



As filed with the Securities and Exchange Commission on April 26, 2017

**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, 2016
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)**

**Ivan de Souza Monteiro
Chief Financial Officer and Chief Investor Relations Officer
(55 21) 3224-4477—ivanmonteiro@petrobras.com.br
Avenida República do Chile, 65—23rd Floor
20031-912—Rio de Janeiro—RJ—Brazil**

(Name, telephone, e-mail and/or facsimile number and address of company contact person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class:	Name of each exchange on which registered:
Petrobras Common Shares, without par value*	New York Stock Exchange*
Petrobras American Depositary Shares, or ADSs (evidenced by American Depositary Receipts, or ADRs), each representing two Common Shares	New York Stock Exchange
Petrobras Preferred Shares, without par value*	New York Stock Exchange*
Petrobras American Depositary Shares (as evidenced by American Depositary Receipts), each representing two Preferred Shares	New York Stock Exchange
5.875% Global Notes due 2018, issued by PGF (successor to PifCo)	New York Stock Exchange
7.875% Global Notes due 2019, issued by PGF (successor to PifCo)	New York Stock Exchange
5.750% Global Notes due 2020, issued by PGF (successor to PifCo)	New York Stock Exchange
5.375% Global Notes due 2021, issued by PGF (successor to PifCo)	New York Stock Exchange
6.875% Global Notes due 2040, issued by PGF (successor to PifCo)	New York Stock Exchange
6.750% Global Notes due 2041, issued by PGF (successor to PifCo)	New York Stock Exchange
3.000% Global Notes due 2019, issued by PGF	New York Stock Exchange
4.375% Global Notes due 2023, issued by PGF	New York Stock Exchange
5.625% Global Notes due 2043, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2019, issued by PGF	New York Stock Exchange
8.375% Global Notes due 2018, issued by PGF	New York Stock Exchange
4.875% Global Notes due 2020, issued by PGF	New York Stock Exchange
6.250% Global Notes due 2024, issued by PGF	New York Stock Exchange
7.250% Global Notes due 2044, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2020, issued by PGF	New York Stock Exchange
6.850% Global Notes due 2115, issued by PGF	New York Stock Exchange
8.375% Global Notes due 2021, issued by PGF	New York Stock Exchange
8.750% Global Notes due 2026, issued by PGF	New York Stock Exchange
6.125% Global Notes due 2022, issued by PGF	New York Stock Exchange
7.375% Global Notes due 2027, issued by PGF	New York Stock Exchange

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



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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, 2016 was:

7.442.454.142 Petrobras Common Shares, without par value

5.602.042.788 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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 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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FORWARD-LOOKING STATEMENTS

This annual report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act, 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.

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 and other costs, 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;



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- receipt of governmental approvals and licenses;
- international and Brazilian political, economic and social developments;
- natural disasters, accidents, military operations, acts of sabotage, wars or embargoes;
- the cost and availability of adequate insurance coverage;
- our ability to successfully implement assets sales under our divestment program;
- 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; 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 “Risk Factors” 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, and our actual production, revenues and expenditures with respect to our reserves may materially differ from these estimates.



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GLOSSARY OF CERTAIN TERMS USED IN THIS ANNUAL REPORT

Unless the context indicates otherwise, the following terms have the meanings shown below:

ADR	American Depositary Receipt.
ADS	American Depositary Share.
AMS	Our health care plan (<i>Assistência Multidisciplinar de Saúde</i>).
ANP	The <i>Agência Nacional de Petróleo, Gás Natural e Biocombustíveis</i> (National Petroleum, Natural Gas and Biofuels Agency), or ANP, is the federal agency that regulates the oil, natural gas and renewable fuels industry in Brazil.
API	Standard measure of oil density developed by the American Petroleum Institute.
Assignment Agreement	An agreement under which the Brazilian federal government assigned to us the right to explore and produce oil, natural gas and other fluid hydrocarbons in specified pre-salt areas in Brazil. See Item 10. “Additional Information—Material Contracts—Assignment Agreement.” Also referred to as the “Transfer of Rights Agreement.”
Bahiagás	Companhia de Gás da Bahia, the natural gas distribution company for the State of Bahia.
Banco do Brasil	Banco do Brasil S.A.
Bank of New York Mellon	The Bank of New York Mellon, which serves as depositary for both our common and preferred ADSs.
Barrels	Standard measure of crude oil volume.
BM&FBOVESPA	The São Paulo Stock Exchange.
Braskem	Braskem S.A.
Brent Crude Oil	A major trading classification of light crude oil that serves as a major benchmark price for commercialization of crude oil worldwide.
BNDES	The <i>Banco Nacional de Desenvolvimento Econômico e Social</i> (the Brazilian Development Bank).
Câmara de Arbitragem do Mercado	An arbitration chamber governed and maintained by the BM&FBOVESPA.
CCEE	The <i>Câmara de Comercialização de Energia Elétrica</i> (Electric Energy Trading Chamber).
CDB	The China Development Bank.
CEG Rio	Gas Natural Fenosa, the natural gas distribution company for the State of Rio de Janeiro.
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.
CGDU	The <i>Controladoria Geral da União</i> (General Federal Inspector’s Office), or CGDU, 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.



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CMN	The <i>Conselho Monetário Nacional</i> (National Monetary Council), or CMN, is the highest authority of the Brazilian financial system, responsible for the formulation of the Brazilian currency and credit policy.
CNODC	CNODC Brasil Petróleo e Gás Ltda.
CNOOC	CNOOC Petroleum Brasil Ltda.
Condensate	Light hydrocarbon substances produced with natural gas, which condense into liquid at normal temperature and pressure.
COMPERJ	The <i>Complexo Petroquímico do Rio de Janeiro – Comperj</i> (Petrochemical Complex of Rio de Janeiro).
CONAMA	The <i>Conselho Nacional do Meio Ambiente</i> (National Council for the Environment).
COSO	Committee of Sponsoring Organizations of the Treadway Commission.
COSO-ERM	Committee of Sponsoring Organizations of the Treadway Commission – Enterprise Risk Management Integrated Framework.
CNPE	The <i>Conselho Nacional de Política Energética</i> (National Energy Policy Council), or CNPE, 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), or CVM.
D&M	DeGolyer and MacNaughton.
Deepwater	Between 300 and 1,500 meters (984 and 4,921 feet) deep.
Distillation	A process by which liquids are separated or refined by vaporization followed by condensation.
DoJ	The U.S. Department of Justice.
Eletrobras	Centrais Elétricas Brasileiras S.A. – Eletrobras.
ERP	Enterprise Resource Planning.
EWT	Extended well test.
Exploration area	A region in Brazil under a regulatory contract without a known hydrocarbon accumulation or with a hydrocarbon accumulation that has not yet been declared commercial.
Fitch	Fitch Ratings Inc., a credit rating agency.
FPSO	Floating production, storage and offloading unit.
Gaspetro	Petrobras Gás S.A.
GSA	Long-term Gas Supply Agreement entered into with the Bolivian state-owned company Yacimientos Petrolíferos Fiscales Bolivianos.
GTB	Gas Transboliviano S.A.
HSE	Health, Safety and Environmental.
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).
IBGC	The <i>Instituto Brasileiro de Governança Corporativa</i> (Brazilian Institute of Corporate Governance).



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IBGE	The <i>Instituto Brasileiro de Geografia e Estatística</i> (Brazilian Institute of Geography and Statistics).
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).
ISO	The International Organization for Standardization.
Lava Jato investigation	See Item 3. “Key Information—Risk Factors—Compliance and Control Risks” and Item 8. “Financial Information—Legal Proceedings—Lava Jato Investigation.”
LFTs	<i>Letras Financeiras do Tesouro</i> (Brazilian federal government bonds).
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.
Mitsui	Mitsui Gás e Energia do Brasil Ltda.
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.
MPBM	The <i>Ministério do Planejamento, Orçamento e Gestão</i> (Ministry of Planning, Budget and Management) of Brazil.
NGLs	Natural gas liquids, which are light hydrocarbon substances produced with natural gas, which condense into liquid at normal temperature and pressure.
NYSE	The New York Stock Exchange.
NTS	Nova Transportadora do Sudeste S.A.
OHSAS	Occupational Health and Safety Management Systems.
Oil	Crude oil, including NGLs and condensates.
ONS	The <i>Operador Nacional do Sistema Elétrico</i> (National Electric System Operator) of Brazil.
OPEC	Organization of the Petroleum Exporting Countries.
OSRL	The Oil Spill Response Limited.
PESA	Petrobras Argentina S.A.
Petros	Petrobras’ employee pension fund.
Petros 2	Petrobras’ sponsored pension plan.
PFC Energy	A global energy research and consultancy group.
PGF	Petrobras Global Finance B.V.
PifCo	Petrobras International Finance Company S.A.
PLSV	Pipe laying support vessel.
PO&G	Petrobras Oil & Gas.
Post-salt reservoir	A geological formation containing oil or natural gas deposits located above a salt layer.
PPSA	Pré-Sal Petróleo S.A.



Pre-salt reservoir A geological formation containing oil or natural gas deposits located beneath a salt layer.

Proved reserves Consistent with the definitions in Rule 4-10(a) of Regulation S-X, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible – from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations. Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price is the average price during the 12-month period prior to December 31, 2015, 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, 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 Brazilian Central Bank.

PwC PricewaterhouseCoopers Auditores Independentes.

RNEST The Refinaria Abreu e Lima (Abreu e Lima Refinery).



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S&P	Standard & Poor's Financial Services LLC, a credit rating agency.
SDNY	The United States District Court for the Southern District of New York.
SEC	The United States Securities and Exchange Commission.
SELIC	The Brazilian Central Bank base interest rate.
Sete Brasil	Sete Brasil Participações, S.A.
Suape Petrochemical Complex	The <i>Complexo Industrial Petroquímica Suape</i> , an industrial complex with facilities owned by Companhia Petroquímica de Pernambuco – PetroquímicaSuape and Companhia Integrada Têxtil de Pernambuco – Citepe.
Shell	Shell Brasil Petróleo Ltda.
SPE	The Society of Petroleum Engineers.
SS	Semi-submersible unit.
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.
TAG	Transportadora Associada de Gás S.A.
TCU	The <i>Tribunal de Contas da União</i> (Federal Auditor's Office), or TCU, is an advisory body of the Brazilian Congress, responsible for assisting it in matters related to the supervision of the Brazilian executive branch with respect to accounting, finance, budget, operational and public property (<i>patrimônio público</i>) matters.
TBG	Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG).
TLWP	Tension Leg Wellhead Platform.
Total	Total E&P do Brasil Ltda.
Total depth	Total depth of a well, including vertical distance through water and below the mudline.
Transpetro	Petrobras Transporte S.A.
Ultra-deepwater	Over 1,500 meters (4,921 feet) deep.
YPFB	Yacimientos Petroliferos Fiscales Bolivianos.



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)



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ABBREVIATIONS

bbl	Barrels
bcf	Billion cubic feet
bn	Billion (thousand million)
bnbbl	Billion barrels
bncf	Billion cubic feet
bnm ³	Billion cubic meters
boe	Barrels of oil equivalent
bnboe	Billion barrels of oil equivalent
bbl/d	Barrels per day
cf	Cubic feet
GWh	One gigawatt of power supplied or demanded for one hour
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
mboe/d	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
mmboe/d	Million barrels of oil equivalent per day
mmcf	Million cubic feet
mmcf/d	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
Tcf	Trillion cubic feet
US\$	United States dollars
/d	Per day
/y	Per year



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PRESENTATION OF FINANCIAL AND OTHER INFORMATION

This is the annual report of Petróleo Brasileiro S.A.—Petrobras, or 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.

We currently issue notes in the international capital markets through our wholly-owned finance subsidiary Petrobras Global Finance B.V., or PGF, a private company with limited liability incorporated under the law of The Netherlands. We fully and unconditionally guarantee the notes issued by PGF. In the past, we used our former wholly-owned subsidiary, Petrobras International Finance Company S.A., or PifCo, as a vehicle to issue notes that we fully and unconditionally guaranteed. On December 29, 2014, PifCo merged into PGF, and PGF assumed PifCo’s obligations under all outstanding notes originally issued by PifCo (together with the notes issued by PGF, the “PGF notes”), which continue to benefit from our full and unconditional guarantee. PGF is not required to file periodic reports with the U.S. Securities and Exchange Commission, or SEC. See Note 36 to our audited consolidated financial statements.

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. Certain figures included in this annual report have been subject to rounding adjustments; accordingly, figures shown as totals in certain tables may not be an exact arithmetic aggregation of the figures that precede them.

Our audited consolidated financial statements as of and for each of the three years ended December 31, 2016, 2015 and 2014 and the accompanying notes contained in this annual report have been presented in U.S. dollars and prepared in accordance with International Financial Reporting Standards, or IFRS, issued by the International Accounting Standards Board, or IASB. See Item 5. “Operating and Financial Review and Prospects” and Note 2 to our audited consolidated financial statements. Petrobras applies IFRS in its statutory financial statements prepared in accordance with Brazilian Corporate Law and regulations promulgated by the CVM.

Our IFRS financial statements filed with the CVM are presented in *reais*, while the presentation currency of the audited consolidated financial statements included herein is the U.S. dollar. The functional currency of Petrobras and all of its Brazilian subsidiaries is the *real*. The functional currency of most of our other entities that operate internationally, such as PGF, is the U.S. dollar. As described more fully in Note 2.2 to our audited consolidated financial statements, the U.S. dollar amounts for the periods presented have been translated from the *real* amounts in accordance with the criteria set forth in IAS 21 – “The effects of changes in foreign exchange rates.” Based on IAS 21, we have translated all assets and liabilities into U.S. dollars at the exchange rate as of the date of the balance sheet, all accounts in the statement of income and statement of cash flows at the average rates prevailing during the corresponding year and all equity items at the exchange rates prevailing at the dates of the transactions. All exchange differences arising from the translation are recognized as cumulative translation adjustments (CTA) within consolidated shareholders’ equity.

Unless the context otherwise indicates:

- data contained in this annual report regarding capital expenditures, investments and other expenditures during the corresponding year that were not derived from the audited consolidated financial statements have been translated from *reais* at the average rates prevailing during such corresponding year;
- historical data contained in this annual report regarding balances of investments, commitments or other related expenditures that were not derived from the audited consolidated financial statements have been translated from *reais* at the period-end exchange rate; and



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- forward-looking amounts, including estimated future capital expenditures and investments, have all been based on our 2017-2021 Business and Management Plan, as originally approved in September 2016 (“2017-2021 Plan”), and have been projected on a constant basis. Future calculations involving an assumed price of crude oil have been calculated using an average Brent crude oil price of US\$48 per barrel for 2017. In addition, in accordance with our 2017-2021 Plan, we have used an estimated average nominal exchange rate of R\$3.55 to US\$1.00 for 2017. For further information on our 2017-2021 Plan, see Item 4. “Information on the Company—2017-2021 Plan.”

PRESENTATION OF INFORMATION CONCERNING RESERVES

We apply the SEC rules for estimating and disclosing oil and natural gas reserve quantities included in this annual report. In accordance with those rules, we estimate reserve volumes using the 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 reserves in certain fields for which volumes have been estimated using gas prices as set forth in our contractual arrangements for the sale of gas. Reserve volumes of non-traditional reserves, such as synthetic oil and gas, are also included in this annual report in accordance with SEC rules. In addition, the rules also utilize a reliable technology definition that permits reserves to be added based on field-tested technologies.

DeGolyer and MacNaughton (D&M) used our reserve estimates to conduct a reserves audit of 97% of our net proved crude oil, condensate and natural gas reserves as of December 31, 2016 in certain properties we own in Brazil. In addition, D&M used our reserve estimates to conduct a reserves audit of 100% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2016 in properties we operate in the United States. The reserve estimates were prepared in accordance with the reserves definitions in Rule 4-10(a) of Regulation S-X. All reserve estimates involve some degree of uncertainty. See Item 3. “Key Information—Risk Factors—Risks Relating to Our Operations” for a description of the risks relating to our reserves and our reserve estimates.

On January 31, 2017, we filed proved reserve estimates for Brazil with the ANP, in accordance with Brazilian rules and regulations, totaling net volumes of 10.4 bnbbbl of crude oil, condensate and synthetic oil and 11.6 tcf of natural gas and synthetic gas. The reserve estimates filed with the ANP were approximately 29.8% higher than those provided herein in terms of oil equivalent. This difference is due to: (i) the fact that the ANP permits the estimation of proved reserves through the technical-economical abandonment of production wells, as opposed to limiting reserve estimates to the life of the concession contracts as required by Rule 4-10 of Regulation S-X; and (ii) different technical criteria for booking proved reserves, including the use of future oil prices projected by Petrobras as opposed to the SEC requirement that the 12-month average price be used to determine the economic producibility of the reserves.

We also file reserve estimates from our international operations with various governmental agencies under the guidelines of the SPE. The aggregate reserve estimates from our international operations, under SPE guidelines, amounted to 0.2 bnbbbl of crude oil, condensate and NGL and 0.2 tcf of natural gas as of December 31, 2016, which is approximately 8.5% higher than the reserve estimates calculated under Regulation S-X, as provided herein. This difference is due to different technical criteria for booking proved reserves, including the use of future oil prices projected by Petrobras as opposed to the SEC requirement that the 12-month average price be used to determine the economic producibility of the reserves.



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PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

Selected Financial Data

This section contains selected consolidated financial data presented in U.S. dollars and prepared in accordance with IFRS as of and for each of the five years ended December 31, 2016, 2015, 2014, 2013 and 2012, derived from our audited consolidated financial statements, which were audited by PricewaterhouseCoopers Auditores Independentes (“PwC”).

The information below should be read in conjunction with, and is qualified in its entirety by reference to, our audited consolidated financial statements and the accompanying notes and Item 5. “Operating and Financial Review and Prospects.”



BALANCE SHEET DATA

IFRS Summary Financial Data

	As of December 31,				
	2016	2015	2014	2013	2012
	(US\$ million)				
Assets:					
Cash and cash equivalents	21,205	25,058	16,655	15,868	13,520
Marketable securities	784	780	9,323	3,885	10,431
Trade and other receivables, net	4,769	5,554	7,969	9,670	11,099
Inventories	8,475	7,441	11,466	14,225	14,552
Assets classified as held for sale	5,728	152	5	2,407	143
Other current assets	3,808	4,194	5,414	6,600	8,049
Long-term receivables	20,420	19,426	18,863	18,782	18,856
Investments	3,052	3,527	5,753	6,666	6,106
Property, plant and equipment	175,470	161,297	218,730	227,901	204,901
Intangible assets	3,272	3,092	4,509	15,419	39,739
Total assets	<u>246,983</u>	<u>230,521</u>	<u>298,687</u>	<u>321,423</u>	<u>327,396</u>
Liabilities and shareholders' equity:					
Total current liabilities	24,903	28,573	31,118	35,226	34,070
Non-current liabilities(1)	36,159	24,411	30,373	30,839	42,976
Non-current finance debt(2)	108,371	111,482	120,218	106,235	88,484
Total liabilities	<u>169,433</u>	<u>164,466</u>	<u>181,709</u>	<u>172,300</u>	<u>165,530</u>
Shareholders' equity					
Share capital (net of share issuance costs)	107,101	107,101	107,101	107,092	107,083
Reserves and other comprehensive income (deficit)(3)	(30,322)	(41,865)	9,171	41,435	53,631
Shareholders' equity attributable to the shareholders of					
Petrobras	<u>76,779</u>	<u>65,236</u>	<u>116,272</u>	<u>148,527</u>	<u>160,714</u>
Non-controlling interests	771	819	706	596	1,152
Total shareholders' equity	<u>77,550</u>	<u>66,055</u>	<u>116,978</u>	<u>149,123</u>	<u>161,866</u>
Total liabilities and shareholders' equity	<u>246,983</u>	<u>230,521</u>	<u>298,687</u>	<u>321,423</u>	<u>327,396</u>

(1) Excludes non-current finance debt.

(2) Excludes current portion of long-term finance debt.

(3) Capital transactions, profit reserve and accumulated other comprehensive income (deficit).



INCOME STATEMENT DATA

IFRS Summary Financial Data

	For the Year Ended December 31,				
	2016(1)	2015(1)	2014(1)	2013	2012
	(US\$ million, except for share and per share data)				
Sales revenues	81,405	97,314	143,657	141,462	144,103
Net income (loss) before finance income (expense), share of earnings in equity-accounted investments, profit sharing and income taxes	4,308	(1,130)	(7,407)	16,214	16,900
Net income (loss) attributable to the shareholders of Petrobras	(4,838)	(8,450)	(7,367)	11,094	11,034
Weighted average number of shares outstanding:					
Common	7,442,454,142	7,442,454,142	7,442,454,142	7,442,454,142	7,442,454,142
Preferred	5,602,042,788	5,602,042,788	5,602,042,788	5,602,042,788	5,602,042,788
Net income (loss) before financial results, profit sharing and income taxes per:					
Common and Preferred shares	0.33	(0.09)	(0.57)	1.24	1.30
Common and Preferred ADS	0.66	(0.18)	(1.14)	2.48	2.60
Basic and diluted earnings (losses) per:					
Common and Preferred shares	(0.37)	(0.65)	(0.56)	0.85	0.85
Common and Preferred ADS	(0.74)	(1.30)	(1.12)	1.70	1.70
Cash dividends per(2):					
Common shares	—	—	—	0.22	0.24
Preferred shares	—	—	—	0.41	0.48
Common ADS	—	—	—	0.44	0.48
Preferred ADS	—	—	—	0.82	0.96

(1) In 2014, we wrote-off US\$2,527 million of incorrectly capitalized overpayments. In 2016, 2015 and 2014, we recognized impairment losses of US\$6,139, US\$12,299 and US\$16,823, respectively. See Notes 3 and 14 to our audited consolidated financial statements for further information.

(2) Pre-tax interest on capital and/or dividends proposed for the year. Amounts were translated from the original amounts in reais considering the balance sheet date exchange rate.



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BRAZILIAN REAIS EXCHANGE RATES

Year ended December 31,	Daily Observed Exchange Rate			
	High	Low	Average(1)	Period-End
	(R\$ per US\$)			
2012	2.1121	1.7024	1.9546	2.0435
2013	2.4457	1.9528	2.1576	2.3426
2014	2.7403	2.1974	2.3536	2.6562
2015	4.1949	2.5754	3.3315	3.9048
2016	4.1558	3.1193	3.4901	3.2591
October	3.2359	3.1193	3.1858	3.1811
November	3.4446	3.2024	3.3420	3.3967
December	3.4650	3.2591	3.3523	3.2591
2017	3.2729	3.0510	3.1429	—
January	3.2729	3.1270	3.1966	3.1270
February	3.1479	3.0510	3.1042	3.0993
March	3.1735	3.0765	3.1279	3.1684

Source: Central Bank of Brazil

(1) For each year, the average daily exchange rates for the relevant year. For each month, the average daily exchange rate for the relevant month.



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RISK FACTORS

Risks Relating to Our Operations

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

Some of our main activities, operated by us or our partners, present risks capable of leading to accidents, such as oil spills, product leaks, fires and explosions. In particular, deepwater and ultra-deepwater activities present various risks, such as oil spills and explosions in drilling or production units. These events may occur due to technical failures, human errors or natural events, among other factors. The occurrence of one of these events, or other related incidents, may result in various damages such as death, serious environmental damage and related expenses (including, for example, cleaning and repairing expenses), may have an impact on the health of our workforce or on communities, and may cause environmental or property damage, loss of production, financial losses and, in certain circumstances, judicial liability in civil, labor, criminal and administrative lawsuits. As a consequence, we may incur expenses to repair or remediate damages caused. Further, we may face difficulties in obtaining or maintaining operating licenses and may suffer damages to our reputation.

Our insurance policies do not cover all types of risks and liabilities associated with our activities. 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. See Item 4. “Information on the Company—Health, Safety and Environmental Initiatives” and “—Insurance”, as well as Note 33.7 to our audited consolidated financial statements for further information.

We rely on key third-party suppliers and service providers to provide us with parts, components, services and critical resources that we need to operate our business and complete our major projects, which could be adversely affected by any failure or delay by such third parties in performing their obligations or any deterioration in the financial condition of such third parties.

Our ability to maintain our long-term objectives for oil production depends upon successful delivery of major exploration and production projects. Failure to successfully deliver such major projects, or delays in doing so, could adversely affect our results of operations and financial condition.

We rely upon various key third-party suppliers, vendors and service providers to provide us with parts, components, services and critical resources, which we need to operate and expand our business. We are susceptible to the risks of performance, product quality and financial condition of our key suppliers, vendors and service providers. If these key suppliers, vendors and service providers critically fail to deliver, or are delayed in delivering, equipment, service or critical resources to our major projects, we may not meet our operating targets in the time frame we expected. We may ultimately need to delay or suspend one or more of our major projects, which could have an adverse effect on our results of operations and financial condition.

In connection with the Lava Jato investigation, we temporarily suspended the ability of a number of companies to participate as suppliers and contractors in future bids for new contracts and services with us, a number of whom have historically acted as key suppliers, vendors and service providers for our major projects. There can be no assurance that all of these companies will be permitted to participate in our future projects or that we will be able to replace such key suppliers, vendors and service providers with others that would be able to meet our needs, and we are also susceptible to the risk that future circumstances will require us to impose further suspensions, which could affect the successful and timely delivery of our future projects, and consequently our results of operations and financial condition. See Note 3 to our audited consolidated financial statements for further information about the Lava Jato investigation.



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We are also subject to Brazilian local content requirements arising out of our concession agreements, the Assignment Agreement and the Libra Production Sharing Agreement. For further information on local content requirement, see Item 10. “Additional Information—Material Contracts—Brazilian Content.” This mandatory acquisition of equipment and services from a limited number of suppliers may result in (i) higher acquisition costs and (ii) delays in the delivery of equipment. Additionally, these requirements, along with the temporary suspension of many of our local suppliers described above, due to the Lava Jato investigations, could cause delays in some of our major projects if we are unable to timely replace Brazilian suppliers or service providers that fail to perform their obligations under our contracts. Unless ANP exempts us from complying with local content requirements, as to which there is no assurance, we could also face delays and fines in the execution of our current major exploration and production projects.

In addition, there are risks relating to our ability to contract efficiently enough to meet our needs, in light of the significant change promulgated by a recently issued law (Law No. 13,303/2016). The new law contains new guidelines, rules and procedures for bidding, which will have broad and systemic impacts. We have until June 30, 2018 to comply with the new legislation, with respect to bids and contracts, as well as governance.

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. See “—Risks Relating to Our Operations—Strikes, work stoppages or labor unrest by our employees or by the employees of our suppliers or contractors could adversely affect our results of operations and our business”, Item 4. “Information of the Company—Insurance” and Note 33.7 to our audited consolidated financial statements. Therefore, an attack or an operational incident causing an interruption of our business could have a material adverse effect on our results of operations and financial condition.

Strikes, work stoppages or labor unrest by our employees or by the employees of our suppliers or contractors, as well as potential shortages of skilled personnel, could adversely affect our results of operations and our business.

Approximately 45% of our employees are represented by labor unions. Disagreements on issues involving divestments or changes in our business strategy, reductions in our personnel, as well as potential employee contributions to a Petros shortfall, could lead to labor unrest. Strikes, work stoppages or other forms of labor unrest at any of our major suppliers, contractors or their facilities could impair our ability to complete major projects and impact our ability to achieve our long-term objectives.

In addition, we could experience potential shortages of skilled personnel. We recently announced a new voluntary separation incentive program open to all of our employees. For further information on this program, see Item 6. “Directors, Senior Management and Employees—Employees and Labor Relations—Voluntary Separation Incentive Program—PIDV.” If the voluntary separation incentive program is successfully implemented, and we are unable to timely replace the key skilled personnel that decide to enroll in such program, there could be an adverse effect on our results of operations and our business. Our success also depends on our ability to continue to successfully train and qualify our personnel so they can assume qualified senior positions in the future. We cannot assure you that we will be able to properly train, qualify or retain senior management personnel, or do so without costs or delays, nor can we assure you that we will be able to find new qualified senior managers, should the need arise. Any such failure could adversely affect our results of operations and our business.



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The mobilization and demobilization of our employees as a result of our partnership and divestment program may adversely affect the results of our business and operations.

Our 2017-2021 Plan includes, among other initiatives, a divestment program that contemplates partnerships and the sale of approximately US\$21 billion in assets during the period 2017-2018, with the goal of improving our short-term liquidity position and allowing us to deleverage. For further information on our divestments, see Item 4. "Information on the Company – Overview of the Group." Many of the assets that we have sold, or expect to sell, utilize our employees, that could be relocated to other areas and projects and we may have to train these employees to perform other tasks. Potential difficulties could arise from the need to relocate portions of our employees related to these assets and may generate additional costs, judicial inquiries related to labor lawsuits, strikes and may negatively impact our 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 heavily dependent on information technology and telecommunication systems and services. Interruptions in these systems, caused by obsolescence, technical failures or intentional acts, can disrupt or even paralyze our business and adversely impact our operations and reputation. In addition, security failures related to sensitive information due to intentional or unintentional actions, such as cyberterrorism, or internal actions, including negligence or misconduct of our employees, may have a negative impact on our reputation, our relationship with external entities (government, regulators, partners and suppliers, among others), our strategic positioning with relation to our competitors, and our results, due to the leakage of information or unauthorized use of such information.

Financial Risks

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 of operations.

We have incurred a substantial amount of debt in order to finance the capital expenditures needed to meet our long-term objectives, 65% of which (principal), or US\$75 billion, will mature in the next five years. For more information about our debt, see Item 5. "Operating and Financial Review and Prospects—Liquidity and Capital Resources." Since our operating cash flow may be insufficient to finance both our planned investments and the 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 of operations and the ability to fulfill our business plan.

We lost our Moody's, S&P and Fitch investment grade ratings for all of our credit ratings between 2015 and 2016. In May 2016, Fitch revised our corporate debt rating from BB+ to BB, with negative outlook. This review followed the change in the sovereign rating of Brazil, announced on May 5, 2016. In October 2016, Moody's upgraded our rating from B3 to B2, and changed the outlook from negative to stable. In April 2017, Moody's upgraded our rating again from B2 to B1 and changed the outlook from stable to positive.

However, our Moody's, S&P and Fitch ratings have fluctuated substantially over the past two years, as a result of concerns expressed by the rating agencies regarding (i) liquidity pressures and our capacity to meet our principal and interest payment obligations maturing in the short- and medium-term, (ii) the total size of our debt, (iii) the increase in our indebtedness and leverage over the last few years, (iv) the significant decline in international crude oil prices, (v) the sharp devaluation of the real and (vi) the challenges involved in successfully implementing our divestment program. The loss of our investment grade credit rating and any further lowering of our credit ratings has had, and may continue to have, adverse consequences on our ability to obtain financing, due to a less liquid market for our debt and 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 of operations and financial condition.



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In addition, despite the fact that the Brazilian federal government (as our controlling shareholder) is not responsible or liable for any of our liabilities, any further lowering of the Brazilian federal government'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 of operations 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, 2016, approximately 79.5% of our financial debt was denominated in currencies other than the real (71.9% was denominated in U.S. dollars). A substantial portion of our indebtedness is, and is expected to continue to be, denominated in or indexed to the U.S. dollar and other foreign currencies. A further depreciation of the real against these other currencies will increase our debt service in reais, as the amount of reais necessary to pay principal and interest on foreign currency debt will increase with this depreciation. See Item 5. "Operating and Financial Review and Prospects—Inflation and Exchange Rate Variation—Exchange Rate Variation" for further information.

Foreign exchange variations may have an immediate impact on our reported income, except for a portion of our obligations denominated in U.S. dollars that are designated as hedging instruments in cash flow hedging relationships. According to our cash flow hedge accounting policy, hedging relationships are designated for the existing natural hedge between our U.S. dollar denominated future exports that are considered to be highly probable (hedged item) and U.S. dollar denominated financial debt (hedging instruments). See Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates" for further information.

Following a devaluation 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, unless we increase the prices of our products to reflect the depreciation of the real, our cash generation relative to our capacity to service debt may decline.

Additionally, we have a substantial amount of debt maturing during the next five years, a portion of which may be refinanced by issuing new debt. To the extent we refinance our maturing obligations with newly contracted debt, we may incur additional interest expense.

As of December 31, 2016, approximately 54.2% of our total indebtedness 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 additional expenses. Additionally, 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 of operations and financial condition.

Our commitment to meet the obligations of our pension plan ("Petros") and health care benefits ("AMS") may be higher than what is currently anticipated, and we may be required to make additional contributions of resources to Petros.

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 predicted value and the actual realized value. For further information on Petros and AMS, see Item 6. "Directors, Senior Management and Employees—Employees and Labor Relations—Pension and Health Care Plan" and Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Pension and other post-retirement benefits."

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 our employees, may be required.



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These risks may result in an increase in our liabilities and adversely affect our results of operations and our business. See Note 22 to our audited consolidated financial statements for further information about our employee benefits, including pension and health care plans.

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 of operations 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.

For example, as of December 31, 2016, certain subsidiaries of Centrais Elétricas Brasileiras S.A. – Eletrobras owed us approximately US\$4.9 million under energy supply agreements. In 2016 and 2015, we recognized an allowance for impairment of trade receivables from the isolated electricity sector in the Northern region of Brazil amounting to approximately US\$0.3 billion and US\$0.8 billion, respectively, mostly to cover certain trade receivables due by Eletrobras's subsidiaries. For further information on our trade receivable in the electricity sector, see Note 8.4 to our audited consolidated financial statements.

In addition, many of our customers finance their activities through their cash flows from operations, the incurrence of short- and long-term debt. Declining financial results and 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 to us. This could result in a decrease in our cash flows from operations and may also reduce or curtail our customers' future demand for our products and services, which may have an adverse effect on our results of operations and financial condition.

We may have difficulty fulfilling cash call requests by our partners in projects where we are not the operators.

We enter into partnerships in the course of our business in all of our segments, particularly in the upstream segment. In some of these partnerships, we are not the operator, and therefore, we have limited control over certain business decisions, including those related to cash calls. In the future, we could be asked to provide resources in connection with unplanned cash calls. These cash calls can negatively impact our short-term financial planning and may result in the increase of our capital costs in order to allocate additional financial resources to pay for these cash applications.

Compliance, Legal and Regulatory Risks

We are exposed to behaviors incompatible with our ethics and compliance standards, and failure to timely detect or remedy any such behavior has had, and may have, a material adverse effect on our results of operations and financial condition.

In the past, some of our contractors have engaged in fraudulent activities, incompatible with our ethics and compliance standards. Although we have adopted measures to identify, monitor and remediate such actions, we are subject to the risk that our 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 or business advantage to our detriment. This risk is heightened by the fact that we have a large number of complex, valuable 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 have in place a number of systems for identifying, monitoring and mitigating these risks, but our systems may not be effective.

Our business, including relationships with third parties, is guided by ethical principles. We have adopted a Code of Ethics, a Conduct Guide and a number of internal policies designed to guide our management, employees and contractors and reinforce our principles and rules for ethical behavior and professional conduct. For further information on our Code of Ethics, see Item 16B. "Code of Ethics." We offer an external whistleblower channel overseen by our General Ombudsman Office for employees, contractors and other third parties. See Item 6. "Directors, Senior Management and Employees—Ombudsman."

It is difficult for us to ensure that all of our employees and contractors, totaling over 186,000, will comply with our ethical principles. Any failure – real or perceived – to follow these principles or to comply with applicable governance or regulatory obligations could harm our reputation, limit our ability to obtain financing and otherwise have a material adverse effect on our results of operations and financial condition.

Our management has identified material weaknesses in our internal control over financial reporting, and has concluded that our internal control over financial reporting was not effective at December 31, 2016, which may have a material adverse result on our results of operation and financial condition.

Our management identified a number of material weaknesses in our internal control over financial reporting in 2016. For further information on the material weaknesses identified by our management, see Item 15. "Controls and Procedures—Management Report on Internal Control over Financial Reporting." As a result, due to the identified material weaknesses, our management concluded that our internal control over financial reporting was not effective at December 31, 2016. A number of our current material weaknesses in our internal control over financial reporting were identified and reported by management at December 31, 2014 and 2015. Although we have developed and implemented several measures to remedy these material weaknesses, we cannot be certain that there will be no other material weaknesses in our internal control over financial reporting in the future.

If our efforts to remediate the material weaknesses are not successful, we may be unable to report our results of operations for future periods accurately and in a timely manner and make our required filings with government authorities, including the SEC. There is also a risk that there could be accounting errors in our financial reporting, and we cannot be certain that in the future additional material weaknesses will not exist or otherwise be discovered. Any of these occurrences could adversely affect our business and operating results and could generate negative market reactions, potentially leading to a decline in the price of our shares, ADSs and debt securities.

Ongoing SEC and DoJ investigations regarding the possibility of non-compliance with the U.S. Foreign Corrupt Practices Act could adversely affect us. Violations of this or other laws may require us to pay fines and expose us and our employees to criminal sanctions and civil suits.

In November 2014, we received a subpoena from the SEC requesting certain documents and information about us relating to, among other things, the Lava Jato investigation and any allegations regarding a violation of the U.S. Foreign Corrupt Practices Act. The DoJ is conducting a similar inquiry, and we are voluntarily cooperating with both investigations. The internal investigation and related government inquiries concerning these matters remain ongoing, and it is still not possible to estimate the duration, scope or results of the internal investigation or related inquiries by relevant authorities. While we are cooperating fully with both investigations, adverse developments in connection with these investigations, including any expansion of the scope of the investigations, could negatively impact us and could divert the efforts and attention of our management team from our ordinary business operations. In connection with any SEC or DoJ investigation or any other investigation carried out by any other authority, there can be no assurance that we will not be required to pay penalties or provide 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. 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. See Item 8. "Financial Information—Legal Proceedings."



Our methodology to estimate the overpayments incorrectly capitalized, uncovered in the context of the Lava Jato investigation, involves some degree of uncertainty. If substantive additional information comes to light in the future that would make our estimate for the overstatements of our assets appear, in retrospect, to have been materially underestimated or overestimated, this could require a restatement of our financial statements and may have a material adverse effect on our results of operations and financial condition and affect the market value of our securities.

As a result of the findings of the Lava Jato investigation, in the third quarter of 2014, we wrote off US\$2,527 million of capitalized costs representing amounts that Petrobras overpaid for the acquisition of property, plant and equipment in prior years.

Beginning in 2014, and over the course of 2015, the Brazilian Federal Prosecutor's Office focused 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 former Petrobras personnel. See Note 3 to our audited consolidated financial statements and Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Estimation Methodology for Determining Write-Off for Overpayments Incorrectly Capitalized" for further information about the Lava Jato investigation, the overpayments charged by certain contractors and suppliers to Petrobras and our methodology to estimate the overstatement of our assets.

We concluded that a portion of our costs incurred to build property, plant and equipment that resulted from contractors and suppliers in the cartel overcharging us to make improper payments should not have been capitalized in our historical costs of property, plant and equipment. As it is impracticable to identify the specific periods and amounts for the overpayments made by us, we considered all the available information to determine the impact of the overpayments charged to us. As a result, to account for these overpayments, we developed a methodology to estimate the aggregate amount that we overpaid under the payment scheme, in order to determine the amount of the write-off representing the overstatement of our assets resulting from overpayments used to fund improper payments.

The Lava Jato investigation is still ongoing and it could be a significant amount of time before the Brazilian federal prosecutors conclude their investigation. As a result of this investigation, substantive additional information might come to light in the future that would make our estimate for overpayments appear, in retrospect, to have been materially low or high, which may require us to restate our financial statements to further adjust the write-offs representing the overstatement of our assets recognized in our interim consolidated financial statements for the nine-month period ended September 30, 2014.

We believe that we have used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized based on the information available to us, but our estimation methodology involves some degree of uncertainty. There can be no assurance that the write-offs representing the overstatement of our assets, determined using our estimation methodology, and recognized in our interim consolidated financial statements for the nine-month period ended September 30, 2014, are not underestimated or overestimated. In the event that we are required to write-off additional historical costs from our property, plant and equipment or to reverse write-offs previously recognized in our financial statements, this might impact the total value of our assets and we may be subject to negative publicity, credit rating downgrades, or other negative material events, which may have a material adverse effect on our results of operations and financial condition and affect the market value of our securities. For more information, see Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Write-off—for overpayments incorrectly capitalized" and note 3 to our audited consolidated financial statements.



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

We are currently party to numerous legal proceedings relating to civil, administrative, tax, labor, environmental and corporate claims filed against us. These claims involve substantial amounts of money and other remedies. Several individual disputes account for a significant part of the total amount of claims against us. See Item 8. "Financial Information—Legal Proceedings" and Note 30 to our audited consolidated financial statements included in this annual report for a description of the legal proceedings to which we are subject.

In the event that claims involving a material amount and for which we have no provisions were to be decided against us, or in the event that the losses estimated turn out to be significantly higher than the provisions made, the aggregate cost of unfavorable decisions could have a material adverse effect on our results of operations and financial condition. We may also be subject to litigation and administrative proceedings in connection with our concessions and other government authorizations, which could result in the revocation of such concessions and government authorizations. In addition, 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. Depending on the outcome, litigation could result in restrictions on our operations and have a material adverse effect on some of our businesses.

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

We are subject to a number of civil proceedings relating to the Lava Jato investigation, including a putative securities class action lawsuit against us consolidated in the United States District Court for the Southern District of New York ("SDNY") on February 17, 2015 and numerous individual actions. See Item 8. "Financial Information—Legal Proceedings" and Note 30.4 to our audited consolidated financial statements for a description of the U.S. securities class action litigation and other civil proceedings. As detailed in Item 8. "Financial Information—Legal Proceedings" and Note 30.4 to our audited consolidated financial statements, our Board of Directors has approved agreements to settle several of the individual actions, and we provisioned US\$ 372 million in 2016 to reflect the settlements reached and the status of certain other individual actions. Because these actions involve highly complex issues that are subject to substantial uncertainties and depend on a number of factors, the possible loss or range of losses, if any, arising from the class action lawsuit or remaining individual actions cannot be estimated and consequently we have made no provisions with respect to these litigations. In the event that these litigations are decided against us, or we enter into an agreement to settle such matters, we may be required to pay substantial amounts. Depending on the outcome, such litigations could also result in restrictions on our operations and have a material adverse effect on our business. We have engaged a U.S. firm as legal counsel and intend to defend vigorously against the allegations made in the context of these actions. In addition, EIG Management Company filed a complaint against us on February 23, 2016 in connection with their investment in Sete Brasil Participações, S.A., or Sete Brasil. 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.

Additional information regarding the Lava Jato or other investigations may be damaging to us and our interests, and may generate instability in the political environment.

On April 11, 2017, the Brazilian Supreme Court made public the content of part of the plea bargain statements by executives of Odebrecht, a construction company involved in the Lava Jato investigation. These statements allege the involvement of several politicians, political parties and some of our former executives in activities that comprise part of the Lava Jato investigation.



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The unfolding of investigations related to Odebrecht and the emergence of new plea bargain statements or testimony by other individuals or companies related to the Lava Jato or other investigations, may lead to the discovery, and potential confirmation, of information that would be damaging to us and our interests, and may generate instability in the political environment. For further information, see Item 8. “Financial Information – Legal Proceedings – Lava Jato Investigation.”

We may have to restate our financial statements as a result of the CVM’s analysis of our hedge accounting practices.

In accordance with our risk management policy for foreign exchange risks, which states that we shall benefit from the diversification of our businesses to seek natural hedges (offsetting positions), we have been applying “cash flow hedge accounting” since May 2013, to account for the existing natural hedge between our U.S. dollar-denominated long-term debt obligations (hedging instrument) and our highly probable U.S. dollar-denominated future export revenues (hedged item). In this case, the nature of the hedged risk is the foreign currency *real* vs. U.S. dollar spot rate.

The adoption of hedge accounting is optional, and in applying it we have complied with the requirements of IAS 39 “Financial Instruments: Recognition and Measurement” and the requirements of the corresponding Brazilian accounting standard, CPC 38. According to these requirements, foreign exchange gains and losses associated with the hedging instrument (debt obligations) are recorded as gains or losses under other comprehensive income in shareholders’ equity. Such gains and losses are recycled to our statement of income when the corresponding export revenue is recognized.

If future exports, for which a hedging relationship has been designated, are no longer highly probable but are still expected to occur, we revoke the designation, and the unrealized cumulative foreign exchange gains or losses remain recognized under other comprehensive income and are recycled to our statement of income when the corresponding export revenue is recognized. If future exports, for which a hedging relationship has been designated, are no longer expected to occur, any related gains or losses are immediately recycled from shareholders’ equity to our statement of income.

In July 2013, the Department of Public Company Supervision (“SEP”), a technical office of the CVM, commenced an analysis in connection with our hedge accounting practices. As a result of this analysis, on March 3, 2017, SEP issued an official communication that required us to restate our financial statements for all periods since we began to apply our cash flow hedge accounting practices. We appealed to the Board of Commissioners of the CVM against the decision, and the effects of the SEP’s order are currently suspended.

Depending on the outcome of our appeal, we may be required to restate our financial statements for the periods indicated, and cease or modify our cash flow hedge accounting practices going forward. The estimated impacts for the fiscal years 2016, 2015, 2014 and 2013 if we are required to restate our financial statements are set out in Item 5. Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Cash Flow Hedge Accounting Involving our Future Exports. If we only cease our cash flow hedge accounting practice prospectively, the cumulative foreign exchange rate variation gains or losses in our shareholder’s equity will be recycled to our statement of income in future periods, pursuant to the schedule set out in note 33.2 to our audited consolidated financial statements. In addition, in case we cease our cash flow hedge accounting practice, the effect of prospective exchange rate changes on our U.S. dollar-denominated long-term debt obligations would be immediately recognized as finance income or expense in our consolidated statement of income, instead of being recognized in our shareholders’ equity and recycled to profit or loss when the future export revenues occur.



For more information on our hedge accounting practices and their effect on our financial statements, see “Item 5. Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Cash Flow Hedge Accounting Involving our Future Exports” and notes 4.3.6, 5.8 and 33.2 and the Consolidated Statement of Comprehensive Income to our audited consolidated financial statements.

In addition, if we are required to restate our financial statements, the net loss in 2016 would reverse to net income and, as a consequence, we may be required to distribute mandatory dividends in accordance with our bylaws and subject to approval by our shareholders at a shareholders’ meeting, which could materially and adversely affect our financial position and cash flow. For more information about this impact, see Item 5. “Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates.” For more information about the dividend distribution requirements applicable to us, see Item 10. “Additional Information – Mandatory Distribution.” Any restatement of our financial statements and changes to our cash flow hedge accounting practices in future periods may have a material adverse effect on our results of operations and financial condition and may affect the market value of our securities.

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, including the ANP, which regulates oil and gas exploration and production activities. Issues such as local content policies, procedures for the unitization of areas, definition of reference prices for the calculation of royalties and governmental participation, among others, are under the ANP’s control.

Changes in the regulation, as well as differences of interpretation between us and the agencies that regulate our industry, may have a material adverse effect on our financial condition and results of operations. On March 30, 2017, the ANP charged the consortium BM-S-11 R\$2.6 billion with respect to the Lula field, of which Petrobras is the operator, due to the ANP’s recalculation of oil prices and the portion related to the Brazilian federal government participation. For more information, see Item 8. “Financial Information – Legal Proceedings – Other Legal Proceedings.”

Any future differences in interpretation between us and these regulatory agencies may materially impact our results of operations, since such interpretations directly affect the economic and technical premises that guide our investment decisions. In particular, there is no guarantee that ANP will agree with our request for a waiver of the Brazilian content based on (i) the lack of national production of goods and services, (ii) the higher price of products and services sold by local suppliers in relation to international suppliers, or (iii) the fact that national suppliers cannot perform timely, based on our schedule. Depending on the interpretation adopted by ANP on the facts presented by us to sustain our request of waiver, our business can be materially affected.

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

We are subject to tax rules and regulation that may be interpreted differently over time, or that may be interpreted differently by us and Brazilian tax authorities (including the federal, state and municipal authorities), both of which could have a financial impact on our business. For example, in the second and third quarters of 2015, we recognized material charges related to settlements of certain tax liabilities. Although unanticipated, these charges relate to the settlement of disputes relating to tax regulations that allowed for certain tax contingencies to be settled at a reduced value. 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.



In the future, 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. Changes in interpretation or differing interpretations as to tax regulations, as well as our decision to settle any claims relating to such regulations, could have a material adverse effect on our financial condition and results of operations.

The absence of regulation for the application of Law No. 13,365/16, which provides for the exercise of our preemptive right in ANP's auctions for the blocks under the production sharing regime, may result in legal uncertainty in the bidding process, in the structuring of consortia and in our exploration activities.

In accordance with Law No. 13,365/2016, we have the option of being the operator of, and/or holding at least a 30% interest in, the exploration areas available for public bidding under the production sharing regime. As such, it is no longer mandatory for us to be the exclusive operator of exploration and production activities under this regime, including for the Pre-salt layer. Regardless of whether we exercise our preemptive right, we will also be able to participate, at our discretion, in the bidding process to increase our interest in these activities. For more information about the production sharing regime in Brazil, see Item 4. "information on the Company—Regulation of the Oil and Gas Industry in Brazil" and Item 10. "Additional Information – Material Contracts."

Although the modifications brought by Law No. 13,365/16 seem positive to us, it is not possible, at this time, to know precisely under which conditions and in which part of the bidding rounds the preemptive right could become enforceable. As of April 2017, the regulation of this new piece of legislation has not yet been approved by the Brazilian government, which is necessary in order to avoid uncertainties during the bidding process and to clarify that we will not be obliged to undertake the conditions of the winning proposal in every possible scenario.

The Assignment Agreement we entered into with the Brazilian federal government is a related party transaction subject to future price revision.

We entered into an Assignment Agreement in 2010 with the Brazilian federal government, our controlling shareholder, to obtain oil and gas exploration and production rights for specific pre-salt areas, subject to a maximum production of five billion boe. At the time the Assignment Agreement was negotiated, the initial contract price paid by us was based on an assumed Brent oil crude price of approximately US\$80 per barrel. However, the Assignment Agreement includes provisions for a subsequent revision of certain of its terms, including the price we paid for the rights we acquired, maximum volume, maturity and local content percentages.

Negotiations with the Brazilian federal government to revise the Assignment Agreement began in December 2013, and are still ongoing. Once the revision process is concluded pursuant to the terms of the Assignment Agreement, if the revised contract price is higher than the initial contract price, we will either make an additional payment to the Brazilian federal government or reduce the amount of barrels of oil equivalent subject to the Assignment Agreement.

We do not know when this negotiation will be completed, nor can we assure that the terms of this new agreement would be favorable to us, which could negatively impact our operating and financial results. See Item 4. "Information on the Company—Exploration and Production-Santos Basin—Assignment Agreement," Item 10. "Material Contracts—Assignment Agreement—Additional Production in the Assignment Agreement Areas" and Note 12.3 to our audited consolidated financial statements for further information.



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

Generally, transactions with related parties are part of the business of large companies. For further information on our related party transactions, see Item 7. “Major Shareholders and Related Party Transactions—Related Party Transactions.” Such transactions must follow market standards and generate mutual benefit. Decision processes surrounding such transactions must be objective and documented. Further, we must comply with the rules of competition and adequate disclosure of information, in accordance with the applicable legislation and as determined by the CVM and the SEC. The possible failure of our process to identify and deal with these situations may adversely affect our economic and financial condition, as well as lead to regulatory assessments by agencies.

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 in which we operate. In addition, we are subject to environmental laws that require us to incur significant costs to cover any damages that a project may cause to the environment. These additional costs may have a negative impact on the profitability of the projects we intend to implement or may make such projects economically unfeasible. See Item 4. “Information on the Company—Regulation of the Oil and Gas Industry in Brazil—Environmental Regulations.”

As environmental, health and safety regulations become more stringent with evolving industry standards, and as new laws and regulations relating to climate change, including carbon controls, become applicable to us, it is possible that our capital expenditures and investments to comply with such laws and regulations and industry standards will increase substantially in the future. Any substantial increase in expenditures for compliance with environmental, health or safety regulations or reduction in strategic investments and significant decreases in our production from unplanned shutdowns may have a material adverse effect on our results of operations and financial condition.

Furthermore, changes in interpretation or differing interpretations as to environmental, health and safety regulations, as well as our decision to settle any claims relating to such regulations, may have a material adverse effect on our financial condition and our results of operations.

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

Our activities are subject to and depend on the granting of new environmental licenses and permits by a wide variety of federal, state and local law regulators, 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 will not be affected by internal procedures of the regulatory body or that the relevant licenses and permits will be issued in a timely manner, and this could impact our crude oil and natural gas production objectives, negatively influencing our results of operations and financial condition. For example, although the production unit P-66 is currently ready to operate at the Lula Field, in the pre-salt Santos Basin, we are waiting for the applicable operating license from the environmental federal authority (IBAMA) to be issued.



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We may be required by law 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, and public and private institutions, with the purpose of guaranteeing supplies to the domestic oil market, even in situations where these clients and institutions are in default with contractual or legal obligations. Such supply in exceptional situations may adversely affect our financial position.

Risks Relating to our Strategy

Our divestment program depends on external factors that could impede its successful implementation.

Our 2017-2021 Plan includes, among other initiatives, a divestment program that contemplates partnerships and the sale of US\$21 billion in assets for the period 2017-2018, with the goal of improving our short-term liquidity position (by increasing our cash balance) and allowing us to deleverage. For further information on our cash flow, see Item 5. “Operating and Financial Review and Prospects—Liquidity and Capital Resources—Sources of Funds—Our Cash Flow.” However, external factors, such as the sustained decline in oil prices, exchange rate fluctuations, the deterioration of Brazilian and global economic conditions, the Brazilian political crisis and judicial decisions, among other factors, may reduce or hinder sale opportunities for our assets or affect the price at which we can sell our assets, and may force us to alter the terms of our divestment program.

For the period from 2015-2016, we were unable to successfully implement all of the goals of our divestment program, due to administrative and judicial decisions. If we are unable to successfully implement our divestment program, this may negatively impact our business, results of operations and financial condition, including by potentially exposing us to short and medium-term liquidity constraints. In addition, the sale of strategic assets under our divestment program will result in a decrease in our cash flows from operations, which could negatively impact our long-term operating growth prospects and consequently our results of operations in the medium and long-term. For further information, see Item 8. “Financial Information – Legal Proceedings – Legal Proceedings and Preliminary Procedure on TCU – Divestments” and note 10.4 to our audited consolidated financial statements.

Many of our projects and operations are conducted in joint arrangements or associations, which may not perform as expected, negatively impacting our results.

In our 2017-2021 Plan, we plan to establish partnerships to reduce risks in exploration and production, refining, transportation, logistics, distribution and commercialization activities. In cases where we are not the operator, we have limited influence and control over the behavior, performance and costs of operation of such joint arrangements or associations. Despite not having control, we could still be exposed to the risks associated with these operations, including reputational, litigation (where joint and several liability could apply) and government sanction risks, which could have a material adverse effect on our operations, cash flow and financial condition.

For example, our partners or members of a joint arrangement or an association may not be able to meet their financial or other obligations, threatening the viability of the relevant project. Where we are the operator of a joint arrangement, the other partner(s) could still veto or block certain decisions, which could be to our overall detriment.



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The selection and development of our investment projects involve risks that may affect our originally expected results of operation.

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 rates, and financing conditions of projects that may jeopardize our expected rate of return on these projects.

In addition, we face specific risks for oil and gas projects. Despite our experience in the exploration and production of oil in deepwater and ultra-deepwater and the continuous development of studies during the planning stages, the quantity and quality of oil produced in a certain field will only be fully known in the phases of deployment and operation, which may require adjustments throughout the project life cycle.

In addition, we are not immune to potential risks arising from problems in contracting goods and services and in relationships with suppliers, partners, governments and local representatives. All these factors can impact our business and results of operation.

The mobilization and demobilization of our ventures may affect the expectations and dynamics of the communities where we operate, impacting our business and reputation.

Acting with social and environmental responsibility in the communities where we carry out our activities is one of our strategic goals. However, we cannot control the changes in local dynamics and the expectations of the communities where we establish our businesses. The schedule or budget of our projects may be affected, or even hindered or rendered unviable, as a result of social impacts directly and indirectly resulting from our decisions and activities, especially those related to the mobilization and demobilization of our projects, due to lawsuits, financial impacts and consequences on our reputation.

The performance of the companies that have licensed our brand may negatively impact our image and reputation.

In our 2017-2021 Plan, we plan to carry out substantial divestitures and partnerships. A number of these transactions will involve licensing agreements of our brand for future buyers and partners. Failures, errors, accidents in the performance of such partners, and improper use of our brand, among other factors, could potentially negatively impact our image and reputation.

This risk may impact us in cases where the licensed company has a contrasting position with regards to our values of respect for life, people and the environment. As a consequence, there may be situations wherein product failures and/or accidents are not properly mitigated, making our relationship with our stakeholders difficult. We cannot ensure that there will be no impact on our relationship with local governments, which could affect the granting of new environmental licenses or sanctions, and impact on our consumers, who may stop buying our products, thus affecting our image and reputation, negatively impacting us in the business environment and challenging the implementation of our strategies and achievement of our objectives.



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

We operate and have businesses in several countries, particularly in the Gulf of Mexico, in the U.S., in South America, in Europe, in Asia and in Africa, in areas where there may be political, economic and social instabilities. For further information on our operations abroad, see Item 4. "Information on the Company—Exploration and Production." In such regions, external factors may adversely affect the operating results and the financial condition of our subsidiaries in these countries, including: (i) the imposition of price controls; (ii) the imposition of restrictions on hydrocarbon exports; (iii) the fluctuation of local currencies against the real; (iv) nationalization of our oil and gas reserves and our assets; (v) increases in export tax and income tax rates for oil and oil products; and (vi) unilateral (governmental) and contractual institutional changes, including controls on investments and limitations on new projects.

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

The ability to develop, adapt, and access new technologies is fundamental to our competitiveness.

The oil industry is characterized by a strong technological base. Development and accessibility of, and adaptability to, technological change is essential for our competitiveness. In the event some disruptive technology is introduced into the oil industry, changing performance standards, it would be important for us to have access to this technology, which may impact our competitiveness in relation to other companies.

In addition, the availability of technologies that ensure the maintenance of our reserve rates and the viability of production in an efficient manner, as well as the development of new products and processes that respond to environmental regulations and new market trends, play a key role in maintaining our long-term competitiveness. Our pre-salt operations require continuous technological development for exploration, production and continuous cost reduction, which impact our competitiveness in the market.

Climate change could impact our operating results and strategy.

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

The risks associated with climate change could also manifest in difficulties accessing capital due to public image issues with investors; changes in the consumer profile, with reduced consumption of fossil fuels; and energy transitions in the world economy, such as increasing electrification in urban mobility. These factors may have a negative impact on the demand for our products and services and may jeopardize or even impair the implementation and operation of our businesses, adversely impacting our operating and financial results and limiting some of our growth opportunities.



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Business Risks***We are exposed to the effects of fluctuations in the prices of oil, gas and oil products.***

Most of our revenue in Brazil is from sales of crude oil products and, to a lesser extent, natural gas. International prices for oil and oil products are volatile and the prices of our products are strongly influenced by conditions and expectations of world supply and demand. Volatility and uncertainty in international prices for crude oil, oil products and natural gas will most likely continue. See Item 5. "Operating and Financial Review and Prospects—Sales Volumes and Prices" for further information on the variation of oil, oil products and gas prices. Changes in oil prices usually result in changes in the prices of oil products and natural gas.

In October 2016, our board of directors approved a new diesel and gasoline pricing policy. For further information on our current pricing policy, see Item 5. "Operating and Financial Review and Prospects—Sales Volumes and Prices." Since one of the goals of our new pricing policy is to maintain fuel prices in parity with international market trends, substantial or extended declines in international crude oil prices may have a material adverse effect on our business, results of operations and financial condition, and may also affect the value of our proved reserves and lead to a decision to cancel or extend our projects.

In the past, we did not always adjust our prices to reflect parity with the international market trends or reflect exchange rate volatility. Our pricing policy is adapted from time to time by our management; we cannot assure you that our pricing policy will not be changed in the future. In the event our pricing policy changes based on the decisions of the Brazilian federal government, as our controlling shareholder, we may have periods in the future during which our prices for diesel and gasoline will not be at parity with international product prices (See "—Risks Relating to Our Relationship with the Brazilian Federal Government—The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us"). Such change in policy could have a material adverse effect on our businesses, results of operations and financial condition.

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. Events such as the United Kingdom's exit from the European Union (Brexit), the increasing tension between the U.S. and other countries, the escalation of the conflict in Syria, the terrorist attacks and political movements in Europe indicate the growing possibility that new events may occur that affect, directly or indirectly, markets related to the oil industry, which could negatively impact our business and result in substantial losses.

Developments 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 of operations 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 or cash-generating unit is less than its carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount.



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Changes in the economic, regulatory, business or political environment in Brazil or other markets where we operate, such as the recent significant decline in international crude oil and gas prices, the devaluation of the *real* and lower projected economic growth in Brazil, 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. For information about the impairment of certain of our assets, see Item 5. "Operating and Financial Review and Prospects—Results of Operations—2016 compared to 2015" and Item 5. "Operating and Financial Review and Prospects—Results of Operations—2015 compared to 2014", Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates" and Notes 5.2 and 14 to our audited consolidated financial statements.

Future developments in the economic environment, in the oil and gas industry and other factors could result in further substantial impairment charges, adversely affecting our operating results and financial condition.

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 successfully develop our existing reserves, and to obtain additional reserves. The development of the sizable reservoirs in deepwater and ultra-deepwaters, including the pre-salt reservoirs that have been licensed and granted to us by the Brazilian federal government, has demanded and will continue to demand significant capital investments. See Item 4. "Information on the Company—Exploration and Production" and "Information on the Company—Additional Reserves and Production Information," for further information on the capital investments required for exploration and production. We cannot guarantee that we will have or will be able to obtain, in the time frame that we expect, sufficient resources and financing necessary to exploit the reservoirs in deepwater and ultra-deepwaters that have been licensed and granted to us, or that may be licensed and granted to us in the future.

Our ability to obtain additional reserves depends upon exploration activities, which exposes us to the inherent risks of drilling, and may not lead to the discovery of commercially productive crude oil or natural gas reserves. Drilling wells often yields uncertain results, and numerous factors beyond our control (such as unexpected drilling conditions, equipment failures or incidents, and shortages or delays in the availability of drilling rigs and the delivery of equipment) may cause drilling 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 concessions and to explore existing concessions.

Also, our ability to maintain our long-term objectives for oil production partially depends on conducting major projects and operations in joint arrangements or in partnership with other oil and gas companies. If we or our partners fail or are unable to meet with respective payment obligations under applicable contractual arrangements, this may threaten the viability of a given project, and may result either in a delay in, or cancellation of, such project, which could bring regulatory sanctions to the relevant joint arrangement or partnership, an increase or dilution of our interest in such project or our withdrawal from such project, any of which could have a material adverse effect on our results of operations and financial condition. These factors could impede us from participating in further bidding rounds in the future and limit future exploration. We may not be able to maintain our long-term objectives for oil production unless we conduct successful exploration and development activities of our large reservoirs in a timely manner.



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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, natural gas and NGLs that geological and engineering data demonstrate with reasonable certainty to be recoverable from known reservoirs under existing economic and operating conditions (i.e., 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 present uncertainties and contingencies that are beyond our control. If the geological and engineering data that we use to measure our reserves are not accurate, our reserves may be significantly lower than the ones currently indicated in the volume estimates of our portfolio and reported by the certification companies. Substantial downward revisions in our reserve estimates could lead to lower future production, which could have an adverse effect on our results of operations and financial condition. For further information relating to our crude oil and natural gas estimates, see Item 4. “Information on the Company—Additional Reserves and Production Information”, Item 5. “Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates”, “Note 5.1 and Supplementary information on Oil and Gas Exploration and Production to our audited consolidated financial statements.”

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 the concessionaire 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 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. For further information, see Item 4. “Information on the Company—Regulation of the Oil and Gas Industry in Brazil—Concession Regime for Oil and Gas.”

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.

Risks Relating to Brazil and Our Relationship with the Brazilian Federal Government

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

Our board of directors is composed of a minimum of seven and a maximum of ten members, elected at the annual general meeting for a term of up to two years, with a maximum of three consecutive reelections permitted. The majority of nominations of candidates for our board of directors depends on appointment by the federal government, our controlling shareholder.

Elections in Brazil occur every four years, and changes in elected representatives may lead to a change of the members of our board of directors appointed by the controlling shareholder, which may further impact the management of our business strategy and guidelines.

Moreover, the Brazilian federal government may pursue certain of its macroeconomic and social objectives through us. Brazilian law requires that the Brazilian federal government own 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, a majority of 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.



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Accordingly, we may make investments, incur costs and engage in sales with parties or on terms that may have an adverse effect on our results of operations and financial condition. In particular, we may have to assist the Brazilian federal government in ensuring that the supply and pricing of crude oil and oil products in Brazil meets Brazilian consumption requirements. Prior to January 2002, prices for crude oil and oil products were regulated by the Brazilian federal government, occasionally set below prices prevailing in the world oil markets. We cannot assure you that price controls will not be reinstated in Brazil.

Our investment budget is subject to approval by the Brazilian federal government, and failure to obtain approval of our planned investments could adversely affect our results of operations and financial condition.

The Brazilian federal government maintains control over our investment budget and establishes limits on our investments and long-term debt. As a state-controlled entity, we must submit our proposed annual budgets to the MPBM and the MME. Following review by these governmental authorities, the Brazilian Congress must approve our budget. Our approved budget may reduce or alter our proposed investments and incurrence of new debt, and we may be unable to obtain financing that does not require Brazilian federal government approval. As a result, we may not be able to make all the investments we envision, including those we have agreed to make to expand and develop our crude oil and natural gas fields, which may adversely affect our results of operations and financial condition.

Fragility in the performance of the Brazilian economy, instability in the political environment, 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. The Brazilian federal government's economic policies may have important effects on Brazilian companies, including us, and on market conditions and prices of Brazilian securities. Our financial condition and results of operations may be adversely affected by the following factors and the Brazilian federal government's response to these factors:

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



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Historically, the country's political scenario has influenced the performance of the Brazilian economy and political crises have affected the confidence of investors and the general public, which resulted in economic downturn and heightened volatility in the securities issued abroad by Brazilian companies. Although Brazilian authorities have publicly described Petrobras as a victim of the alleged illegal conduct identified during the Lava Jato investigation, any developments in the Lava Jato investigation (foreseeable and unforeseeable) could have a material adverse effect on the Brazilian economy and on our results of operations and financial condition.

Brazil has historically experienced high rates of inflation, particularly prior to 1995. Inflation, as well as government efforts to combat inflation, had significant negative effects on the Brazilian economy. More recently, inflation rates were 6.29% in 2016, 10.67% in 2015 and 6.41% in 2014, as measured by the IPCA, the National Consumer Price Index (*Índice Nacional de Preços ao Consumidor Amplo*), compiled by IBGE. Brazil may experience high levels of inflation in the future and the Brazilian government may introduce policies to reduce inflationary pressures, which could have the effect of reducing the overall performance of the Brazilian economy. Some of these policies may have an effect on our ability to access foreign capital or reduce our ability to execute our future business and management plans, particularly for those projects that rely on foreign partners.

The Brazilian government's measures to control inflation have often included maintaining a tight monetary policy with high *real* interest rates. These policies have contributed to limiting the size and attractiveness of the local debt markets, requiring borrowers like us to seek foreign currency funding in the international capital markets. To the extent that there is economic uncertainty in Brazil, which weakens our ability to obtain external financing on favorable terms, the local Brazilian market may be insufficient to meet our financing needs, which in turn may have a material adverse effect on us.

Additionally, since 2011, Brazil has been experiencing an economic slowdown culminating in a Gross Domestic Product, or GDP, decrease of 3.6% in 2016. GDP growth rates were -3.8% in 2015, 0.5% in 2014, 3.0% in 2013 and 1.9% in 2012 (according to the GDP review released by IBGE). Our results of operations and financial condition have been, and will continue to be, affected by the growth rate of GDP in Brazil because a substantial portion of our oil products are sold in Brazil. We cannot ensure that GDP will increase or remain stable in the future. Future developments in the Brazilian economy may affect Brazil's growth rates and, consequently, the consumption of our oil products. As a result, these developments could impair our results of operations and financial condition.

Allegations of political corruption against the Brazilian federal government and the Brazilian legislative branch 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 Petrobras), 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.



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Risks Relating to Our Equity and Debt Securities

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.

Petrobras shares are among the most liquid traded on the São Paulo Stock Exchange, or BM&FBOVESPA, 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.

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 New York Stock Exchange and the Luxembourg Stock Exchange and trade on the NYSE Euronext and Euro MTF (Multilateral Trading Facility) 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.

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, The Bank of New York Mellon, 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 Item 10. "Additional Information—Memorandum and Articles of Incorporation—Preemptive Rights."

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 forfeiting Brazilian tax 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. Such remittances under an ADR program are subject to a specific tax treatment in Brazil that may be more favorable to a foreign investor if compared to remitting gains originated from securities directly acquired by the investor in the Brazilian regulated stock markets. Therefore, an investor who opts to exchange ADSs for the underlying common or preferred share may be subject to less favorable tax treatment on gains with respect to these investments.



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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 Annex I 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 BM&FBOVESPA. 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 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 US, and under Brazilian law, shareholders in Brazilian companies do not have standing to bring a class action, and under our by-laws must, generally with respect to disputes concerning rules regarding the operation of the capital markets, arbitrate any such disputes. See Item 10. "Additional Information—Memorandum and Articles of Incorporation—Dispute Resolution."

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.



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In addition, a portion of our ADSs represents our preferred shares. Under Brazilian law and our bylaws, holders of preferred shares do not have the right to vote in shareholders' meetings. This means, among other things, that holders of ADSs representing preferred shares are not entitled to vote on important corporate transactions or decisions. See Item 10. "Additional Information—Memorandum and Articles of Incorporation—Voting Rights."

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.



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ITEM 4. INFORMATION ON THE COMPANY

History and Development

Petróleo Brasileiro S.A.—Petrobras was incorporated in 1953 as the exclusive agent to conduct the Brazilian federal government’s hydrocarbon activities. We began operations in 1954 and since then have been carrying out crude oil and natural gas production and refining activities in Brazil on behalf of the government. As of December 31, 2016, the Brazilian federal government owned 28.67% of our outstanding capital stock and 50.26% of our voting shares. See Item 7. “Major Shareholders and Related Party Transactions—Major Shareholders.” Our common and preferred shares have been traded on the BM&FBOVESPA since 1968 and on the NYSE in the form of ADSs since 2000.

We lost our exclusive right to carry out oil and gas activities in Brazil when the Brazilian Congress amended the Brazilian Constitution, and subsequently passed Law No. 9,478/1997 in 1997. Enacted as part of a comprehensive reform of the oil and gas regulatory system, this law authorized the Brazilian federal government to contract with any state or privately-owned company to carry out all activities related to oil, natural gas and their respective products. This new law established a concession-based regulatory framework, ended our exclusive right to carry out oil and gas activities, and allowed open competition in all aspects of the oil and gas industry in Brazil. The law also created an independent regulatory agency, the ANP, to regulate the oil, natural gas and renewable fuel industry in Brazil and to create a competitive environment in the oil and gas sector. See Item 4. “Information on the Company—Regulation of the Oil and Gas Industry in Brazil—Price Regulation.”

Following the discovery of large pre-salt reservoirs offshore Brazil, Congress passed in 2010 additional laws intended to regulate exploration and production activities in the pre-salt area, as well as other potentially strategic areas not already under concession. Under these new laws, we acquired from the Brazilian federal government through an Assignment Agreement the right to explore and produce up to five bnboe of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas. Additionally, on December 2, 2013, based on these laws enacted in 2010, we executed our first agreement with the Brazilian federal government under a production sharing regime for the Libra field. On November 29, 2016, Law No. 13.365/2016 was enacted, which no longer requires us to be the operator in this area, but provides us with a right of first refusal to do so. It is no longer mandatory for us to be the exclusive operator. See Item 4. “Information on the Company—Regulation of the Oil and Gas Industry in Brazil”, Item 10. “Additional Information—Material Contracts—Assignment Agreement” and Item 10. “Additional Information—Material Contracts—Production Sharing Agreement.”

We operate through subsidiaries, joint ventures, joint operations, consolidated structured entities and associated companies established in Brazil and many other countries. Our principal executive office is located at Avenida República do Chile 65, 20031-912 Rio de Janeiro, RJ, Brazil, our telephone number is (55-21) 3224-4477 and our website is www.petrobras.com.br. The information on our website, which might be accessible through a hyperlink resulting from this URL, is not and shall not be deemed to be incorporated into this annual report.



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Overview of the Group

We are one of the world's largest integrated oil and gas companies, operating principally in Brazil where we are the dominant participant. As a result of our legacy as Brazil's former sole producer and supplier of crude oil and oil products and our strong and continuous commitment to find and develop oil fields in Brazil, we have a large base of proved reserves and operate and produce most of Brazil's oil and gas production. In 2016, our average domestic daily oil production was 2,144 mbbl/d, which represents more than 85% of Brazil's total oil production. Most of our domestic 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 development and production for our new discoveries. Additionally, we have developed special expertise in deepwater exploration and production from 47 years of developing Brazil's offshore basins. We are applying the technical expertise we gained through developing the Campos Basin to the Santos Basin, which is expected to be the principal source of our future growth in proved reserves and oil production.

As of December 31, 2016, we had proved developed oil and gas reserves of 5,097.5 mmboe and proved undeveloped reserves of 4,372.8 mmboe in Brazil. The development of this large reserve base and the exploration of pre-salt areas have demanded, and will continue to demand, significant investments and the growth of our operations.

We operate substantially all of the refining capacity in Brazil. Most of our refineries are located in southeastern 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. Our current domestic crude distillation capacity is 2,176 mbbl/d and our domestic refining throughput in 2016 was 1,819 mbbl/d. We meet our demand for oil products through a planned combination of oil products imports and domestic refining of crude oil, which seeks to optimize our margins. We are also involved in the production of petrochemicals. We distribute oil products through our own retail network and through wholesalers.

We participate in most aspects of the Brazilian natural gas market, including the logistics and processing of natural gas. To meet our domestic demand, we process natural gas derived from our onshore and offshore (mainly from fields in the Campos, Espírito Santo and Santos Basins) production, import natural gas from Bolivia, and to the extent necessary, import LNG through our regasification terminals. We also participate in the domestic power market primarily through our investments in gas-fired, fuel oil and diesel oil thermoelectric power plants and in renewable energy. In addition, we participate in the fertilizer business.

Outside of Brazil, we operate in 9 countries. In Latin America, our operations extend from exploration and production to marketing, retail services and natural gas. In North America, we produce oil and gas and have refining operations in the United States. In Africa, through a joint venture, we produce oil in Nigeria. In Japan, we sold 100% of the shares we owned in Nansei Seikyu (NSS), located on the island of Okinawa, as described below.

Comprehensive information and tables on reserves and production is presented at the end of Item 4. See "Information on the Company—Additional Reserves and Production Information."

We have incurred a substantial amount of debt in order to finance the capital expenditures needed to meet our long term objectives, 65% of which (principal), or US\$75 billion, will mature in the next five years. For more information about our indebtedness levels, see "– Risk Factors – 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 of operations" and "Item 5. "Operating and Financial Review and Prospects—Liquidity and Capital Resources."



In addition, we take social responsibility seriously, and have guidelines involving the management of social risks, social-environmental investments and community relations. In 2016, we approved our social risk standard, which identifies and classifies social risks (including risks involving human rights in the supply chain and interaction with local communities), based on their likelihood of potential impact. The results of our analysis of these risks supports our decision-making process. We have an executive committee for communication and social responsibility to advise our executive board and, in 2016, we invested approximately US\$34 million in 470 initiatives related to the socio-environmental projects we support. In addition, in 2016, (i) we strengthened our relationship with local communities, by developing action plans in 193 communities that neighbor our operational units and (ii) we signed on to the sixth edition of the Pro-Equity Gender and Race Program, an initiative to promote equality between men and women in the labor market, supported by the UN Women, the International Labor Organization and the Secretariat for Policies to Promote Racial Equality.

Our activities are currently organized into five business segments:

- **Exploration and Production:** this segment covers the activities of exploration, development and production of crude oil, LNG and natural gas in Brazil and abroad, for the primary purpose of supplying our domestic refineries and selling surplus crude oil and oil products produced in the natural gas processing plants to the domestic and foreign markets. The E&P segment also operates through partnerships with other companies;
- **Refining, Transportation and Marketing:** this segment covers the activities of refining, logistics, transport and trading of crude oil and oil products in Brazil and abroad, exports of ethanol, extraction and processing of shale, as well as holding interests in petrochemical companies in Brazil;
- **Gas and Power:** this segment covers the activities of transportation and trading of natural gas produced in Brazil and abroad, imported natural gas, transportation and trading of LNG, generation and trading of electricity, as well as holding interests in transporters and distributors of natural gas and in thermoelectric power plants in Brazil, in addition to being responsible for the fertilizer business;
- **Distribution:** this segment covers the activities of Petrobras Distribuidora S.A, which sells oil products, ethanol and vehicle natural gas in Brazil. This segment also includes distribution of oil products operations abroad (South America); and
- **Biofuel:** this business segment covers the activities of production of biodiesel and its co-products, as well as ethanol-related activities such as equity investments, production and trading of ethanol, sugar and the surplus electric power generated from sugarcane bagasse.

Additionally, we have a Corporate segment that has activities that are not attributed to the other segments, notably 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. For further information regarding our business segments, see Notes 4.2 and 29 to our audited consolidated financial statements.



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The following table sets forth key information for each business segment in 2016:

Key Information by Business Segment, 2016								
	Exploration and Production	Refining, Transportation and Marketing	Gas and Power	Biofuel	Distribution	Corporate	Eliminations	Group Total
				(US\$ million)				
Sales revenues . . .	33,675	62,588	9,401	240	27,927	—	(52,426)	81,405
Income (loss) before income taxes	2,055	8,644	1,252	(351)	96	(13,723)	(1,638)	(3,665)
Total assets at December 31 . .	140,096	52,580	19,488	522	6,230	33,769	(5,702)	246,983
Capital expenditures and investments . . .	13,509	1,168	717	96	139	230	—	15,859

As part of our 2017-2021 Plan, our partnership and divestment program aims to improve our operating efficiencies, returns on capital, and generate additional cash to service our debt. The partnership and divestment program contemplates the sale of minority, majority or entire positions in certain of our subsidiaries, affiliates, and assets to strategic or financial investors or through public offerings.

Based on our internal valuation of assets that are considered for sale pursuant to the partnership and divestment program for the period 2017-2018, our goal is to receive proceeds of approximately US\$21 billion. Nonetheless, changes in market conditions or in our evaluation of our different businesses, among other factors, may affect ongoing negotiations or the feasibility of potential transactions. In addition, the sale of these assets will impact our future results of operations.



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In 2015, 2016 and the beginning of 2017, we completed, among others, the following partnerships and divestments.

<u>Signing Date</u>	<u>Closing Date</u>	<u>Transaction</u>	<u>Transaction Nominal Value* (US\$ billion)</u>
03/31/2015	03/31/2015	Disposal of assets in the Southern Basin (“Bacia Austral”), in the province of Santa Cruz, in Argentina	0.1
10/23/2015	12/28/2015	Sale of 49% of Petrobras Gás S.A. (Gaspetro)	0.5
05/13/2016	07/27/2016	Sale of the entire 67.19% interest in Petrobras Argentina	0.9
07/29/2016	11/22/2016	Sale of the entire 66% interest in the exploratory block BM-S-8, in the Santos Basin	2.5
10/17/2016	12/28/2016	Sale of 100% of the shares of Nansei Seikyu (NSS), located on the island of Okinawa, in Japan	0.2
07/22/2016	01/04/2017	Sale of 100% of Petrobras Chile Distribución Ltda.	0.5
12/28/2016	02/03/2017	Sale of the entire 45.97% interest in Guarani S.A.	0.2
12/15/2016	02/23/2017	Receipt of 24 million new common shares issued by São Martinho S.A., as payment for the merger, by São Martinho, of the 49% interest held by Petrobras Biocombustíveis in Nova Fronteira Biocombustível S.A.	0.1**
09/23/2016	04/04/2017	Sale of 90% of the shares of Nova Transportadora do Sudeste (NTS), a natural gas transportation company in Southeast Brazil (total transaction value includes debt settlement)	5.2
Total			10.2

* Considering amounts received and future payments related to the transaction.

** Based on the average price weighted by trading volume of São Martinho shares in the 30 days prior to signing of contractual instruments of the merger.

In 2015, 2016, and early 2017, up to April 13, 2017, we received proceeds from the sale of assets under our partnership and divestment program amounting to approximately US\$7.7 billion, mainly resulting from the sale of (i) Nova Transportadora do Sudeste, (ii) the Carcará Oilfield, and (iii) Petrobras Argentina.



In addition, we have signed agreements in transactions relating to our partnership and divestment program, which are currently pending closing or payment. Among others, the agreements listed below were signed in 2016. Completion of such transactions is subject to compliance with contractual and legal conditions precedent. Taking into account the signed deals in 2015-2016, our partnership and divestment program amounted to US\$13.6 billion, out of our US\$15.1 billion goal announced for the 2015-2016 period. Some of our divestment projects that were in progress had been suspended due to injunctions issued by Brazilian courts as part of ongoing judicial proceedings. Among others, (i) the partial sale of our share interest in BR Distribuidora and (ii) the assignment of concession rights in Baúna and Tartaruga Verde Fields were suspended as a result of these judicial injunctions. Moreover, on March 15, 2017, the TCU reversed its preliminary decision from December 2016 that had also prevented us from initiating new divestment projects and from concluding those projects that were in progress. Despite the fact that the reversal of the TCU's preliminary decision allowed us to reinstate our partnerships and divestments program under modified procedures, some of these projects remained suspended by virtue of the judicial injunctions mentioned above. In order to comply with the new divestment process methodology approved by the TCU, which requires a more transparent process for the benefit of our investors and is now applicable to all of our divestment projects, we terminated all of our divestment projects that were currently in progress (including the partial sale of our share interest in BR Distribuidora and the assignment of concession rights in Baúna and Tartaruga Verde Fields which had remained suspended by virtue of the judicial injunctions mentioned above). For further information on the TCU awards and other judicial proceedings related to our divestment program, see Item 8. "Financial Information – Legal Proceedings – Legal Proceedings and Preliminary Procedure on TCU – Divestments."

In 2016, we signed the agreements listed below, which are still pending closing.

Signing Date	Transaction	Transaction Nominal Value* (US\$ billion)
11/17/2016	Sale of 100% of the shares held by Petrobras in Liquigás Distribuidora S.A.	0.8**
12/28/2016	Sale of all the shares held by Petrobras in its wholly-owned subsidiaries Companhia Petroquímica de Pernambuco (PetroquímicaSuape) and Companhia Integrada Têxtil de Pernambuco (Citepe)	0.4
12/28/2016	Strategic Alliance with the French Company Total in the upstream and downstream segments. We have signed contracts for (i) joint exploratory studies in the region of the Equatorial Margin and the Santos Basin; and (ii) a technological partnership agreement in the areas of digital petrophysics, geological processing and underwater production systems. In addition, the contracts provide for the assignment of 22.5% of Petrobras' rights to Total in the concession area "Iara"; transfer of 35% of the rights, as well as operation, of the concession of Lapa field Block BM-S-9, leaving Petrobras with 10%; transfer of 50% of Petrobras' participation in Termobahia, including the thermoelectric plants Rômulo de Almeida e Celso Furtado, with the option of acquisition by Petrobras of 20% of the participation in block 2 in the Perdido Foldbelt area in the Mexican sector of the Gulf of Mexico.	2.2
Total		3.4

* Considering amounts to be received at the closing of the transaction and subsequent payments.

** Considering the exchange rate as of December 31, 2016.



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In addition, our board of directors has approved changes to our organizational structure and our governance and management model, which resulted in the elimination of 43% of all management functions in non-operational units, which we expect will lead to cost savings amounting up to R\$1.8 billion (US\$507 million) per year. This new model seeks to align our management and our structure to our 2017-2021 Plan and our current business environment, promote cost savings and strengthen compliance and internal controls processes. It also involves the integration of activities among our business and corporate segments, and the combination of areas to enhance accountability for business results. For further information on our voluntary separation incentive program, see Item 6. “Directors, Senior Management and Employees—Employees and Labor Relations—Voluntary Separation Incentive Program—PIDV.”

2017-2021 Plan

Our board of directors approved our 2017-2021 Plan in September 2016. Our 2017-2021 Plan contains five key elements of our vision that are broken down into strategies, with systematic follow-up, as detailed below.

- *Integrated energy company:* (i) reduce our risk in operations related to our exploration and production, refining, transportation, logistics, distribution and marketing through partnerships and divestments; (ii) restructure our energy business by consolidating thermoelectric assets and other businesses in this segment, seeking an alternative that maximizes value; and (iii) review the positioning of our lubricant business in order to maximize value generation.
- *Focus on oil and gas:* (i) manage our exploratory portfolio, aiming to maximize return and guarantee the sustainability of our oil and gas production; (ii) manage our portfolio of exploration and production projects in an integrated way; (iii) optimize our business portfolio by fully exiting biofuel production, distribution of LPG, fertilizer production and petrochemical investments, and preserving technological competencies in areas with potential for development; and (iv) maximize value generation in the gas chain, following regulatory evolution, ensuring the monetization of proprietary production and optimizing participation in the chain of natural gas as a fuel of transition for the long term.
- *Evolve with society:* (i) strengthen our internal controls and governance, ensuring the transparency and effectiveness of our program to prevent and combat deviations, without decelerating our decision making process; (ii) strengthen our relationship and reputation with all stakeholders, including our controlling and supervisory bodies; (iii) maintain transparent and proactive dialogue with all stakeholders, using the best and most modern internal and external communication practices; and (iv) align social responsibility actions with our projects.
- *Value Generation:* (i) strengthen our reservoir management to maximize the value of our exploration and production contracts in all regulatory regimes, while searching for opportunities for continued incorporation of reserves; (ii) ensure disciplined use of capital and shareholder returns in all of our projects; (iii) continuously maximize productivity and cost savings in line with best international practices; (iv) promote market price policies and maximize margins in the value chain; (v) act with emphasis on partnerships and divestments as key elements for the value generation; (vi) promote the management of our workforce in a participatory environment and a culture of mutual trust focused on results that add value and encourage safety, ethics, responsibility, meritocracy, simplicity and compliance; and (vii) manage our procurement process with a focus on value that is aligned with international standards and metrics and meets compliance requirements, maintains flexibility to adverse scenarios and demand volatility, and contributes to the development of the chain as a whole.
- *Technical capacity:* (i) ensure the constant development of technological skills and creating alternatives for competitive action in low carbon technologies, renewable energy and refining-petrochemical integration; (ii) prioritize the development of production in deepwaters, acting primarily through partnerships; and (iii) enable the design and implementation of projects with low oil balance prices, focused on safety and compliance with environmental requirements.



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Exploration and Production

Exploration and Production Key Statistics

	2016	2015	2014
	(US\$ million)		
Exploration and Production:			
Sales revenues	33,675	35,680	68,611
Income (loss) before income taxes	2,055	(3,683)	21,850
Property, plant and equipment	123,056	109,724	140,582
Capital expenditures and investments	13,509	19,131	25,500

Our oil and gas exploration and production activities are the largest components of our investment portfolio. Our activities are concentrated in deepwater oil reservoirs in Brazil. Our domestic activities represented 94% of our worldwide production in 2016 and accounted for 98% of our worldwide reserves on December 31, 2016. Over the last five years, approximately 90% of our total Brazilian production has been oil.

Brazil's richest oil fields are located offshore, most of them in deepwaters. We have been conducting offshore exploration and production activities in the Campos Basin since 1971, when we started exploration, and our major discoveries were made in deepwater and ultra-deepwater. Our technology and expertise have created a competitive advantage for us and we have become globally recognized as innovators in the technology required to explore and produce hydrocarbons in deep and ultra-deepwaters. In 2016, offshore production accounted for 92% of our production in Brazil and deepwater production accounted for 86% of our production in Brazil. According to production data from WoodMackenzie, we operate more production (on a boe basis) from fields in deepwater and ultra-deepwater than any other company.

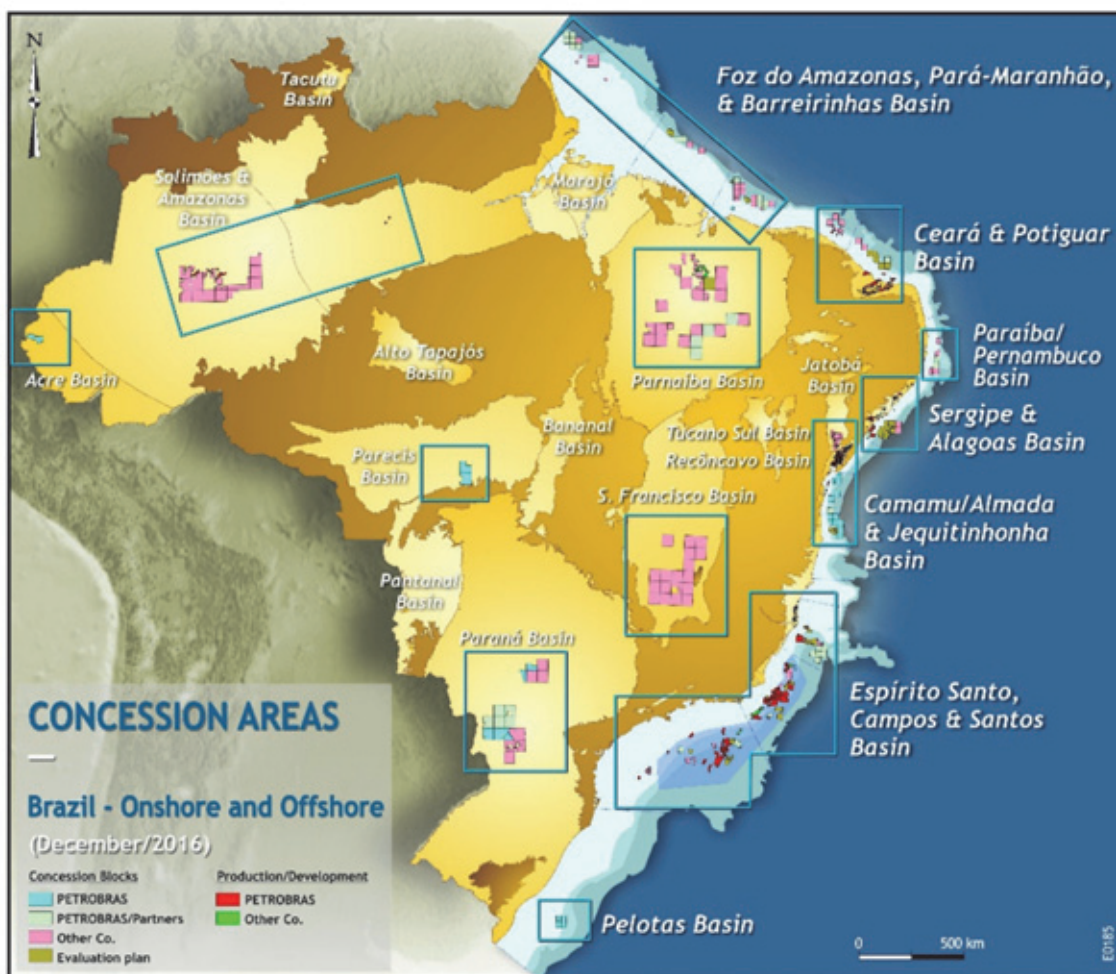
Historically, we focused our offshore exploration and production activities on sandstone turbidite reservoirs, located primarily in the Campos Basin. In 2006, we were successful in drilling through a massive salt layer off the Brazilian coast that stretches from the Campos to the Santos Basin. This pre-salt area has many large carbonate reservoirs with well-preserved oil, leading to a number of important discoveries. This pre-salt province occupies an area of approximately 149,000 km² (36.8 million acres), of which we have rights to produce from 16% of the total area (around 23,340 km² or 5.8 million acres), through acreage assigned to us under Concession Agreements, the Assignment Agreement and a Production Sharing Agreement.

The pre-salt reservoirs we have discovered are located in deepwater and ultra-deepwaters at total depths of up to 7,000 meters (22,965 feet). The southern part of the pre-salt province consists of the Santos Basin, where the salt layer is approximately two kilometers thick. In the northern part of the pre-salt province, the salt is thinner and much of the oil has migrated through the salt to the post-salt sandstone reservoirs of the Campos Basin. While some of the oil that formed has migrated, we still have made important discoveries in pre-salt reservoirs in the Campos Basin, as we drilled through the salt layers. Most of our current and future capital will be committed to developing the oil found in the pre-salt province, with an emphasis on the Santos Basin, given the size of its reservoirs and its potential.



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The following map shows our exploration and production areas in Brazil as of December 2016.



Campos Basin

The Campos Basin is the most prolific oil and gas basin in Brazil in terms of proved hydrocarbon reserves and annual production. Our activities in the basin began in 1971 and we are now focused on maintaining our production in relatively mature fields. We have been able to mitigate the natural decline in mature fields of this basin by installing new production systems, tapping pre-salt reservoirs with both new and existing production units and improving operational efficiency. All of our licenses in the Campos Basin are under concession agreements. See “—Regulation of the Oil and Gas Industry in Brazil.”

Most of our production in the Campos Basin is from post-salt reservoirs, but pre-salt reservoirs in the basin are a growing source of production. We first began pre-salt oil production in 2008 in the Jubarte field located in the Parque das Baleias region. In 2016, the Campos Basin pre-salt area average production of oil was 245.4 mbbbl/d, which represents an increase of 1% compared to 2015. We have a 100% interest in oil produced from the Campos Basin pre-salt reservoirs.



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Santos Basin

The Santos Basin is one of the most promising offshore exploration and production areas in the world, containing the southern and most prolific part of the pre-salt province. Our activities in the Santos Basin began with the acquisition of eight blocks through public auction under concession agreements in 2000 and 2001. In 2010, we entered into an Assignment Agreement with the Brazilian federal government, under which we were assigned exclusive rights to explore and produce five billion barrels of oil equivalents in the Santos Basin. In 2013, a consortium led by Petrobras (holding a 40% interest and acting as exclusive operator of the area), Shell (20% interest), Total (20% interest), CNPC (10% interest) and CNOOC (10% interest) was awarded the rights and obligations to explore and develop the Libra block in the ultra-deepwaters of the Santos Basin in the first production-sharing regime auction ever held in Brazil. See “—Regulation of the Oil and Gas Industry in Brazil” and Item 10. “Additional Information—Material Contracts.”

The Assignment Agreement and Libra areas are currently in development and appraisal phases, respectively, and have shown very successful results and will ensure our long-term reserves and production curve. In 2016, we commenced a new bid process for the Libra Pilot Project FPSO, following the cancellation of the previous bid process, which began on August 12, 2015, because it resulted in a proposal with an abnormally high price compared to what could be expected in the international market.

We have been increasing the pre-salt oil production in the Santos Basin by, on average, 91% year over year since its first oil production, in 2009, with an average productivity of 23 mbbbl/d per well on the new wells. We continue to concentrate our efforts on gathering information about the pre-salt reserves through EWTs (Extended Well Tests) and pilots. We currently have two units that can perform EWTs in the Santos Basin pre-salt area. In 2016, one EWT was performed in Búzios field and another in Sépia field. There is another on stream in Búzios field.

Other Basins

We produce hydrocarbons and hold exploration acreage in 18 other basins in Brazil. While our onshore production is primarily in mature fields, we plan to sustain and slightly increase production in these fields by enhancing recovery methods. The most significant potential for exploratory success within our other basins is the equatorial margin and east margin.

South America

We conduct exploration and production activities in Argentina, Bolivia, and Colombia.

- In **Argentina**, through our 100% interest in Petrobras Operaciones S.A., or POSA. Our oil and gas production is concentrated in the Neuquén Basin.
- In **Bolivia**, our oil and gas production comes principally from the San Alberto and San Antonio fields, which are operated mainly to supply gas to Brazil and Bolivia.
- In **Colombia**, our portfolio includes the Tayrona offshore exploration block and the Villarica Norte onshore exploration block.

North America

- In the **United States**, we focus on deepwater fields in the Gulf of Mexico. Our production in the United States during 2016 originated mainly from the Cascade, Chinook, Saint Malo, Lucius, Hadrian South and Cottonwood fields. The Cascade and Chinook development project was the first in the Gulf of Mexico to use an FPSO.
- In **Mexico**, we have held non-risk service contracts through our joint venture with PTD Servicios Multiplos SRL for the Cuervito and Fronterizo blocks in the Burgos Basin since 2003. Under these service contracts, we receive fees for our services.



Africa

We explore oil and gas opportunities in Africa exclusively through our 50% interest in a joint venture with BTG Pactual, Petrobras Oil & Gas (PO&G). The assets of this joint venture include the Agbami and Akpo fields, in Nigeria, which are both producing oil. PO&G also has a 16% interest in the Egina field project, currently in its development stage while the Preowei and Egina South discoveries are under appraisal. In 2016, PO&G relinquished Block 26 in Angola and Block 8 in Tanzania. PO&G also withdrew from the joint operation agreements in relation to the Ntsina Marin and Mbeli Marin permits in Gabon in June 2016. According to such agreements, the respective participating interests have yet to be transferred to the remaining joint venture partner.

Oil and Gas Production Activities

In 2016, our oil and gas worldwide production averaged 2.55 Mboe/d, a 1% decline compared to the previous year (2.58 Mboe/d), and our oil worldwide production averaged 2.22 Mbb/d, the same level compared to the previous year. Brazil represented 94% of our worldwide oil and gas production in 2016.

Our domestic oil production in 2016 was of 2,144 mmbbl/d, 0.7% higher than in 2015 and in line with the 2,145 mmbbl/d target projected in our 2015-2019 Plan.

Pre-salt operated oil production averaged 1.02 Mbb/d, the highest ever, representing a 33% increase compared to the previous year. Pre-salt oil production reached 1.34 Mbb/d on December 29, 2016, achieving a new daily production record, with only 65 producing wells. Of these wells, 42 are located in the Santos Basin and were responsible for 48.2% of that production (646.5 mmb/d).

Despite the natural gas output, which decreased by 5% compared to the previous year, our domestic total production averaged 2.39 Mboe/d in 2016, the same level compared to the previous year.

The main highlights for production expansion in 2016 were the significant production growth in the Lula field (Iracema Norte and Iracema Sul areas, with FPSOs Cidade de Itaguaí and Cidade de Mangaratiba) and in the Sapinhoá field (FPSO Cidade de Ilhabela), located in the Santos Basin's pre-salt layer, in addition to the Parque das Baleias area (P-58), in the Espírito Santo state section of the Campos Basin. Additionally, operations for three production systems started, two of which are located in the Lula field (FPSO Cidade de Maricá and FPSO Cidade de Saquarema) and one in Lapa (FPSO Cidade de Caraguatatuba), located in the Santos Basin's pre-salt layer.

Oil and gas production abroad averaged 161.1 mboe/d in 2016, a 15% decrease from the 190.1 mboe/d recorded in 2015, primarily due to executed divestments, such as the sale of Petrobras Argentina.

Our average production per region as of December 31, 2016, December 31, 2015 and December 31, 2014 is summarized in the table below:

Production	Oil (mmb/d)			Gas (mmcf/d)			Total (mboe/d)			Stationary production units		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Brazil	2,144	2,128	2,034	1,459	1,544	1,500	2,387	2,386	2,284	122	121	123
Campos Basin	1,358	1,488	1,526	525	577	548	1,446	1,584	1,617	55	56	56
Santos Basin	557	395	247	528	487	413	645	477	316	15	12	11
Other Basins	229	245	261	405	479	539	296	325	352	51	52	55
South America (excluding Brazil)	22	39	57	395	475	546	88	118	148	0	0	0
North America	33	31	27	88	67	13	48	42	30	2	2	2
Africa	0	0	0	0	0	0	0	0	0	0	0	0
Equity and non-consolidated affiliates	25	30	31	0	1	2	25	30	32	0	0	0
South America (excluding Brazil)	1	3	5	0.3	1	2	1	4	5	0	0	0
Africa	24	27	27	0	0	0	24	27	27	0	0	0
Total	2,224	2,228	2,150	2,027	2,087	2,061	2,547	2,575	2,494	124	123	125



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We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$2.3 billion with respect to our domestic exploration and production producing properties due to (i) the appreciation of the *real* against the U.S. dollar, (ii) the review of our price assumptions, (iii) our annual reviews of oil and gas reserves, (iv) decommissioning cost estimates and (v) a higher discount rate following the increase in Brazil's risk premium. This amount also includes an impairment reversal relating to Centro Sul group, amounting to US\$415 million, was recognized due to the higher estimates of reserves and production and the lower estimates of operating expenses. The decommissioning of a unit, which had high operational costs, and the replacement of another unit by an investment in a new processing plant, which was committed during the third quarter of 2016, also contributed to such impairment reversal. We have also recognized impairment losses of US\$0.9 billion with respect to oil and gas production and drilling equipment, which were not directly related to producing properties in Brazil, mainly due to uncertainties over the ongoing hulls construction of the FPSOs P-71, P-72 and P-73.

For the fiscal year ended December 31, 2015, we previously recognized impairment losses of US\$8.7 billion with respect to our domestic exploration and production producing properties due to the impact of the decline in international crude oil prices on the price assumptions for certain of our domestic crude oil and natural gas producing properties, including Papa-Terra, Centro Sul group, Uruguá group, Espadarte, among others, the use of a higher discount rate (reflecting an increase in Brazil's risk premium), as well as the geological revision of Papa-Terra reservoir. We have also recognized impairment losses of US\$0.5 billion with respect to oil and gas production and drilling equipment, which were not directly related to producing properties in Brazil, mainly related to the idle capacity of two drilling rigs in the future and to the use of a higher discount rate. For the fiscal year ended December 31, 2015, we also recognized impairment losses of US\$0.6 billion in E&P assets abroad, mainly in productive properties located in the United States (US\$0.4 billion) and Bolivia (US\$0.2 billion), attributable to the decline in international crude oil prices.

For the fiscal year ended December 31, 2014, we previously recognized impairment losses of US\$1.6 billion with respect to our domestic exploration and production operations mainly related to the impact of the decline in international crude oil prices on our price assumptions and were principally recognized for the following fields: Frade, Pirapitanga, Tambuatá, Carapicu and Piracucá. We also recognized impairment losses for the fiscal year ended December 31, 2014 of US\$0.5 billion with respect to oil and gas production and drilling equipment located in Brazil, unrelated to crude oil and natural gas producing properties, mainly related to idle capacity of two drilling rigs and to the demobilization of two oil platforms, which were not deployed in any oil and gas property as of December 31, 2014. For the fiscal year ended December 31 2014, we also recognized impairment losses of US\$1.7 billion in E&P assets abroad, mainly in Cascade and Chinook producing properties located in the United States (US\$1.6 billion) and were mainly attributable to the decline in international crude oil prices.

For further Information on impairment losses in 2016, 2015 and 2014, see Note 14 to our audited consolidated financial statements.

For 2017, we expect to produce 2.07 MMbbl/d of oil in Brazil (3.5% below our average in 2016), as a result of divestments and natural decline of our production areas, even considering a new unit start-up in Santos Basin' pre-salt layer (FPSO P-66 in Lula field) and the ramp-up of the recently installed systems. For more information on new production systems, see the following section "Production Development."

Lifting Cost

In 2016, our average lifting cost excluding government fees was US\$10.33 per boe, which is a decrease of 11% compared to the average cost of US\$11.67 per boe mined in 2015. This decrease is due mainly to the reduction of intervention activities in wells in the Campos Basin and a higher percentage of pre-salt participation in our total production, which has lower operating costs.

Capital Expenditures in E&P

In 2016, as a result of the oil price volatility in international markets and the depreciation of the real against the US dollar we decreased capital expenditures in order to meet our objectives of financial deleveraging and value generation for our shareholders. In our 2017-2021 Business Plan, we maintain our focus on the development of our reservoirs in Brazil, especially in the pre-salt layer.

Out of US\$60.6 billion capital expenditures in exploration and production for the next five years, 76% will be allocated to production development, 11% to exploration and 13% to operating support. The capital expenditures in exploration and production activities in 2016 (in Brazil and abroad) amounted to US\$13.5 billion, a 29% decrease compared to capital expenditures for the fiscal year ended December 31, 2015, mainly attributable to a reduction of exploration activities, projects optimization and the effect of exchange rate fluctuation. Brazil represented 97% of our exploration and production investments in 2016. See “—Liquidity and Capital Resources—Use of funds” for further information on our investments.

Exploration

As of December 31, 2016, we had 166 exploratory blocks in which 36 discoveries were under evaluation. We also had two discoveries being assessed in production areas. As of December 31, 2016, we had a 100% working interest in 63 exploratory blocks. We also had exploration partnerships with 28 foreign and domestic companies, for a total of 103 exploratory blocks. We serve as the operator in 66 of these exploration partnership blocks. We hold interest ranging from 20% to 89% in the exploration areas under concession or assigned to us.

In the Campos Basin, our exploration efforts are in the Pre-Salt Layer with the Gávea and Forno discoveries. In Santos Basin, Libra Consortium drilled the largest net pay in the Pre-Salt Layer in the block, confirming a discovery of good-quality oil (28° API) in highly productive reservoirs. The table below breaks down our investments in exploration activities in 2016, which totaled US\$749 million.

	Net Exploratory Area (km ²)			Exploratory Blocks			Evaluation Plans			Wells Drilled		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Brazil	43,966	55,366	63,789	131	146	158	37	43	46	16	51	74
Campos Basin	1,216	1,798	3,398	6	7	8	7	9	9	2	4	10
Santos Basin	2,140	3,378	6,322	4	6	9	3	5	8	2	5	8
Other Basins	40,610	50,190	54,069	121	133	141	27	29	48	12	42	56
Other S. America	11,444	12,702	12,702	7	7	7	1	1	1	5	6	9
North America	376	787	1,877	28	52	110	0	0	0	0	2	1
Africa	0	3,679	6,057	0	3	6	0	2	2	0	0	4
Total	55,786	72,534	84,425	166	208	281	38	46	49	21	59	88

Production Development

In 2016, three new systems came on stream (FPSO Cidade de Maricá and FPSO Cidade de Saquarema in the Lula field and FPSO Cidade de Caraguatatuba in the Lapa field), and we connected 65 new wells (47 production and 18 injection wells) in our production systems.

Over the last six years, we had substantial cost optimizations regarding project development. For instance, we reduced the time required to drill and complete wells in the Santos Basin pre-salt area by more than 50% in 2016, compared to 2010, significantly reducing our capital expenditures per well. In addition, due to the wells high productivity, we have been able to top the capacity of the platforms with fewer wells.

Recently Installed Systems

Since 2014, we have installed several major systems in the pre-salt area of the Santos Basin and in the Campos Basin, which helped mitigating the basin's natural decline (table below).

Start Up (year)	Basin	Field/Area	Unit Type	Production Unit	Crude Oil Nominal Capacity (bbl/d)	Natural Gas Nominal Capacity (mmcf/d)	Water Depth (meters)	Notes
2016	Santos	Lapa	FPSO	Cid. de Caraguataruba	100,000	176.6	2,140	Pre-salt
2016	Santos	Lula Central	FPSO	Cid. de Saquarema	150,000	211.9	2,100	Pre-salt
2016	Santos	Lula Alto	FPSO	Cidade de Maricá	150,000	211.9	2,100	Pre-salt
2015	Santos	Lula	FPSO	Cidade de Itaguaí	150,000	282.5	2,240	Pre-salt
2015	Campos	Papa-Terra-Module 1	TLWP	P-61	(1)	(1)	1,180	Post-salt
2014	Campos	Roncador-Module 4	FPSO	P-62	180,000	211.9	1,600	Post-Salt
2014	Campos	Parque das Baleias	FPSO	P-58	180,000	211.9	1,399	Both
2014	Santos	Iracema Sul	FPSO	Cid. de Mangaratiba	150,000	282.5	2,220	Pre-salt
2014	Santos	Sapinhoá Norte	FPSO	Cidade de Ilhabela	150,000	211.9	2,140	Pre-salt

(1) P-61 production is processed by the FPSO P-63, which came onstream in 2013, with 140 Mbbl/d.

Main systems to be installed from 2017 to 2019

We currently have 10 major systems to be installed from 2017 to 2019. The Lula and Búzios fields will be particularly important to support our production growth. Production from these fields will be brought online through 7 FPSOs. Moreover, we will install a new post-salt unit in the Tartaruga Verde Field by 2017. The table below lists our upcoming system start-ups.

Projected Start Up (year)	Basin	Field/Area	Unit Type	Crude Oil Nominal Capacity (bbl/d)	Natural Gas Nominal Capacity (mmcf/d)	Water Depth (meters)	E&P Regime
2017	Santos	Lula Sul	FPSO	150,000	211.9	2,100	Pre-salt Concession
2017	Campos	Tartaruga Verde	FPSO	150,000	176.6	765	Post-salt Concession
2017	Santos	Lula Norte	FPSO	150,000	211.9	2,100	Pre-salt Concession
2018	Santos	Lula Extremo Sul	FPSO	150,000	211.9	2,100	Pre-salt Concession
2018	Santos	Búzios 3	FPSO	150,000	247.2	2,100	Assignment Agreement
2018	Santos	Búzios 1	FPSO	150,000	247.2	2,100	Assignment Agreement
2018	Santos	Búzios 2	FPSO	150,000	247.2	2,100	Assignment Agreement
2018	Santos	Berbigão	FPSO	150,000	211.9	2,100	Pre-salt Concession
2019	Santos	Atapu 1	FPSO	150,000	211.9	2,100	Assignment Agreement
2019	Santos	Búzios 4	FPSO	150,000	211.9	2,100	Assignment Agreement

Critical Resources in Exploration and Production

We seek to develop and retain the critical resources that are necessary to meet our production targets. Drilling rigs are an important resource for our exploration and production operations and lead time is required when fleet expansion is needed. When we discovered the pre-salt reservoirs, in 2006, our activities as operators were constrained by a lack of rigs, but our subsequent efforts to lease additional rigs have eliminated this constraint. Whereas in 2008 we only had three rigs capable of drilling in waters with depth greater than 2,000 meters (6,560 feet), we had 26 as of December 31, 2016 (see table below). We believe that we now have sufficient rigs to meet our production targets, and we will continue to evaluate our drilling requirements and will adjust our fleet size as needed. Likewise, in order to achieve our production goals, we must secure a number of specialized vessels (such as PLSV) to connect wells to production systems.



Since 2015, we've been adjusting our fleet to our project portfolio. In 2016, our specialized vessels were sufficient to meet our needs.

Drilling Units in Use by Exploration and Production on December 31 of Each Year

	2016		2015		2014	
	Leased	Owned	Leased	Owned	Leased	Owned
Brazil	31	10	50	14	71	16
Onshore	1	4	10	8	16	10
Offshore, by water depth (WD)	30	6	40	6	55	6
Jack-up rigs	0	2	0	2	0	2
Floating rigs:	30	4	40	4	55	4
500 to 999 meters WD	1	2	2	2	2	2
1000 to 1999 meters WD	3	2	7	2	14	2
2000 to 3200 meters WD	26	0	30	0	39	0
Outside Brazil	4	0	8	0	8	0
Onshore	4	0	8	0	6	0
Offshore	0	0	1	0	2	0
Worldwide	35	10	59	14	79	16

Reserves

According to SEC technical criteria for booking proved reserves, as of December 31, 2016, our worldwide net proved oil, condensate and natural gas reserves, including synthetic oil and gas, reached 9.7 bnboe, an 8% reduction compared to our proved reserves of 10.5 bnboe as of December 31, 2015, as shown in the table below. This variation was mainly due to natural depletion of oil fields production.

	Oil (mmbbl)			Gas (bcf)			Total (mmboe)		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Proved Reserves(1)									
Brazil	8,069.8	8,551.1	10,858.8	8,403.2	9,597.0	11,180.9	9,470.3	10,150.6	12,722.2
Campos basin	4,097.1	4,778.8	7,202.8	2,767.2	3,407.5	4,578.4	4,558.3	5,346.7	7,965.9
Santos basin	3,576.2	3,216.0	2,917.4	4,169.1	4,579.7	4,339.7	4,271.1	3,979.3	3,640.7
Other basins	396.4	556.3	738.6	1,466.9	1,609.8	2,262.8	640.9	824.6	1,115.7
Other S. America(2)	0.8	66.9	84.6	113.9	697.4	758.3	19.8	183.1	211.0
North America	96.4	90.6	120.1	87.2	138.5	180.0	111.0	113.7	150.1
Africa	69.0	65.8	54.1	12.5	16.6	19.3	71.1	68.6	57.3
Total	8,236.1	8,774.4	11,117.6	8,616.8	10,449.5	12,138.5	9,672.2	10,515.9	13,140.6

(1) Includes synthetic oil and gas

(2) In the case of Bolivia, the country's Constitution prohibits concessionaires from recording reserves

In 2016, we incorporated 103 mmboe of proved reserves from extensions and discoveries in Brazil (Santos Basin), and we increased 131 mmboe of our proved reserves due to revisions of previous estimates and due to new production development well drilling and better reservoir response in onshore and offshore post-salt fields, in Brazil and in the USA, and in the pre-salt, as a result of positive answers from the reservoirs, recovery mechanisms (water injection) and operating efficiency of production systems in operation, as well as the growing drilling activities and tie-back activities, in the Santos and Campos Basin. We reduced 169 mmboe of our proved reserves due to sales of minerals *in situ* and increased 16 mmboe in our proved reserves due to purchases of minerals *in situ*, resulting in a net effect of a decrease of 153 mmboe in our proved reserves. The net result of these additions and dispositions, excluding production, was an increase of 81 mmboe to our proved reserves in 2016. Considering a production of 925 mmboe in 2016, our net decrease of proved reserves was 844 mmboe. This volume production does not take into account the production of EWTs in exploratory blocks in Brazil, and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves. For further information on our reserves, see Item 4. "Information on the Company—Additional Reserves and Production Information" and "Supplementary Information on Oil and Gas Exploration and Production" in our consolidated audited financial statements.

The following table summarizes the reserves variations in the last three years, in terms of oil equivalents, including synthetic oil and gas.

Proved reserves (million barrels of oil equivalent)	2016	2015	2014
Proved reserves, beginning of year	10,516	13,141	13,134
Discoveries and extensions	103	494	316
Improved recovery	0	22	2
Revisions of previous estimates	131	(2,186)	718
Sales of minerals in situ	(169)	(22)	(163)
Purchases of minerals in situ	16	0	31
Production	(925)	(932)	(898)
Proved Reserves, end of year	9,672	10,516	13,141

We recorded in 2016 a reserve replacement ratio (RRR) of 25%, disregarding the effects of divestments carried out in 2016. We also recorded a reserves-to-production ratio (R/P) of 10.5 years and a development ratio (DR), which is the ratio between developed proved reserves and total proved reserves, of 54.1%.

Refining, Transportation and Marketing

Refining, Transportation and Marketing Key Statistics

	2016	2015	2014
	(US\$ million)		
Refining, Transportation and Marketing:			
Sales revenues	62,588	74,321	114,431
Income (loss) before income taxes	8,644	8,459	(23,527)
Property, plant and equipment	35,515	33,032	50,273
Capital expenditures and investments	1,168	2,534	7,882

We are one of the world's largest refiners. We own and operate 13 refineries in Brazil, with a total net crude distillation capacity of 2,176 mbbbl/d. As of December 31, 2016, we operated substantially all of Brazil's total refining capacity. We supplied almost all of the refined product needs of third-party wholesalers, exporters and petrochemical companies, in addition to the needs of our Distribution segment. We operate a large and complex infrastructure of pipelines, terminals and a shipping fleet to transport oil products and crude oil to domestic and export markets. Most of our refineries are located near our crude oil pipelines, storage facilities, refined product pipelines and major petrochemical facilities, facilitating access to crude oil supplies and end-users.

Our Refining, Transportation and Marketing segment also includes (i) petrochemical operations that add value to the hydrocarbons we produce, (ii) extraction and processing of shale and (iii) international refining activities.

Refining Capacity in Brazil

Our crude distillation capacity in Brazil as of December 31, 2016, was 2,176 mbbbl/d and our average throughput during 2016 was 1,819 mbbbl/d. We have also gradually increased the production of low sulfur diesel, from 201 mbbbl/d in 2015 to 228 mbbbl/d in 2016, meeting the market demand for a more environmentally friendly transportation fuel.

The following table shows the installed capacity of our Brazilian refineries as of December 31, 2016, and the average daily throughputs of our refineries in Brazil in 2016, 2015 and 2014.

Capacity and Average Throughput of Refineries					
Name (Alternative Name)	Location	Crude Distillation Capacity at December 31, 2016 (mmbbl/d)	Average Throughput*		
			2016	2015	2014
LUBNOR	Fortaleza (CE)	8	9	8	9
RECAP (Capuava)	Capuava (SP)	53	54	40	54
REDUC (Duque de Caxias)	Duque de Caxias (RJ)	239	194	235	271
REFAP (Alberto Pasqualini)	Canoas (RS)	201	148	174	192
REGAP (Gabriel Passos)	Betim (MG)	157	150	152	158
REMAN (Isaac Sabbá)	Manaus (AM)	46	34	38	44
REPAR (Presidente Getúlio Vargas)	Araucária (PR)	208	167	197	204
REPLAN (Paulínia)	Paulínia (SP)	415	331	391	408
REVAP (Henrique Lage)	São Jose dos Campos (SP)	252	217	249	262
RLAM (Landulpho Alves)	Mataripe (BA)	315	218	248	287
RPBC (Presidente Bernardes)	Cubatão (SP)	170	142	157	177
RPCC (Potiguar Clara Camarão)	Guamaré (RN)	38	33	34	38
RNEST (Abreu e Lima)	Ipojuca (PE)	74	75	53	3
Average crude oil throughput		2,176	1,772	1,936	2,065
Average NGL throughput		—	47	40	41
Average throughput		—	1,819	1,976	2,106

* Considers oil and NGLs processing (fresh feedstock)

Refinery Investments

We initiated in the last few years the construction of two new refineries—Abreu e Lima Refinery—RNEST in northeastern Brazil and Petrochemical Complex of Rio de Janeiro (Complexo Petroquímico do Rio de Janeiro—COMPERJ) to process our domestically produced heavy oil for oil products that were most in demand in the Brazilian market and with growing shortage.

The first refining unit of RNEST began its operations in December 2014. Designed to process 115 mmbbl/d of crude oil into low sulfur diesel (10 ppm) and other products, this unit started operating with a partial capacity of 74 mmbbl/d and since January 2016 it has been authorized to process up to 100 mmbbl/d of crude oil. Reaching full capacity for the unit will require the completion of a sulfur emissions reduction unit (SNOX), which we expect will be completed in 2018. Construction of the second refining unit of RNEST is included in our 2017-2021 Plan, despite our continuous efforts to seek partnerships for this construction.

With respect to COMPERJ, we are currently building a business model to restart the construction of this project, which includes partnerships with parties willing to fund and complete the construction of its first refining unit, according to our 2017-2021 Plan. To support gas processing from the pre-salt areas, in 2017, we started the execution of a bidding plan to complete the gas plant and its utilities. The projects for the second refining unit and the lubricants unit were cancelled.



We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$1.2 billion on the RNEST and COMPERJ refining assets. A loss of US\$0.8 billion was recognized for the second refining unit in RNEST, mainly attributable to the use of a higher discount rate and a delay in expected future cash inflows to 2023 due to the postponement of the RNEST project. The completion of this project is subject to our own capital resources, as set forth in our 2017-2021 Plan. Despite the postponement of the beginning of operations of its first refining unit until December 2020, the construction of COMPERJ's first refining unit facilities that will also support the natural gas processing plant (UPGN) are still in progress. These facilities are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in the Santos Basin. Due to the interdependence between such infrastructure and COMPERJ's first refining unit, we recognized additional impairment charges, amounting US\$0.4 billion of impairment losses in 2016.

We previously recognized impairment losses for the fiscal year ended December 31, 2015 of US\$1.35 billion with respect to COMPERJ due to the use of a higher discount rate (reflecting an increase in Brazil's risk premium) and the delay in expected future cash inflows resulting from the further postponement of the project. For further information, see Note 14 to our audited consolidated financial statements and Item 5. "Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates—Impairment Testing of Refining Assets." We previously recognized impairment losses for the fiscal year ended December 31, 2014 of US\$11.7 billion with respect to COMPERJ and RNEST and of US\$0.1 billion with respect to the Nansei Sekiyu K.K. refinery in Okinawa.

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

Our LPG distribution business—Liquigas Distribuidora—held a 21.6% market share and ranked second in LPG sales in Brazil in 2016, according to the ANP. In November 2016, we signed a contract for the sale of Liquigás Distribuidora S.A. to Companhia Ultragaz S.A., a subsidiary of Ultrapar Participações.

Domestic Output of Oil Products and Domestic Sales Volumes

The following tables summarize our domestic output of oil products and sales by product for the last three years.

Domestic Output of Oil Products: Refining and marketing operations, mbbl/d(1)			
	2016	2015	2014
Diesel	775	848	853
Gasoline	444	435	494
Fuel oil	196	250	286
Naphtha	54	78	85
LPG	125	127	130
Jet fuel	100	98	105
Others	193	190	217
Total domestic output of oil products	1,887	2,026	2,170
Installed capacity(2)	2,176	2,176	2,176
Crude distillation utilization (%) (3)	81	89	98
Domestic crude oil as % of total feedstock processed	92	86	82

(1) Output volumes are larger than throughput volumes as a result of gains during the refining process.

(2) Installed capacity as of December 31, 2016, 2015 and 2014.

(3) Crude distillation utilization considers average installed capacity as of December 31, 2016, 2015 and 2014.

Our total domestic output of oil products decreased to 1,887 mbb/d in 2016 from 2,026 mbb/d in 2015, as a result of lower demand for oil products in the domestic market and maintenance stoppages. In 2016, diesel represented 41% of our domestic output of oil products, as compared to 42% in 2015 and there was a higher participation of domestic crude oil in our total domestic feedstock processed (92% as compared to 86% in 2015.)

Domestic Sales Volumes and Exports from Brazil, mbb/d

	2016	2015	2014
Diesel	780	923	1,001
Gasoline	545	553	620
Fuel oil	67	104	119
Naphtha	151	133	163
LPG	234	232	235
Jet fuel	101	110	110
Others	186	179	210
Total oil products	2,064	2,234	2,458
Ethanol, nitrogen fertilizers, renewables and other products	112	123	99
Natural gas	333	432	446
Total domestic market	2,509	2,789	3,003
Exports	554	510	393
Total domestic market and exports	3,063	3,299	3,396

The Brazilian domestic market grew rapidly from 2010 to 2014, in parallel with Brazil's economic expansion and the increase of average income, increasing by an average of 5.6%. In the last two years, as a result of the Brazilian economic slowdown, the domestic growth rate in consumption of oil products, particularly diesel, decreased as compared to the higher rates of growth experienced in prior years.

Our total domestic sales volumes for oil products were 2,064 mbb/d in 2016, a reduction of 8% compared to 2015. In 2016, our sales of oil products declined as a result of a 3.6% reduction in the Brazilian GDP, an increase in imports of diesel and gasoline from other participants in the Brazilian market, but the decrease in gasoline sales was mitigated by the loss of competitiveness of hydrous ethanol in 2016. Fuel oil sales fell due to reduced thermoelectric consumption, because of weak GDP, the expansion of wind power generation and the increase of hydroelectric power generation by Northern utilities. Jet fuel sales declined due to increased measures adopted by airlines to optimize routes, as a way to compensate for the strong decline of trips demands caused by economic crises.

Imports and Exports

Our import and export of oil products depend on our refinery output and Brazilian demand levels. Much of the crude oil we produce in Brazil is intermediate. We import some light crude to balance the slate for our refineries, and export mainly intermediate crude oil from our production in Brazil. We also continue to import oil products to balance any shortfall between production from our Brazilian refineries and the market demand for each product and to take advantage of the spread between refining crude oil in Brazil and importing oil products. Due to the domestic market retraction and to our lower market share in 2016, our imports levels were lower than in former years.

We export oil products that our refineries produce in excess of Brazilian market demand, which is largely fuel oil.



The table below shows our exports and imports of crude oil and oil products in 2016, 2015 and 2014:

Exports and Imports of Crude Oil and Oil Products, mbb/d			
	2016	2015	2014
Exports			
Crude oil	387	360	232
Fuel oil (including bunker fuel)	119	125	128
Gasoline	10	3	0
Others	26	21	30
Total exports	542	509	390
Imports			
Crude oil	136	277	392
Diesel	13	78	185
LPG	72	67	70
Gasoline	32	28	41
Naphtha	105	51	88
Others	16	32	29
Total imports	374	533	805

Delivery Commitments

We sell crude oil through long-term and spot-market contracts. Our long-term contracts specify the delivery of fixed and determinable quantities, subject to a price negotiation with third parties on a delivery-by-delivery basis. We are committed through long-term contracts to deliver a total of approximately 333 mbb/d of crude oil in 2017. We believe our domestic proved reserves will be sufficient to allow us to continue to deliver all contracted volumes. For 2017, approximately 83% of our domestic exported crude oil will be committed to meeting our contractual delivery commitments to third parties.

Logistics and Infrastructure for Oil and Oil Products

We own and operate an extensive network of crude oil and oil product pipelines in Brazil that connect our terminals, refineries and other primary distribution points. As of December 31, 2016, our onshore and offshore, crude oil and oil products pipelines extended over 7,719 km (4,796 miles). We operate 27 marine storage terminals and 20 other tank farms with nominal aggregate storage capacity of 64,6 mmbbl. Our marine terminals handle an average of 8,981 tankers and oil barges annually.

We operate a fleet of owned and chartered vessels. These provide shuttle services between our producing basins offshore Brazil and the Brazilian mainland, and shipping to other parts of South America and internationally. We are increasing our fleet of owned vessels to replace older vessels and decrease our dependency on chartered vessels. Upgrades will include replacing vessels nearing the end of their 25-year useful life. Our long-term strategy continues to focus on the flexibility afforded by operating a combination of owned and chartered vessels.

Also, one new oil tanker and three new LPG carriers were delivered to Transpetro in 2016. We plan to have another three vessels delivered to us during 2017 and up to 9 vessels in the following three years, all of which will be built in Brazilian shipyards. In 2016, as a result of our 2015-2019 business and management plan ("2015-2019 Plan"), as well as issues with our counter-parties under many of the contracts for the construction or delivery of vessels, we canceled purchase contracts for the delivery of 7 additional vessels.



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The table below shows our operating fleet and vessels under contract as of December 31, 2016.

Owned and Chartered Vessels in Operation and Under Construction Contracts at December 31, 2016

	In Operation		Under Contract/Construction	
	Number	Tons Deadweight Capacity	Number	Tons Deadweight Capacity
Owned fleet:				
Tankers	48	4,512,835	10	1,107,600
LPG tankers	8	51,534	2	6,000
Anchor Handling Tug Supply (AHTS)	0	—	0	0
Total	56	4,564,369	12	1,113,600
Chartered vessels:				
Tankers	113	12,964,456	—	—
LPG tankers	15	299,820	—	—
Total	128	13,264,276	—	—

An increase in the number of chartered vessels (tankers) in 2016 to 113 (as compared to 105 as of December 31, 2015) is mainly attributable to the increase of total cargo transportation between maritime terminals in Brazil.

We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$0.2 billion on transportations assets, mainly in the third quarter of 2016, relating to the removal of a group of support vessels of Hidrovias project from the Transportation CGU, due to the postponements and suspension of construction projects and the use of a higher discount rate. In the last quarter of 2016, additional impairment charges were accounted for, due to the commencement of the construction on 5 vessels after securing the projects funding, which avoided potential future claims for breach of contracts, and further the higher discount rate.

Petrochemicals

Our petrochemical operations provide an outlet for our growing production volumes of gas and other refined products, which increase their value and provide substitute for products that are otherwise imported. Our new strategy is to carry out divestments in subsidiaries, joint ventures, joint operations and associated companies, but keeping technological competencies in areas with development potential.

We engage in our petrochemical operations through the following subsidiaries, joint ventures, joint operations and associated companies:

	mmt/y (nominal capacity)	Petrobras interest (%)
Braskem:		36.20
Ethylene	3.95	
Polyethylene	3.05	
Polypropylene	3.99	
DETEN Química S.A.:		27.88
LAB(1)	0.22	
LABSA(1)	0.12	
METANOR S.A./COPENOR S.A.(2):		34.54
Methanol(4)	0.08	
Formaldehyde	0.09	
Hexamine	0.01	
FCC Fábrica Carioca de Catalisadores S.A.:		50.00
Catalysts	0.04	
Additives	0.01	
PETROQUÍMICASUAPE COMPLEX(3):		100.00
Purified Terephthalic Acid —PTA	0.70	
Polyethylene Terephthalate—PET	0.45	
Polymer and polyester filament textiles	0.24	
PETROCOQUE S.A.:		50.00
Calcined petroleum coke	0.50	

(1) Feedstock for the production of biodegradable detergents.

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

(3) The PTA unit started operations in January 2013 and the PET unit started operations in August 2014.

(4) The company decided to stop the production of methanol in 2016.

In July, our board of directors approved exclusive negotiations with the company Alpek, S.A.B. de C.V. (Alpek), for the sale of our stake in Suape Petrochemical Complex, which includes *Companhia Petroquímica de Pernambuco* (Petroquímica Suape) and *Companhia Integrada Têxtil de Pernambuco* (Citepe). In the end of December, our board of directors approved the execution of the agreement for the sale of Suape Petrochemical Complex and Citepe to Grupo Petromex S.A. de C.V. and Dak Americas Exterior, S.L, both subsidiaries of Alpek. In March 2017, the transaction was approved at a shareholder's meeting. The total sale value was US\$ 385 million, to be paid in *reais* on the closing date for the transaction.

We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$0.6 billion with respect to the Suape Petrochemical Complex, mainly attributable to lower market projections and the appreciation of the *real* against the U.S. dollar. Following the disposal of Suape Petrochemical Complex in December 2016, we recognized an additional impairment charge of US\$0.4 billion, due to the lower exit price of these investments when compared to their carrying amount adjusted by the debt to be settled by us as part of the closing of such transaction.

We previously recognized impairment losses for the fiscal year ended December 31, 2015 of US\$0.2 billion with respect to the Suape Petrochemical Complex due to changes in market and price assumptions resulting from a decrease in economic activity in Brazil, a reduction in the spread for petrochemical products in the international market and the use of a higher discount rate (reflecting an increase in Brazil's risk premium). For further information, see Note 14 to our audited consolidated financial statements.



Refining Capacity Abroad

Our international crude distillation capacity as of December 31, 2016 was 200 mbbbl/d and the utilization factor for our international consolidated refining facilities was 65%.

The following table shows the installed capacity of our international refineries as of December 31, 2016, and the average daily throughputs in 2016, 2015 and 2014, respectively.

Capacity and Average Throughput of Refineries					
Name (Alternative Name)	Location	Crude Distillation Capacity at December 31, 2016 (mbbl/d)	Average Throughput(1) (mbbl/d)		
			2016(2)	2015	2014
Pasadena Refining System Inc.	Texas (USA)	100	104.2	99.5	100.3
Nansei Sekiyu Kabushiki Kaisha	Okinawa (JP)	100	—	10.2	35.9
Ricardo Eliçabe Refinery	Bahía Blanca (AR)	(3)	15.3	28.7	27.2
Total average crude oil throughput . . .		200	119.4	132.8	158.9
Average external intermediate throughput		—	6.5	5.6	4.5
Total average throughput		—	125.9	138.4	163.4

(1) Consider oil (fresh feedstock) and external processed intermediate oil products.

(2) For the year 2016 we report the average crude oil throughput separately from the average external intermediate throughput.

(2) Crude distillation capacity of 30.5 mbbbl/d and average throughput of Bahía Blanca refinery until July 2016.

The following table shows the total average output of oil products of our international refineries in 2016, 2015 and 2014.

International Average Output of Oil Products				
	2016	2015	2014	
	(mbbl/d)			
Total average output	128	149	175	

We also participate in the refining sector in other South American countries and in North America. See below our international refining activities by region:

South America

We conducted refining and transportation activities in Argentina through our interest in PESA until July 2016, when we sold our entire participation in PESA, indirectly owned through Petrobras Participaciones S.L. (“PPSL”), to Pampa Energía.

We used to own the Bahia Blanca Refinery, with a capacity of 30.5 mbbbl/d, and used to own interests in the Refinor refinery in Campo Duran and in two petrochemical plants in Puerto General San Martín and Zárate.

North America

In the United States, we own 100% of the Pasadena Refining System Inc., and 100% of its related trading company, PRSI Trading, LLC.



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Asia

In Japan, we operated the Nansei Sekiyu Kabushiki Kaisha refinery in Okinawa until the first quarter of 2015. In April 2015, we decided to begin winding down the operations of this refinery and the refinery stopped processing crude oil. We continued its activities until March 2016. In December, we closed the sale of 100% of the shares in Nansei Sekiyu ("NSS") to Taiyo Oil Company. The operation was completed with the payment of US\$165 million made on December 28, 2016 by Taiyo.

*Sales Volumes Abroad***Sales Volumes Abroad, mbb/d**

	2016	2015	2014
International Sales	418	546	571

Distribution**Distribution Key Statistics**

	2016	2015	2014
	(US\$ million)		
Sales revenues	27,927	33,406	46,893
Income (loss) before income taxes	96	(219)	860
Property, plant and equipment	1,936	1,868	2,685
Capital expenditures and investments	139	255	487

Domestic Distribution

We are Brazil's leading oil products distributor, operating through our own retail network, through our own wholesale channels, and by supplying other fuel wholesalers and retailers. Our Distribution segment sells oil products that are primarily produced by our Refining, Transportation and Marketing segment, or RTM, and works to expand the domestic market for these oil products and for other fuels, including LPG, natural gas, ethanol and biodiesel.

The primary focus of our Distribution segment is to be the benchmark in the distribution of oil products and biofuels in Brazil, by innovating and providing value to our business, while promoting safe operations and environmental and social responsibility, strengthening the Petrobras brand.

We supply and operate Petrobras Distribuidora, which accounts for 31.1% of the total Brazilian retail and wholesale distribution market. Petrobras Distribuidora distributes oil products, ethanol, biodiesel and natural gas to retail, commercial and industrial customers. In 2016, Petrobras Distribuidora sold the equivalent of 784.6 mbb/d of oil products and other fuels to wholesale and retail customers, of which the largest portion (40.3%) was diesel.

At December 31, 2016, our Petrobras Distribuidora branded service station network was Brazil's leading retail marketer, with 8,176 service stations, or 20% of the stations in Brazil. Petrobras Distribuidora owned and franchised stations that represented 25.4% of Brazil's retail sales of diesel, gasoline, ethanol, vehicular natural gas and lubricants in 2016.



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Most Petrobras Distribuidora service stations are owned by franchisees that use the Petrobras Distribuidora brand name under license and purchase exclusively from us; we also provide franchisees with technical support, training and advertising. We own 632 of the Petrobras Distribuidora service stations and are required by law to subcontract the operation of these owned stations to third parties. We believe that our market share position is supported by a strong Petrobras Distribuidora brand image and by the remodeling of service stations and addition of lubrication centers and convenience stores.

Our wholesale distribution of oil products and biofuels under the Petrobras Distribuidora brand to commercial and industrial customers accounts for 46.9% of the total Brazilian wholesale market. Our customers include aviation, transportation and industrial companies, as well as utilities and government entities.

Distribution Abroad

We also participate in the retail sector in other South American countries. See below our international distribution activities by region:

South America

We conduct distribution activities in Argentina, Chile, Colombia, Paraguay and Uruguay:

- In **Argentina**, through PESA, our operations included 266 retail service stations until July of 2016, when we sold our entire participation in PESA;
- In **Chile**, our operations included 281 service stations, the distribution and sales of fuel at airports and a lubricant plant. In July of 2016, we signed with Southern Cross Group ("SCG") a contract for the sale of our entire interest in distribution in Chile. We also signed a temporary brand licensing agreement through which SCG will operate under our brand;
- In **Colombia**, our operations include 114 service stations and a lubricant plant;
- In **Paraguay**, our operations include 186 service stations, the distribution and sales of fuel at three airports and an LPG refueling plant; and
- In **Uruguay**, we have downstream operations in the country, including 88 service stations.

Gas and Power

Gas and Power Key Statistics

	2016	2015	2014
	(US\$ million)		
Gas and Power:			
Sales revenues	9,401	13,145	18,373
Income (loss) before income taxes	1,252	518	(466)
Property, plant and equipment	13,094	14,674	22,237
Capital expenditures and investments	717	793	2,571

Our Gas and Power segment comprises gas transmission and distribution, LNG regasification, the manufacture of nitrogen-based fertilizers, gas-fired and flex-fuel power generation, and power generation from renewable sources, including solar and wind sources.



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The primary focus of our Gas and Power segment is to:

- Monetize our natural gas resources;
- Assure reliability and profitability in the supply of natural gas; and
- Consolidate our electric energy business, exploring synergies between our natural gas supply and power generation capacities.

Domestic Gas and Power

For more than two decades, we have actively worked to simultaneously develop Brazil's natural gas reserves and develop important infrastructure in order to assure flexibility and reliability in the supply of natural gas. As a result of this multi-year development program, we now have an integrated 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). This network allows us to deliver to our customers natural gas processed in our gas facilities arriving from our onshore and offshore natural gas producing fields, mainly from Santos, Campos and Espírito Santo Basins, as well as the natural gas from our three LNG terminals, and from Bolivia.

Natural Gas

Our principal markets for natural gas are:

- Industrial, commercial and retail customers;
- Thermoelectric generation; and
- Consumption by our refineries and fertilizer plants.

The table below shows the sources of our natural gas supply, our sales and internal consumption of natural gas, and revenues in our local gas distribution operations for each of the past three years.

Supply and Sales of Natural Gas in Brazil, mmm ³ /d			
	2016	2015	2014
Sources of natural gas supply			
Domestic production	44.0	44.9	43.2
Imported from Bolivia	28.4	32.1	32.9
LNG	3.8	18.0	20.0
Total natural gas supply	76.2	95.0	96.1
Sales of natural gas			
Sales to local gas distribution companies(1)	34.8	37.5	38.9
Sales to gas-fired power plants	18.0	31.1	31.6
Total sales of natural gas	52.8	68.6	70.5
Internal consumption (refineries, fertilizer and gas-fired power plants)(2)	23.4	26.4	25.6
Revenues (US\$ billion)(3)	6.4	8.3	9.8

(1) Includes sales to local gas distribution companies in which we have an equity interest.

(2) Includes gas used in the transport system.

(3) Includes natural gas sales revenues from the Natural Gas segment to other operating segments, service and other revenues from natural gas companies.



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Our volume of natural gas sales to industrial, gas-fired electric power generation, commercial and retail customers in 2016 was 52.8 mmm³/d, representing a decrease of 23% compared to 2015. This decrease is attributable to the reduction of our industrial activities from 2015 to 2016 and to the improvement of hydroelectric plant reservoirs due to the increased hydrological inflow, stable electric power consumption and increased wind and hydro nominal power generation capacity, reducing the consumption of natural gas by power plants. Natural gas consumption by refineries and fertilizer plants only increased by 6.4%.

Currently, our main focus is to provide transportation and processing solutions for our planned natural gas production from the pre-salt fields. In 2017, we plan to continue to invest in (i) the construction of one gas offshore export pipelines connecting our pre-salt natural gas producing fields to processing plant in the city of Itaboraí; and (ii) the development of a natural gas processing plant with a capacity of 742 mmcf/d (21 mmm³/d), located at Itaboraí, also associated with the pre-salt reservoirs in the Santos Basin. The Cabiúnas Terminal expansion became fully operational in March 2016 and natural gas processing plant in Itaboraí is scheduled to begin operations by 2020.

We also own and operate three LNG flexible terminals using three FSRUs (Floating Storage and Regasification Units), one in Guanabara Bay (State of Rio de Janeiro) with a send-out capacity of 706 mmcf/d (20 mmm³/d), another in Pecém (State of Ceará) in Northeastern Brazil with a send-out capacity of 247 mmcf/d (7 mmm³/d) and the last one located in the Todos os Santos Bay (State of Bahia), with a send-out capacity of 494 mmcf/d (14 mmm³/d).

In 2016, we imported 26 LNG cargos in Brazil, as compared to 79 in 2015. In addition, in 2016, we kept our commercial activities primarily abroad, with 19 trading operations overseas (including 9 reloads from Brazil).

We also own and operate four natural gas processing facilities. Two of them, Sul Capixaba and Cacimbas, located in the State of Espírito Santo, have the capacity to process 2.5 mmm³/d and 16 mmm³/d of natural gas, respectively, and are designated to process natural gas from the Campos Basin and from the Espírito Santo Basin. Caraguatatuba plant, located in the State of São Paulo, has the capacity to process 20 mmm³/d of natural gas, and is designated to process natural gas from the Santos Basin post-salt and pre-salt areas. The TECAB plant, located in State of Rio de Janeiro, has the capacity to process 25 mmm³/d of natural gas from the Campos Basin and the Santos Basin pre-salt.

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Our volume obligations under the ship-or-pay arrangements entered into with Gas Transboliviano S.A. (GTB) and Transportadora Brasileira Gasoduto Bol via-Brasil S.A. (TBG) were generally designed to match our gas purchase obligations under the GSA through 2019. The tables below show our contractual commitments under these agreements for the five-year period from 2017 through 2021.

Besides the aforementioned contracts, we also have obligations under the ship-or-pay contracts entered into with Nova Transportadora do Sudeste (NTS) and Transportadora Associada de G s (TAG) to transport natural gas produced in Brazil and import LNG to gas distribution companies, power plants and oil refineries.

	2017	2018	2019	2020	2021
Purchase commitments to YPFB					
Volume obligation (mmm3/d)(1)	24.06	24.06	24.06	24.06	24.06
Volume obligation (mmcf/d)(1)	850.00	850.00	850.00	850.00	850.00
Brent crude oil projection (US\$)(2)	48.09	55.52	67.73	71.09	71.12
Estimated payments (US\$ million)(3)	1,043.70	1,164.57	1,574.32	1,700.17	1,756.41
Ship-or-pay contract with GTB					
Volume commitment (mmm3/d)	30.08	30.08	30.08	6.00	6.00
Volume commitment (mmcf/d)	1,062.26	1,062.26	1,062.26	211.89	211.89
Estimated payments (US\$ million)(4)(5)	113.17	113.72	114.30	0	0
Ship-or-pay contract with TBG					
Volume commitment (mmm3/d)(6)	35.28	35.28	35.28	17.20	17.20
Volume commitment (mmcf/d)	1,246.09	1,246.09	1,246.09	607.50	607.50
Estimated payments (US\$ million)(4)	532	530	533	156	157
Ship-or-pay contract with NTS					
Volume commitment (mmm3/d)	158.21	158.21	158.21	158.21	158.21
Volume commitment (mmcf/d)	5,586.96	5,586.96	5,586.96	5,586.96	5,586.96
Estimated payments (US\$ million)(4)	1,169.53	1,143.10	1,162.81	1,183.21	1,197.21
Ship-or-pay contract with TAG					
Volume commitment (mmm3/d)	64.78	64.78	64.78	64.78	64.78
Volume commitment (mmcf/d)	2,287.65	2,287.65	2,287.65	2,287.65	2,287.65
Estimated payments (US\$ million)(4)	1,507.78	1,473.70	1,499.11	1,525.41	1,543.46

(1) 25.3% of contracted volume supplied by Petrobras Bolivia.

(2) Brent crude oil price forecast based on our strategic plan, which is currently under review by our management.

(3) 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 Petrobras may vary annually.

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

(5) No estimated payments from 2020 due to Contract TCO-Bolivia prepayment.

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

Natural Gas Sales Contracts

We sell our gas primarily to local gas distribution companies and to gas fired plants generally based on standard take-or-pay, long-term supply contracts. This represents 70% of our total sale volumes, and the price formulas under these contracts are mainly indexed to an international fuel oil basket. Additionally, we have a number of sales contracts designed to create flexibility in matching customer demand with our gas supply capabilities. These include flexible and interruptible long-term gas sales contracts.

In 2016, we continued to renegotiate some existing long-term natural gas sales contracts with local distribution companies of natural gas in order to promote adjustments to commercial conditions tailored to specific market demands, concluding in negotiations with seven local distribution companies that represent 29% of the non-thermoelectric natural gas market, with an average price increase of 9%. The renegotiations will continue in 2017 with remaining local distribution companies.



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The table below shows our future gas supply commitments from 2017 to 2021, including sales to both local gas distribution companies and gas-fired power plants:

Future Commitments under Natural Gas Sales Contracts, mmm ³ /d					
	2017	2018	2019	2020	2021
To local gas distribution companies:					
Related parties(1)	16.52	15.84	15.86	9.07	8.38
Third parties	17.28	17.28	14.87	6.58	6.58
To gas-fired power plants:					
Related parties(1)	6.11	4.57	8.55	2.67	2.58
Third parties	11.19	10.97	10.61	10.54	10.17
Total(2)	51.09	48.65	49.89	28.86	27.17
Estimated amounts to be invoiced (US\$ billion)(3)(4)	4.22	4.09	4.52	5.16	5.86

- (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 an equity interest.
- (2) Estimated volumes are based on “take or pay” agreements in our contracts, expected volumes and contracts under negotiation (including renewals of existing contracts), not maximum sales.
- (3) Estimates are based on outside sales and do not include internal consumption or transfers.
- (4) Prices may be adjusted in the future and actual amounts may vary.

Power

Brazilian electricity needs are mainly supplied by hydroelectric power plants (101,138 MW of installed capacity), which account for 63% of Brazil’s generation capacity. Hydroelectric power plants are dependent on the annual level of rainfall; in the years where rainfall is abundant, Brazilian hydroelectric power plants will generate more electricity and consequently less generation from thermoelectric power plants will be demanded. The total installed capacity of the Brazilian National Interconnected Power Grid (*Sistema Interligado Nacional*) in 2016 was 161,344 MW. Of this total, 6,148 MW (or 4%) was available from 20 thermoelectric plants we operate. These plants are designed to supplement power from the hydroelectric power plants.

In 2016, hydroelectric power plants in Brazil generated 46,694 MWavg, which corresponded to 72% of Brazil’s total electricity needs (64,621 MWavg). Hydroelectric generation capacity is supplemented by other sources of energy (wind, coal, nuclear, fuel oil, diesel oil, natural gas, and others). Total electricity generated by these sources averaged 17,927 MW in 2016, of which our thermoelectric power plants contributed 2,252 MWavg, as compared to 4,646 MWavg in 2015 and 4,761 MWavg in 2014.

Electricity Sales and Commitments for Future Generation Capacity

Under Brazil’s power pricing regime, a thermoelectric power plant may sell only electricity that is certified by the MME and which corresponds to a fraction of its installed capacity. This 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), sold through bilateral contracts executed with free customers and used to meet the energy needs of our own facilities.



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In exchange for selling this certified capacity, the thermoelectric power plants shall produce energy whenever requested by the national operator (ONS). In addition to a capacity payment, thermoelectric power plants also receive from the Electric Energy Trading Chamber (*Câmara de Comercialização de Energia Elétrica*, or CCEE) reimbursement for its variable costs (previously declared to MME to calculate its commercial certified capacity) incurred whenever they are requested to generate electricity.

In 2016, the commercial capacity certified by MME for all thermoelectric power plants controlled by us was 4,197 MWavg, although our total generating capacity was 6,148 MWavg. Of the total 4,542 MWavg of commercial capacity available (*capacidade comercial disponível* or *lastro*) for sale in 2016, approximately 70% was sold as standby availability in public auctions in the regulated market (compared to 69% in 2015) and approximately 30% was committed under bilateral contracts and self-production (i.e. sales to related parties) (compared to 30% in 2015).

Under the terms of standby availability contracts, we are paid 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.

Our future commitments under bilateral contracts and self-production are of 1,315 MWavg in 2017, 1,280 MWavg in 2018, and 1,232 MWavg in 2019. The agreements expire gradually, with the last contract expiring in 2028. As existing bilateral contracts expire, we will sell our remaining certified commercial capacity under contracts in new auctions to be conducted by MME or through the execution of new bilateral contracts.

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			
	2017	2016	2015
Installed capacity (MW)	6,148	6,148	6,148
Certified commercial capacity (MWavg)	3,968	4,197	4,307
Purchases in the free market (MWavg)	345	345	247
Commercial capacity available (<i>Lastro</i>) (MWavg)	4,313	4,542	4,554

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

Volumes of Electricity Sold (MWavg)			
	2016	2015	2014
Total sale commitments	4,463	4,451	4,036
Bilateral contracts	835	854	1,183
Self-production	456	437	428
Public auctions to distribution companies	3,172	3,160	2,425
Generation volume	2,252	4,646	4,761
Revenues (US\$ million)(1)	2,470	4,410	7,693

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

Fertilizers

Our fertilizer plants in Bahia, Sergipe and Paraná produce ammonia and urea for the Brazilian market. The units in Bahia and Paraná also produce automotive liquid reducing agents (ARLA-32) and the unit in Sergipe also produces ammonium sulfate. The combined production capacity of these plants is 1,852,000 t/y of urea, 1,406,000 t/y of ammonia, 300,000 t/y of ammonium sulfate and 800,000 t/y of ARLA-32. Most of our ammonia production is used to produce urea, and the excess production is mainly sold in the Brazilian market. In 2016, we reduced the utilization rate of these plants yielding to a 4.7% decrease in production volume compared to 2015 due to the maintenance turnaround of the fertilizer plant in Araucária located in Paraná.

The table below shows our ammonia and urea sales and revenues for each of the past three years:

Ammonia and Urea (t/y)			
	2016	2015	2014
Ammonia	286,268	240,620	234,339
Urea	1,033,648	1,283,673	1,046,004
Revenues (US\$ million)(1)	465	676	663

(1) Includes nitrogenous fertilizers sales revenues from the Fertilizer segment to other operating segments, services and other revenues from fertilizers companies.

Due to major changes in our business context, in 2015, we suspended investments in the following fertilizer projects:

- UFN III, with the capacity to produce 1.2 mmt/y of urea and 70 mt/y of ammonia from 2.2 mmm³/d of natural gas; and
- UFN V, with the capacity to produce 519,000 t/y of ammonia from 1.3 mmm³/d of natural gas.

The UFN V fertilizing project was cancelled in 2015. The UFN III fertilizing project remains suspended and under evaluation. We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$153 million with respect to the UFN III fertilizer facility and of US\$140 million with respect to Araucária fertilizer facility, mainly attributable to (i) the use of a higher discount rate, (ii) the appreciation of the *real* against the U.S. Dollar for both projects and (iii) an increase in estimated production costs in Araucária.

We previously recognized impairment losses of US\$501 million for the fiscal year ended December 31, 2015, with respect to the UFN III fertilizer due to (i) the use of a higher discount rate (reflecting an increase in Brazil's risk premium) and (ii) the delay in expected future cash inflows resulting from postponement of the project and of US\$190 million with respect to the UFN V fertilizer facility due to our decision to cancel the project.

For further information, see Note 14 to our audited consolidated financial statements.

Renewable Energy

We have invested, alone and in partnership with other companies, in renewable power generation sources in Brazil, including wind. We currently participate in joint ventures in four wind power plants (Mangue Seco 1, 2, 3 and 4) and we hold indirect interests in two small hydroelectric power plants (Areia and Água Limpa) through our associate Termoeletrica Potiguar S.A – TEP. Additionally, the wind power plant Macau and a solar power plant unit UFVAR integrate our assets. The power generation capacity we have (alone and through the equity interests we hold in renewable energy companies) is equivalent to 25.4 MW of hydroelectric capacity, 1.1 MW of solar capacity and 105.8 MW of wind capacity. We and our partners sell energy from these plants directly to the Brazilian federal government via its renewable energies incentive program and the 2009 “reserve energy” auctions.

Gas and Power Abroad

We also participate in the gas and power sector in other South American countries. See below our international activities by region:

South America

We conduct gas and power activities in Argentina, Bolivia and in Uruguay.

- In **Argentina**, through PESA, we previously owned four electric power plants, Pichi Picún Leufú (hydrogeneration), Genelba (gas powered combined cycle), Genelba Plus (gas powered) and EcoEnergia (Cogeneration)), and we previously held an interest in two other electric power plants, Central Termelétrica José de San Martín S.A. and Central Termelétrica Manuel Belgrano S.A. and we also previously had a stake in a natural gas transportation company called TGS (Transportadora Gas del Sur). In July we sold our entire stake in PESA, owned through Petrobras Participaciones S.L. ("PPSL"), to Pampa Energía. Through Petrobras International Braspetro B.V.—PIB BV (Netherlands), we have an interest of 34% in Compañía Mega S.A., a natural gas separation facility.
- In **Bolivia**, we hold an 11% interest in GTB, owner of the Bolivian section of the Bolivia-to-Brazil (BTB) pipeline that transports natural gas we produce in Bolivia to the Brazilian market.
- In **Uruguay**, we participate in the two companies that are responsible for the distribution of natural gas by pipelines in the country: (i) Distribuidora de Gas Montevideo S.A., a company 100% owned by Petrobras, that supplies natural gas to the Montevideo area; and (ii) Conecta S.A., a company in which we hold a 55% equity interest (the remaining 45% belong to ANCAP, Uruguay's state oil company), that supplies natural gas to the rest of country.

Biofuels

Biofuels Key Statistics

	2016	2015	2014
	(US\$ million)		
Biofuel:			
Sales revenues	240	229	266
Income (loss) before income taxes	(351)	(317)	(166)
Property, plant and equipment	100	91	205
Capital expenditures and investments	96	43	112

Brazil is a global leader in the use and production of biofuels. In 2016, 88.0% of new light vehicles sold in Brazil had flexfuel capability, and service stations offered a choice of 100% ethanol and an ethanol/gasoline blend. Starting in March 2015, the Brazilian federal government increased the anhydrous ethanol content requirement for the gasoline sold in Brazil from 25% to 27%. Biodiesel also has a mandatory blend of 7% in all diesel fuel sold in Brazil since November 2014, increasing to 8% by March 2017.

We recognized impairment losses for the fiscal year ended December 31, 2016 on equity-method investments, amounting to US\$208 million, as a result of equity-accounted investments relating to Guarani S.A. (Guarani) and Nova Fronteira Bioenergia S.A. (Nova Fronteira), in which we used to own interests that were approved for sale in the last quarter of 2016. For further information on our partnerships and divestments completed in 2016, see Item 4. "Information of the Company – Overview of the Group." For further information on impairment, see Note 14 to our audited consolidated financial statements.



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Biodiesel

In 2016, we supplied 18% of Brazil's biodiesel (assuming 100% of BSBIOS Indústria e Comércio de Biodiesel Sul Brasil S.A. (BSBIOS Sul Brasil) production) and we act as a market catalyst by securing and blending biodiesel supplies and furnishing these to smaller distributors as well as our own service stations. We directly own two biodiesel plants (Quixadá biodiesel plant had its own operation stopped in November 2016 due to weak economic results) and, through our 50% interest in BSBIOS Sul Brasil, we own two additional plants. The biodiesel production capacity of these four plants totals 13.7 mbbl/d.

Ethanol

We have historically been present in the ethanol and sugar production chain through our ownership interest in Guarani, Nova Fronteira and Bambuí Bioenergia S.A. (Bambuí Bioenergia), and have sold the exceeding electricity generated from sugarcane bagasse burn. However, we have strategically decided to withdraw from biofuel production, preserving technological competencies in areas with development potential, and have entered into a number of strategic transactions to that end, as explained below.

In 2016, through our associated companies Bambuí Bioenergia, Nova Fronteira and Guarani, with plants situated in the States of Minas Gerais, Goiás and São Paulo and in Mozambique, Africa, we have accounted, in the 2016/2017 harvest, for a total milling of 26.2 mmt of sugarcane, corresponding to an ethanol and sugar production of 19.9 mbbl/d and 1.6 mmt respectively compared to 20.3 mbbl/d and 1.5 mmt respectively in the 2015/2016 harvest. These associated entities sold 1.4 GWh of exceeding electricity generated during the 2016/2017 harvest.

In December 2016, as part of our divestment program, we entered into a share purchase agreement with Tereos Participation SAS, a company in the French group Tereos, to sell our entire 46.0% stake in Guarani for US\$202 million and we recognized losses of US\$67 million in connection with the sale. In addition, due to the decision to incorporate Nova Fronteira into São Martinho, our 49% interest in Nova Fronteira was converted into a 6.6% interest in São Martinho, which has higher liquidity in the market, with losses of US\$30 million. For further information on our partnerships and divestments completed in 2016, see Item 4. "Information of the Company – Overview of the Group."

Corporate**Corporate Key Statistics**

	2016	2015	2014
	(US\$ million)		
Corporate:			
Income (loss) before income taxes	(13,723)	(14,961)	(8,047)
Property, plant and equipment	1,819	1,949	2,811
Capital expenditures and investments	230	302	452

Our Corporate segment comprises activities that cannot be attributed to other segments, including corporate financial management, central administrative overhead and actuarial expenses related to our pension and medical benefits for retired employees and their dependents.



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Organizational Structure

As of December 31, 2016, we had 25 direct subsidiaries and two direct joint operations as listed below. Twenty-two are entities incorporated under the laws of Brazil and three are incorporated abroad. We also have indirect subsidiaries (including PGF). See Exhibit 8.1 for a complete list of our subsidiaries and joint operations, including their full names, jurisdictions of incorporation and our percentage of equity interest.

PETROBRAS	
BRAZIL	ABROAD
Transportadora Associada de Gás S.A.—TAG	Petrobras Netherlands B.V.—PNBV
Petrobras Distribuidora S.A.—BR	Petrobras International Braspetro—PIB BV
Petrobras Logística de Exploração e Produção S.A.— PB-LOG	Braspetro Oil Services Company—Brasoil
Nova Transportadora Associada de Gás S.A.—NTS	
Petrobras Transporte S.A. – Transpetro	
Petrobras Gás S.A.—Gaspetro	
Petrobras Biocombustível S.A.	
Petrobras Logística de Gás—Logigás	
Liquigás Distribuidora S.A.	
Termomacaé Ltda.	
Breitener Energética S.A.	
Termobahia S.A.	
Baixada Santista Energia S.A.	
Araucária Nitrogenados S.A.	
Fundo de Investimento Imobiliário RB Logística—FII	
Petrobras Comercializadora de Energia Ltda. – PBEN	
Petrobras Negócios Eletrônicos S.A.—E-Petro	
Termomacaé Comercializadora de Energia Ltda	
Downstream Participações Ltda.	
5283 Participações Ltda.	
Companhia Integrada Têxtil de Pernambuco S.A.— CITEPE	
Companhia Petroquímica de Pernambuco S.A. – PetroquímicaSuape	
Fábrica Carioca de Catalizadores S.A.—FCC(*)	
Ibiritermo S.A.(*)	

(*) Joint operations.

Property, Plant and Equipment

Our most important tangible assets are wells, platforms, refining facilities, pipelines, vessels, other transportation assets, power plants as well as fertilizers and biodiesels plants. Most of these are located in Brazil. We own and lease our facilities and some owned facilities are subject to liens, although the value of encumbered assets is not material.

We have the right to exploit crude oil and gas reserves in Brazil under concession agreements, but the reserves themselves are the property of the government under Brazilian law. Item 4. “Information on the Company” includes a description of our reserves and sources of crude oil and natural gas, key tangible assets, and material plans to expand and improve our facilities.



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As of December 31, 2016, our property, plant and equipment included US\$22,954 million (US\$19,158 million as of December 31, 2015) related to the Assignment Agreement (see Item 10. “Additional Information—Material Contracts—Assignment Agreement.”). On December 29, 2014, we submitted the last declaration of commerciality of crude oil and natural gas accumulations, located in the Entorno de Iara block, to the ANP, which prompted the revision process of the Assignment Agreement. Currently, all areas subject to the Assignment Agreement (Franco, Florim, Nordeste de Tupi, Entorno de Iara, Sul de Guará and Sul de Tupi blocks) are being reviewed. This process includes the preparation of reports by independent experts engaged by us and by the ANP and related discussions with the Brazilian federal government. The revision process, for all the areas subject to the Assignment Agreement, is currently ongoing and there is no formal or official date for its conclusion. If the review of the Assignment Agreement determines that the value of acquired rights is higher than the amount initially paid, we may be required to pay the difference to the Brazilian federal government, or we may proportionally reduce the total volume of barrels acquired under the Assignment Agreement. If the review determines that the value of the acquired rights is lower than initially paid by us, the Brazilian federal government will reimburse us for the difference by delivering cash or bonds or equivalent means of payment, subject to budgetary regulations.

Currently, the settlement conditions and the amount to be agreed for revision of the Assignment Agreement are not defined. The beginning of the negotiations with the Brazilian federal government still depends on the appraisals by independent experts and the issuance of such experts’ reports. On October 21, 2016 our board of directors approved the creation of the minority shareholders committee (“Minority Committee”), responsible for monitoring the Assignment Agreement review process and providing support to our board of directors by issuing opinions on related matters. For further information on our Minority Committee, see Item 6. “Directors, Senior Management and Employees – Other Committees.”

We also recognized impairment charges of US\$6,193 in 2016 (US\$12,299 million in 2015) for certain property, plant and equipment, intangible assets and assets classified as held for sale. Further information about impairment of our assets is provided in Note 14 to our audited consolidated financial statements.

Regulation of the Oil and Gas Industry in Brazil

Concession Regime for Oil and Gas

Under Brazilian law, the Brazilian federal government owns all crude oil and natural gas subsoil accumulations in Brazil. The Brazilian federal government holds a monopoly over the exploration, production, refining and transportation of crude oil and oil products in Brazil and its continental shelf, with the exception that companies that were engaged in refining and distribution in 1953 were permitted to continue those activities. Between 1953 and 1997, we were the Brazilian federal government’s exclusive agent for exploiting its monopoly, including the importation and exportation of crude oil and oil products.

As part of a comprehensive reform of the oil and gas regulatory system, the Brazilian Congress amended the Brazilian Constitution in 1995 to authorize the Brazilian federal government to contract with any state or privately-owned company to carry out upstream, oil refining, cross-border commercialization and transportation activities in Brazil of oil, natural gas and their respective products. On August 6, 1997, Brazil enacted Law No. 9,478, which established a concession-based regulatory framework, ended our exclusive right to carry out oil and gas activities, and allowed competition in all aspects of the oil and gas industry in Brazil. Since that time, we have been operating in an increasingly deregulated and competitive environment. Law No. 9,478/1997 also created an independent regulatory agency, the ANP, to regulate the oil, natural gas and renewable fuel industry in Brazil, and to create a competitive environment in the oil and gas sector. Effective January 2, 2002, Brazil deregulated prices for crude oil, oil products and natural gas.



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Law No. 9,478/1997 established a concession-based regulatory framework and granted us the exclusive right to exploit crude oil reserves in each of our producing fields under the existing 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 contracts. This initial 27-year period for production can be extended at the request of the concessionaire and subject to approval from the ANP. Law No. 9,478/1997 also established a procedural framework for us to claim exclusive exploratory rights for a period of up to three years, later extended to five years, to areas where we could demonstrate that we had made commercial discoveries or exploration investments prior to the enactment of the Law No. 9,478/1997. In order to perfect our claim to explore and develop these areas, we had to demonstrate that we had the financial capacity to carry out these activities, either alone or through other cooperative arrangements.

Starting in 1999, all areas not already subject to concessions became available for public bidding conducted by the ANP. All the concessions that we have obtained since then were obtained through participation in public bidding rounds. In 2016, the ANP granted us an extension of the production phase of the concession agreement related to Marlim Field and Voador Field until August 2052 and an extension related to Ubarana Field until August 2034.

Taxation under Concession Regime for Oil and Gas

According to the Law No. 9,478/1997 and under our concession agreements for exploration and production activities with ANP, we are required to pay the government the following:

- Signing bonuses paid upon the execution of the concession agreement, which are based on the amount of the winning bid, subject to the minimum signing bonuses published in the relevant bidding guidelines (*edital de licitação*);
- Annual retention bonuses for the occupation or retention of areas available for exploration and production, at a rate established by the ANP in the relevant bidding guidelines based on the size, location and geological characteristics of the concession block;
- Special participation charges at a rate ranging from 0 to 40% of the net income derived from the production of fields that reach high production volumes or profitability, according to the criteria established in the applicable legislation. Net revenues are gross revenues less royalties paid, investments in exploration, operational costs and depreciation adjustments and applicable taxes. The Special Participation Tax uses as a reference international oil prices converted to reais at the current exchange rate. In 2016, we paid this tax on 18 of our fields, namely Albacora, Albacora Leste, Baleia Azul, Baleia Franca, Barracuda, Baúna, Canto do Amaro, Jubarte, Leste do Urucu, Lula, Manati, Marlim, Marlim Leste, Marlim Sul, Mexilhão, Rio Urucu, Roncador and Sapinhoá; and
- Royalties, to be established in the concession contracts at a rate ranging between 5% and 10% of gross revenues from production, based on reference prices for crude oil or natural gas established by Decree No. 2,705 and ANP regulatory acts. In establishing royalty rates in the concession contracts, the ANP also takes into account the geological risks and expected productivity levels for each concession. Most of our crude oil production is currently taxed at the maximum royalty rate.



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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.

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, three new laws were enacted to regulate exploration and production activities in pre-salt and other potentially strategic areas not subject to existing concessions: Law No. 12,351, Law No. 12,304, and Law No. 12,276. The enacted legislation does not impact the existing pre-salt concession contracts, which cover approximately 28% of the pre-salt areas.

Law No. 12,351/2010 regulates production-sharing contracts for oil and gas exploration and production in pre-salt areas not under concession and in potentially strategic areas to be defined by the CNPE. Under the production-sharing regime, we used to be the exclusive operator of all blocks. However, Law No. 13,365/2016 recently modified Law 12,3251/2010 in order to grant us the option to be the operator of the blocks offered under public bids under the production sharing regime. It is no longer mandatory for us to be the exclusive operator of all areas. CNPE will only offer us preference to operate the blocks under production-sharing regime. As part of this regulatory change, we must announce whether we will exercise our preference right for each of the areas offered, up to thirty (30) days after the notice by the CNPE and present our justifications. After our announcement, CNPE will propose to the Office of the Presidency which areas should be operated by us. The exploration and production rights for these areas will be offered under public bids. Regardless of whether we exercise our right of preference, we will also be able to participate, at our discretion, in the bidding process to increase our interest in these areas. Nonetheless, the winning bidder will be the company that offers to the Brazilian federal government the highest percentage of “profit oil,” which is the production of a certain field after deduction of royalties and “cost oil,” which is the cost associated with oil production.

Law No. 12,734 became partially effective on November 30, 2012, and amended Law 12,351, establishing a royalty rate of 15% applicable to the gross production of oil and natural gas under future production sharing contracts.

Law No. 12,304/2010, authorized the incorporation of a new state-run non-operating company that will represent the interests of the Brazilian federal government in the production-sharing contracts and will manage the commercialization contracts related to the Brazilian federal government’s share of the “profit oil.” This new state-owned company was incorporated on August 1, 2013, named Pré-Sal Petróleo S.A.—PPSA, and will participate in operational committees, with a casting vote and veto powers, as defined in the contract, and will manage and control costs arising from production-sharing contracts. Where production-sharing contracts are concerned, PPSA will exercise its specific legal activities alongside the ANP, the independent regulatory agency that regulates and oversees oil and gas activities under all exploration and production regimes, and the CNPE, the entity that sets the guidelines to be applied to the oil and gas sector, including with respect to the new regulatory model.

Assignment Agreement (Cessão Onerosa) and Global Offering

Pursuant to Law No. 12,276/2010, we entered into an agreement with the Brazilian federal government on September 3, 2010 (Assignment Agreement), 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 Assignment Agreement was R\$74,807,616,407, which was equivalent to US\$42,533,327,500 as of September 1, 2010. See Item 10. “Additional Information—Material Contracts—Assignment Agreement.”



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Natural Gas Law of 2009

In March 2009, the Brazilian Congress enacted Law No. 11,909, or Gas Law, regulating activities in the gas industry, including transport, processing, storage, liquefaction, regasification and commercialization. The Gas Law created a concession regime for the construction and operation of new pipelines to transport natural gas, while maintaining an authorization regime for pipelines subject to international agreements. According to the Gas Law, after a certain exclusivity period, operators (*transportadores*) will be required to grant access to transport pipelines and maritime terminals, except LNG terminals, to third parties in order to maximize utilization of capacity.

The Gas Law authorized the ANP to regulate prices for the use of gas transport pipelines subject to the new concession regime, based on a procedure defined in the Gas Law as a “*chamada pública*,” and to approve prices submitted by carriers (*carregadores*), according to previously established criteria, for the use of new gas transport pipelines subject to the authorization regime.

Authorizations previously issued by the ANP for natural gas transport will remain valid for 30 years from the date of publication of the Gas Law, and initial carriers (*carregadores iniciais*) were granted exclusivity in these pipelines for 10 years. All pipelines that our subsidiaries currently own and operate in Brazil are subject to an authorization regime. The ANP will issue regulations governing third-party access and carrier compensation if no agreement is reached between the parties.

The Gas Law also authorized certain consumers, who can purchase natural gas on the open market or obtain their own supplies of natural gas, to construct facilities and pipelines for their own use in the event local gas distributors controlled by the states, which have monopoly over local gas distribution, do not meet their distribution needs. These consumers are required to delegate the operation and maintenance of the facilities and pipelines to local gas distributors, but they are not required to sign gas supply agreements with the local gas distributors.

In December 2010, Decree No. 7,382 was enacted in order to regulate Chapter I to VI and VIII of the Gas Law as it relates to activities in the gas industry, including transportation and commercialization. Since the publication of this decree, a number of administrative regulations were enacted by the ANP and the MME in order to regulate various issues in the Gas Law and Decree No. 7,382 that needed to be further clarified. Among those is ANP Resolution No. 51/2013, which prevents a carrier from holding any equity interest in concessionaires of gas transport pipelines. Resolution No. 51/2013 applies only to the concessions granted after its publication, not affecting, therefore, the transportation of our natural gas production through pipelines operated by its subsidiaries and subject to the previous authorization regime.

Price Regulation

Until Law No. 9,478 in 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 government eliminated price controls for crude oil and oil products, although it retained regulation over certain natural gas sales contracts and electricity. Concurrently, the Brazilian federal government has periodically created and adjusted taxes applicable to crude oil, oil and natural gas products, which have been used as a tool to balance price stability to end consumers and also to increase its tax revenues.

Environmental Regulations

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 the *Conselho Nacional do Meio Ambiente* (National Council for the Environment, or CONAMA).



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Our offshore activities are subject to the administrative authority of IBAMA, which issues operating and drilling licenses. We are required to submit reports, including safety and pollution monitoring reports to IBAMA in order to maintain our licenses.

Most of the onshore environmental, health and safety conditions are controlled either at the federal or the state level depending on the localization of our facilities, the type of activity under development and other criteria to be set forth in regulation that is still pending. 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 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.

We are subject to a number of administrative and legal proceedings relating to environmental matters. For more information about these proceedings, see Item 8. “Financial Information—Legal Proceedings.” and Note 30 to our audited consolidated financial statements included in this annual report.

In 2016, we invested US\$0.9billion in environmental projects, compared to US\$1.1 billion in 2015 and US\$1.4 billion in 2014. These investments continued to be primarily directed at reducing emissions and wastes from industrial processes, managing water use and effluents, remediating impacted areas, implementing new environmental technologies, upgrading our pipelines and improving our ability to respond to emergencies.

Health, Safety and Environmental Initiatives

The protection of human health and the environment is one of our primary concerns, and is essential to our success as an integrated energy company.

We have a Health, Safety and Environmental (HSE) Committee (*Comitê de Segurança, Meio Ambiente e Saúde*) composed of three members of our board of directors who are responsible for assisting our board in the following matters:

- Definition of strategic goals in relation to HSE matters;
- Establishment of global policies related to the strategic management of HSE matters within our group of companies; and
- Assessment of the conformity of our strategic plan to its global HSE policies, among others.



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Our efforts to address health, safety and environmental concerns and ensure compliance with environmental regulations (which in 2016 totaled an investment of R\$5.88 billion, or US\$1.68 billion) involve the management of environmental costs related to production and operations, pollution control equipment and systems, projects to rehabilitate degraded areas, safety procedures and initiatives for emergency prevention and control, health and safety programs as well as:

- An HSE management system that seeks to minimize the impacts of operations and products on health, safety and the environment, reduce the use of natural resources and pollution and prevent accidents;
- ISO 14001 (environment) and OHSAS 18001 (health and safety) certification of our operating units. All the oil refined in Brazil was processed by certified units. The Frota Nacional de Petroleiros (National Fleet of Vessels) has been fully certified by the International Maritime Organization (IMO) International Management Code for Safe Operation of Ships and for Pollution Prevention (ISM Code) since December 1997;
- Regular and active engagement with the MME and IBAMA, in order to discuss environmental issues related to new oil and gas production and other transportation and logistical aspects of our operations;
- A strategic goal to reduce the intensity of greenhouse gas emissions, along with a set of performance indicators with targets to monitor progress with respect to this goal; and
- We evaluate each of our operational projects to identify risks and to ensure compliance with all of our HSE requirements and the adoption of the best HSE practices throughout a project's life cycle. In addition, we conduct more extensive environmental studies for new projects when required by applicable environmental legislation.

In 2016, our emissions decreased by 15% compared to 2015, mainly due to the reduction in thermal power generation, divestiture decisions and general lower level of operational activities. We are committed to reducing the intensity of greenhouse gas emissions from our processes and products through several initiatives, including reduction of gas flaring, energy efficiency measures and operational improvements.

Eliminating fatal accidents and achieving performance levels comparable to the best international oil and gas operators when it comes to the prevention of injuries to our employees and third parties are the two most important goals set by our safety management. Although we develop prevention programs in all of our operating units, we recorded 3 fatalities involving our own and contractors' employees in 2016 (compared to 16 in 2015). We investigate all accidents reported in order to identify their causes and then take preventive and corrective actions, which are regularly monitored once they are adopted. In cases of serious accidents, we send out company-wide alerts to enable other operating units to assess the probability of similar events occurring in their own operations.

Environmental Remediation Plans and Procedures

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. In order to respond to these events, Petrobras has 32 dedicated oil spill recovery vessels fully equipped for oil spill control and firefighting, 113 support boats and other vehicles, 270 additional support and recovery boats available to fight offshore oil spills and leaks, around 92 km of containment booms and 118 km of absorbent booms and around 96,000 liters of oil dispersants, among others. These resources are distributed in 12 environmental protection centers in strategic areas in which we operate throughout Brazil and in emergency response centers (distributed over 21 cities) in order to ensure rapid and coordinated response to onshore or offshore oil spills.

We have more than 500 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.



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Since 2012, Petrobras has been a participating member of the Oil Spill Response Limited—OSRL, an international organization that brings together over 160 corporations, including oil major, national/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, Petrobras has access to all resources available through that network, and we also subscribe to their Subsea Well Intervention Services, which provides swift international deployment of response-ready capping and containment equipment. The capping equipment is stored and maintained at bases worldwide, including Brazil. An OSRL Brazilian base opened in March 2014 and is now operational.

In 2016, we conducted 13 emergency drills of regional scope with the Brazilian navy, the civil defense, firefighters, the military police, environmental organizations and local governmental and community entities.

We set up a Zero Spill Plan, aiming at optimizing management and reducing the risk of oil spills in our operations. This plan encompasses investments to improve the management of processes and to ensure the integrity of our equipment and installations. Additionally, Petrobras has a model of communication, processing and recording of oil spills that permits the daily monitoring of these incidents, their impacts and mitigation measures.

The oil spill level in our upstream operations in 2016 was kept below 0.5 m³ per mmbbl produced. Data for 2012 compiled by the International Association of Oil & Gas Producers indicates that the industry average was 0.76 m³ of oil spilled per mmbbl produced. We continue to evaluate and develop initiatives to address HSE concerns and to reduce our exposure to HSE risks. In 2016, we had oil spills totaling 51.9m³, compared to 71.6 m³ in 2015 and 69.5 m³ in 2014.

Insurance

Our insurance programs focus principally on the evaluation of risks and the replacement value of assets, which is customary for our industry. Under our risk management policy, risks associated with our principal assets, such as refineries, tankers and offshore production units and drilling rigs, are insured for their replacement value with third-party Brazilian insurers. Although some policies are issued in Brazil, most of our policies are reinsured abroad with reinsurers rated A- or higher by S&P's rating agency or B++ or higher by A.M. Best.

Less valuable assets, including but not limited to small auxiliary boats, certain storage facilities, and some administrative installations, are self-insured. We do not maintain coverage for business interruption, except for a minority of our international operations and a few specific assets in Brazil. We generally do not maintain coverage for our wells for all of our Brazilian operations, except when required by a joint operating agreement. Although we do not insure most of our pipelines, we have insurance against damage or loss to third parties resulting from specific incidents, such as sudden and accidental seepage and oil pollution. We also maintain coverage for risks associated with cargo, hull and machinery. All projects and installations under construction that have an estimated maximum loss above US\$80 million are covered by a construction insurance policy.

We have operations in 9 countries outside Brazil and maintain varying levels of third-party liability insurance for our domestic and international operations as a result of a variety of factors, including our country risk assessments, whether we have onshore and offshore operations or legal requirements imposed by the particular country in which we operate. We maintain insurance coverage for operational third-party liability with respect to our onshore and offshore activities, including losses to third parties resulting from environmental risks such as oil spills, in Brazil up to an aggregate policy limit of US\$250 million. We maintain additional protection and indemnity (P&I) marine insurance against third-party liability related to our domestic offshore operations up to an aggregate policy limit between US\$50 million up to US\$500 million for a period of 12 months. In the event of an explosion or similar event at one of our mobile offshore units in Brazil, these policies can provide combined third-party liability coverage of up to US\$750 million.



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Our domestic and international operational third-party liability policies cover claims made against us by or on behalf of individuals who are not our employees in the event of property damage, personal injury or death, subject to the policy limits set forth above. As a general rule, our service providers are required to indemnify us for a claim we pay directly to a third party as a result of a court decision holding us liable for the actions of that service provider. Our operational third-party liability policies also cover environmental damage from oil spills (including liability arising from an explosion or similar sudden and accidental event at one of our offshore units) as well as litigation and clean-up and remediation costs, but do not cover governmental fines or punitive damages.

We maintain separate “control-of-well” insurance policies at our international operations to cover liability arising from the uncontrolled eruption of oil, gas, water or drilling fluid, as well as to cover claims for environmental damage from well blow-outs and similar events as well as related clean-up costs, with aggregate policy limits up to US\$509 million for a period of 12 months depending on the country. In the U.S. Gulf of Mexico, for example, we maintain third-party liability coverage up to an aggregate policy limit of US\$250 million, and control-of-well liability insurance up to US\$509 million. Depending on the particular circumstances, either of these policies could apply in the event of an explosion or similar event at one of our offshore units in the U.S. Gulf of Mexico.

We generally do not maintain control-of-well insurance for our domestic operations onshore and offshore Brazil, except when required by a joint operating agreement. As a result, we would bear the costs of clean-up, decontamination and any proceedings arising out of a control-of-well incident. Any sudden and accidental loss of hydrocarbon containment from our domestic operations onshore and offshore that is not attributable to a control-of-well issue would be covered by either our Protection & Indemnity (P&I) insurance, with coverage of up to US\$500 million for our mobile offshore units, or our onshore-offshore liability policy, with coverage of up to US\$250 million.

The premium for renewing our domestic property risk insurance policy for an 18-month period beginning November 2016 was US\$43.41 million. This represented a nominal decrease of 45% over the prior 18-month period. The insured value of our assets, in the same period, decreased by 4.9% to US\$173.6 billion. Beginning November 2016, we changed our risk retention for operational risks from US\$25 million up to US\$180 million while for engineering risks it may reach US\$80 million in certain circumstances.

Additional Reserves and Production Information

During 2016, our oil and gas production in Brazil averaged 2,387.4 mboe/d, of which 90% was oil and 10% was natural gas. The Campos Basin is one of Brazil’s main and most prolific oil and gas offshore basins, with over 60 hydrocarbon fields discovered, eight large oil fields and a total area of approximately 115,000 km² (28.4 million acres). In 2016, the Campos Basin produced an average 1,358.5 mmbbl/d of oil and 525.4 mmcf/d (13.9 mmm³/d) of natural gas, comprising 61% of our total production from Brazil. 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, LPG, shale naphtha and shale fuel oil. Our business unit does 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.

On December 31, 2016, our estimated proved reserves in Brazil totaled 9.5 bnbbbl of oil equivalent, including 8.1 bnbbbl of crude oil, condensate and synthetic oil and 222.7 bnm³ (8.4 tcf) of natural gas and synthetic gas. As of December 31, 2016, our domestic proved developed crude oil, condensate and synthetic oil reserves represented 52.8% of our total domestic proved crude oil, condensate and synthetic oil reserves, and our domestic proved developed natural gas and synthetic gas reserves represented 60.0% of our total domestic proved natural gas and synthetic gas reserves.



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We calculate reserves based on forecasts of field production, which depend on a number of technical parameters, such as seismic interpretation, geological maps, well tests, reservoir engineering studies 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 regulations promulgated by the SEC.

Internal Controls over Proved Reserves

The reserve estimation process begins with an initial evaluation of our assets by geophysicists, geologists and engineers. Corporate Reserves Coordinators (*Coordenadores de Reservas Corporativos*, or CRCs) safeguard the integrity and objectivity of our reserve estimates by supervising and providing technical support to Regional Reserves Coordinators (*Coordenadores de Reservas Regionais*, or CRRs) who are responsible for preparing the reserve estimates. Our CRRs and CRCs have degrees in geology, engineering and accounting and are trained internally and abroad in international reserve estimates seminars. CRCs are responsible for compliance with SEC rules and regulations, consolidating and auditing the reserve estimation process. The technical person primarily responsible for overseeing the preparation of our reserves has 28 years of experience in the field and has been with Petrobras for over 33 years. Our reserve estimates are approved by our board of executive officers, which then informs our board of directors of its approval.

D&M used our reserve estimates to conduct a reserve audit of 97% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2016 from certain properties we own in Brazil. In addition, D&M used our reserve estimates to conduct a reserves audit of 100% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2016 in properties we operate in the United States. The reserve estimates were prepared in accordance with the reserves definitions of Rule 4-10(a) of Regulation S-X of the SEC. For further information about our proved reserves, see “Supplementary Information on Oil and Gas Exploration and Production” beginning on page F-109. For disclosure describing the qualification of D&M’s technical person primarily responsible for overseeing our reserves audit and reserves evaluation, see Exhibit 99.1.

Changes in Proved Reserves

In 2016, we incorporated 103 million boe of proved reserves from extensions and discoveries in Brazil (Santos Basin), and we increased 131 mmboe of our proved reserves due to revisions of previous estimates, because new production development well drilling and better reservoir response in onshore and offshore post-salt fields, in Brazil and in the USA, and in the pre-salt, as result of positive answers from the reservoirs, recovery mechanisms (water injection) and operating efficiency of production systems in operation, as well as the growing drilling activities and tie-back activities, in the Santos and in the Campos Basin. We reduced 169 mmboe of our proved reserves due to sales of minerals in situ and increased 16 mmboe in our proved reserves due to purchases of minerals in situ, resulting in a net effect of a decrease of 153 mmboe in our proved reserves. The net result of these additions and dispositions, excluding production, was an increase of 81 mmboe to our proved reserves in 2016. Considering a production of 925 mmboe in 2016, our net decrease of proved reserves was 844 mmboe. This volume production does not take into account the production of EWTs in exploratory blocks in Brazil, and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.



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At year-end 2016 compared to year-end 2015, our proved undeveloped reserves company-wide decreased by a net total of 700.5 mmboe. Thus, we had a total of 4,441.1 mmboe of proved undeveloped reserves company-wide at December 31, 2016, compared to 5,141.6 mmboe of proved undeveloped reserves company-wide at December 31, 2015.

In Brazil, the net decrease in our proved undeveloped reserves in 2016 compared to 2015 is mostly derived from the conversion of some of our proved undeveloped reserves to proved developed reserves, mainly attributable to the start up of new production units in the Santos Basin, and to the drilling of wells in existing production fields, in the Santos and in the Campos Basins, amounting to 687 mmboe. In addition, our domestic proved undeveloped reserves decreased by 32 mmboe due to revisions of previous estimates. This decrease was partially offset by the increase due to extensions and discoveries, amounting to 103 mmboe, in the pre-salt areas of the Santos Basin.

All reserve volumes described above are “net” to the extent that they only include our proportional participation in reserve volumes and exclude reserves attributed to our partners.

In 2016, we invested a total of US\$13.1 billion in development projects, of which 95 % (US\$12.4 billion) was invested in Brazil, and converted a total of 747 mmboe of proved undeveloped reserves to proved developed reserves, approximately 92% (687 mmboe) of which were Brazilian reserves.

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 can exceed five years.

We had a total of 4,441.1 mmboe of proved undeveloped reserves company-wide at year-end 2016, approximately 7.4% (329.1mmboe) of which have remained undeveloped for five years or more as a result of several factors affecting development and production, including the inherent complexity of ultra-deepwater development projects, particularly in Brazil.

The majority of the 329.1 mmboe of our proved undeveloped reserves that have remained undeveloped for five years or more consist of reserves in the Santos Basin and in the Campos Basin, in which we are making investments to develop necessary infrastructure.

The following tables set forth our production of crude oil, natural gas, synthetic oil and synthetic gas by geographic area in 2016, 2015 and 2014:

Hydrocarbon Production by Geographic Area

	2016					2015					2014				
	Oil (mmbbl/d) (5)	Synth. Oil (mmbbl/d) (4)	Nat. Gas (mmcf/d) (1)	Synth. Gas (mmcf/d) (1)(4)	Total (mboe/d)	Oil (mmbbl/d) (5)	Synth. Oil (mmbbl/d) (4)	Nat. Gas (mmcf/d) (1)	Synth. Gas (mmcf/d) (1)(4)	Total (mboe/d)	Oil (mmbbl/d) (5)	Synth. Oil (mmbbl/d) (4)	Nat. Gas (mmcf/d) (1)	Synth. Gas (mmcf/d) (1)(4)	Total (mboe/d)
Brazil*	2,141.7	2.5	1,458.5	0.6	2,387.4	2,125.5	2.8	1,542.7	0.9	2,385.5	2,031.5	2.9	1,499.4	1.0	2,284.4
Lula field(2)	342.8	—	256.0	—	385.5	212.6	—	142.2	—	236.29	108.38	—	69.91	—	120.03
Búzios field(2)	8.9	—	0	—	8.9	6.5	—	0	—	6.54	0.19	—	0	—	0.19
Other	1,790.0	—	1,202.5	—	1,993.1	1,906.4	—	1,400.5	—	2,142.7	1,922.9	—	1,429.5	—	2,164.2
International:															
South America (outside of Brazil)	21.9	—	395.4	—	87.8	38.6	—	474.9	—	117.8	57.3	—	545.9	—	148.3
North America	33.0	—	87.6	—	47.6	30.6	—	67.2	—	41.8	27.3	—	12.8	—	29.5
Africa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total International	54.9	—	483.0	—	135.4	69.2	—	542.1	—	159.6	84.6	—	558.7	—	177.8
Total consolidated production	2,196.6	2.5	1,941.5	0.6	2,522.9	2,194.7	2.8	2,084.8	0.9	2,545.1	2,116.1	2.9	2,058.1	1.0	2,462.2
Equity and non-consolidated affiliates(2):															
South America (outside of Brazil)	1.3	—	0.3	—	1.3	3.4	—	0.9	—	3.5	4.6	—	1.6	—	4.9
Africa	23.8	—	—	—	23.8	26.6	—	—	—	26.6	26.6	—	—	—	26.6
Worldwide production	2,221.7	2.5	1,941.9	0.6	2,548.0	2,224.7	2.8	2,085.7	0.9	2,575.2	2,147.3	2.9	2,059.7	1.0	2,493.7

(1) Natural gas production figures are the production volumes of natural gas available for sale, excluding flared and reinjected gas and gas consumed in operations.

(2) Búzios and Lula fields are separately included as they contain more than 15% of our total proved reserves each.

(3) Equity-accounted investees.

(4) We produce synthetic oil and synthetic gas from oil shale deposits in São Mateus do Sul, in the Paraná Basin of Brazil.

(5) Oil production includes LNG and production from EWTs.

The following table sets forth our estimated net proved developed and undeveloped reserves of crude oil and natural gas by region as of December 31, 2016.

Estimated Net Proved Developed and Undeveloped Reserves							
Reserves category	Reserves						
	Oil (mmbbl)	Natural gas (bncf)	Total oil and natural gas (mmboe)	Synthetic oil (mmbbl)(1)	Synthetic gas (bncf)(1)	Total synthetic oil and synthetic gas (mmboe)	Total oil and gas products (mmboe)
Proved developed:							
Brazil	4,250.1	5,034.2	5,089.2	6.8	9.2	8.3	5,097.5
International							
South America (outside of Brazil)	0.5	33.7	6.1	—	—	—	6.1
North America	79.6	83.6	93.5	—	—	—	93.5
Total International	<u>80.1</u>	<u>117.3</u>	<u>99.7</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>99.7</u>
Total consolidated proved developed reserves	4,330.2	5,151.5	5,188.8	6.8	9.2	8.3	5,197.2
Equity and non-consolidated affiliates							
South America (outside of Brazil)	—	—	—	—	—	—	—
Africa	32.5	8.6	33.9	—	—	—	33.9
Total non-consolidated proved developed reserves	<u>32.5</u>	<u>8.6</u>	<u>33.9</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>33.9</u>
Total proved developed reserves	4,362.7	5,160.1	5,222.7	6.8	9.2	8.3	5,231.1
Proved undeveloped:							
Brazil	3,812.9	3,359.7	4,372.8	—	—	—	4,372.8
International							
South America (outside of Brazil)	0.3	80.2	13.7	—	—	—	13.7
North America	16.8	3.6	17.4	—	—	—	17.4
Total International	<u>17.1</u>	<u>83.8</u>	<u>31.1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>31.1</u>
Total consolidated proved undeveloped reserves	3,830.0	3,443.6	4,403.9	—	—	—	4,403.9
Equity and non-consolidated affiliates							
South America (outside of Brazil)	—	—	—	—	—	—	—
Africa	36.5	3.9	37.2	—	—	—	37.2
Total non-consolidated proved undeveloped reserves	<u>36.5</u>	<u>3.9</u>	<u>37.2</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>37.2</u>
Total proved undeveloped reserves ..	3,866.5	3,447.5	4,441.1	—	—	—	4,441.1
Total proved reserves (developed and undeveloped)	<u>8,229.2</u>	<u>8,607.6</u>	<u>9,663.8</u>	<u>6.8</u>	<u>9.2</u>	<u>8.3</u>	<u>9,672.2</u>

(1) Volumes of synthetic oil and synthetic gas from oil shale deposits in the Paraná Basin in Brazil have been included in our proved reserves in accordance with the SEC rules for estimating and disclosing reserve quantities.



The table below summarizes information about the changes in total proved reserves of our consolidated entities for 2016, 2015 and 2014:

Total Proved Developed and Undeveloped Reserves (consolidated entities only)(1)

	Oil (mmbbl)	Natural gas (bcf)	Total oil and natural gas (mmboe)	Synthetic oil (mmbbl)	Synthetic gas (bcf)	Total synthetic oil and synthetic gas (mmboe)	Total oil and gas products (mmboe)
Reserves quantity information for the year ended December 31, 2016							
January 1, 2016	8,687.0	10,406.8	10,421.5	6.9	9.3	8.5	10,430.0
Revisions of previous estimates	197.6	(472.6)	118.8	0.8	1.2	1.0	119.8
Improved recovery	—	0.1	0.0	—	—	—	0.0
Purchases of proved reserves ..	0.7	93.3	16.3	—	—	—	16.3
Extensions and discoveries	87.8	92.1	103.2	—	—	—	103.2
Production	(766.3)	(892.6)	(915.1)	(0.9)	(1.4)	(1.2)	(916.2)
Sales of proved reserves	(46.6)	(631.9)	(151.9)	—	—	—	(151.9)
December 31, 2016	<u>8,160.3</u>	<u>8,595.1</u>	<u>9,592.8</u>	<u>6.8</u>	<u>9.2</u>	<u>8.3</u>	<u>9,601.1</u>
Reserves quantity information for the year ended December 31, 2015							
January 1, 2015	11,037.5	12,081.0	13,051.0	7.9	10.6	9.6	13,060.7
Revisions of previous estimates	(1,990.8)	(1,178.3)	(2,187.2)	0.1	0.2	0.1	(2,187.1)
Improved recovery	1.1	27.9	5.8	—	—	—	5.8
Purchases of proved reserves ..	—	—	—	—	—	—	—
Extensions and discoveries	411.9	492.2	494.0	—	—	—	494.0
Production	(766.0)	(924.5)	(920.1)	(1.0)	(1.4)	(1.3)	(921.3)
Sales of proved reserves	(6.8)	(91.4)	(22.0)	—	—	—	(22.0)
December 31, 2015	<u>8,687.0</u>	<u>10,406.8</u>	<u>10,421.5</u>	<u>6.9</u>	<u>9.3</u>	<u>8.5</u>	<u>10,430.0</u>
Reserves quantity information for the year ended December 31, 2014							
January 1, 2014	10,947.7	12,483.2	13,028.3	8.8	11.8	10.7	13,039.0
Revisions of previous estimates	631.4	539.6	721.4	0.2	0.1	0.2	721.6
Improved recovery	0.5	10.8	2.3	—	—	—	2.3
Purchases of proved reserves ..	22.9	47.1	30.8	—	—	—	30.8
Extensions and discoveries	272.3	264.0	316.3	—	—	—	316.3
Production	(732.9)	(911.8)	(884.8)	(1.1)	(1.4)	(1.3)	(886.1)
Sales of proved reserves	(104.5)	(351.9)	(163.1)	—	—	—	(163.1)
December 31, 2014	<u>11,037.5</u>	<u>12,081.0</u>	<u>13,051.0</u>	<u>7.9</u>	<u>10.6</u>	<u>9.6</u>	<u>13,060.7</u>

(1) Natural gas production volumes used in this table are the net volumes withdrawn from our proved reserves, including flared gas consumed in operations and excluding reinjected gas. Oil production volumes used in this table are net volumes withdrawn from our proved reserves and exclude LNG and production from EWTs. As a result, the oil and natural gas production volumes in this table are different from those shown in the production table above, which shows the production volumes of natural gas available for sale.



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We do not have any material acreage expiring before 2025.

The following tables show the number of gross and net productive oil and natural gas wells and total gross and net developed and undeveloped oil and natural gas acreage in which Petrobras had interests as of December 31, 2016.

Gross and Net Productive Wells and Gross and Net Developed and Undeveloped Acreage								
As of December 31, 2016								
Gross and net productive wells(1):	Oil		Natural gas		Synthetic oil		Synthetic gas	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Consolidated subsidiaries								
Brazil	7,738	7,718.0	198	192.4	—	—	—	—
International					—	—	—	—
South America (outside of Brazil)	2,163	1,604.0	329	242.2	—	—	—	—
North America	19	10.9	8	5.0	—	—	—	—
Total international	2,182	1,614.9	337	247.2	—	—	—	—
Total consolidated	9,920	9,332.9	535	439.6	—	—	—	—
Equity and non-consolidated affiliates:					—	—	—	—
South America (outside of Brazil)	83	23.0	8	3.0	—	—	—	—
Africa	42	7.1	0	0.0	—	—	—	—
Total gross and net productive wells	10,045	9,362.9	543	442.6	—	—	—	—



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As of December 31, 2016

	Oil		Natural gas		Synthetic oil		Synthetic gas	
			(in acres)					
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Gross and net developed acreage:								
Brazil	4,589,843.8	4,262,179.0	353,741.2	331,812.3	1,346.0	1,346.0	0.0	0.0
International								
South America (outside of Brazil)	2,518.6	846.2	27,868.0	9,363.6	—	—	—	—
North America	16,557.4	8,528.4	6,267.2	1,509.8	—	—	—	—
Total international	19,076.0	9,374.6	34,135.2	10,873.5	—	—	—	—
Total consolidated	4,608,919.7	4,271,553.6	387,876.4	342,685.8	1,346.0	1,346.0	0.0	0.0
Equity and non-consolidated affiliates:								
South America (outside of Brazil)	—	—	—	—	—	—	—	—
Africa	587,244.2	48,573.5	—	—	—	—	—	—
Total non-consolidated ...	587,244.2	48,573.5	—	—	—	—	—	—
Total gross and net developed acreage	<u>5,196,164.0</u>	<u>4,320,127.1</u>	<u>387,876.4</u>	<u>342,685.8</u>	<u>1,346.0</u>	<u>1,346.0</u>	<u>0.0</u>	<u>0.0</u>



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As of December 31, 2016

	Oil		Natural gas		Synthetic oil		Synthetic gas	
			(in acres)					
Gross and net undeveloped acreage:	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Brazil	571,544.0	454,484.7	233,907.0	229,766.8	0.0	0.0	0.0	0.0
International								
South America (outside of Brazil)	1,605.0	539.3	66,356.4	22,295.8	—	—	—	—
North America	2,907.7	1,629.8	90.2	46.6	—	—	—	—
Total international	4,512.7	2,169.0	66,446.6	22,342.4	—	—	—	—
Total consolidated	576,056.7	456,653.7	300,353.6	252,109.2	0.0	0.0	0.0	0.0
Equity and non-consolidated affiliates:								
South America (outside of Brazil)	—	—	—	—	—	—	—	—
Africa	57,330.2	3,101.9	—	—	—	—	—	—
Total non-consolidated ...	57,330.2	3,101.9	—	—	—	—	—	—
Total gross and net undeveloped acreage ...	633,386.9	459,755.6	300,353.6	252,109.2	0.0	0.0	0.0	0.0

(1) A “gross” well or acre is a well or acre in which a working interest is owned, while the number of “net” wells or acres is the sum of fractional working interests in gross wells or acres.



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

Net Productive and Dry Exploratory and Development Wells			
	2016	2015	2014
Net productive exploratory wells drilled:			
Consolidated subsidiaries:			
Brazil	7.7	41.1	48.3
South America (outside of Brazil)	2.2	3.7	4.7
North America	—	0.1	0.4
Africa	—	—	—
Other	—	—	—
Total consolidated subsidiaries	9.9	44.9	53.4
Equity and non-consolidated affiliates:			
South America (outside of Brazil)	—	—	—
Africa	—	—	—
Total productive exploratory wells drilled	9.9	44.9	53.4
Net dry exploratory wells drilled:			
Consolidated subsidiaries:			
Brazil	5.1	14.9	19.2
South America (outside of Brazil)	1.0	—	1.1
North America	—	0.5	—
Africa	—	—	—
Other	—	—	—
Total consolidated subsidiaries	6.1	15.4	20.3
Equity and non-consolidated affiliates:			
South America (outside of Brazil)	—	—	—
Africa	—	—	0.9
Total dry exploratory wells drilled	6.1	15.4	21.2
Total number of net exploratory wells drilled	16.0	60.2	74.6
Net productive development wells drilled:			
Consolidated subsidiaries:			
Brazil	194.4	523.5	398.0
South America (outside of Brazil)	24.5	70.9	41.8
North America	0.4	0.7	—
Africa	—	—	—
Other	—	—	—
Total consolidated subsidiaries	219.3	595.1	439.8
Equity and non-consolidated affiliates:			
South America (outside of Brazil)	0.0	0.7	0.4
Africa	1.7	0.0	0.7
Total productive development wells drilled	221.0	595.8	440.9
Net dry development wells drilled:			
Consolidated subsidiaries:			
Brazil	1.0	3.0	12.7
South America (outside of Brazil)	—	0.5	—
North America	—	—	—
Africa	—	—	—
Other	—	—	—
Total consolidated subsidiaries	1.0	3.5	12.7
Equity and non-consolidated affiliates:			
South America (outside of Brazil)	—	—	—
Africa	—	—	0.1
Total dry development wells drilled	1.0	3.5	12.8
Total number of net development wells drilled	222.0	599.3	453.6



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The following table summarizes the number of wells in the process of being drilled as of December 31, 2016. For more information about our ongoing exploration and production activities in Brazil, see “—Exploration and Production—Activities in Brazil.” Our present exploration and production activities outside of Brazil are described in “—Exploration and Production—Activities Abroad.” Also, see Note 15 to our audited consolidated financial statements for further information about our capitalized exploration costs and the unaudited supplementary information on oil and gas exploration and production contained in our audited consolidated financial statements.

Number of Wells Being Drilled as of December 31, 2016

	Year-end 2016	
	Gross	Net
Wells Drilling		
Consolidated Subsidiaries:		
Brazil	9	8.1
International:		
South America (outside of Brazil)	1	1.0
North America	1	0.3
Africa	—	—
Others	—	—
Total International	2	1.3
Total consolidated	11	9.4
Equity and non-consolidated affiliates:		
South America (outside of Brazil)	—	—
Africa	1	0.2
Total wells drilling	12	9.5



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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.

	Brazil	South America (outside of Brazil)	North America	Total	Equity and non-consolidated affiliates(2)
			(US\$)		
During 2016					
<i>Average sales prices</i>					
Oil, per barrel	39.36	54.50	37.70	39.47	44.03
Natural gas, per thousand cubic feet(1)	5.22	3.83	2.72	4.99	—
Synthetic oil, per barrel	32.98	—	—	32.98	—
Synthetic gas, per thousand cubic feet	3.13	—	—	3.13	—
<i>Average production costs, per barrel – total</i>	10.36	6.95	6.83	10.18	35.11
During 2015					
<i>Average sales prices</i>					
Oil, per barrel	42.16	65.96	45.31	42.60	51.77
Natural gas, per thousand cubic feet(1)	6.04	3.97	2.75	5.77	—
Synthetic oil, per barrel	48.20	—	—	48.20	—
Synthetic gas, per thousand cubic feet	5.68	—	—	5.68	—
<i>Average production costs, per barrel – total</i>	12.97	8.80	3.16	12.61	32.16
During 2014					
<i>Average sales prices</i>					
Oil, per barrel	87.84	79.28	90.31	87.64	100.62
Natural gas, per thousand cubic feet(1)	7.99	3.50	4.77	7.45	—
Synthetic oil, per barrel	92.63	—	—	92.63	—
Synthetic gas, per thousand cubic feet	9.68	—	—	9.68	—
<i>Average production costs, per barrel – total</i>	16.89	12.32	6.23	16.49	32.45

- (1) The volumes of natural gas used in the calculation of this table are the production volumes of natural gas available for sale and are also shown in the production table above. Natural gas amounts were converted from bbl to cubic feet in accordance with the following scale: 1 bbl = 6 cubic feet.
- (2) Operations in Venezuela and in Africa-PO&G. After our divestment of PESA in 2016, we no longer have equity investments in Venezuela.

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

Management's Discussion and Analysis of Financial Condition and Results of Operations

The information derived from our financial statements as of and for the years ended December 31, 2016, 2015 and 2014 has been prepared in accordance with IFRS issued by the IASB. For more information, see "Presentation of Financial and Other Information" and Notes 2, 4 and 5 to our audited consolidated financial statements.

You should read the following discussion of our financial condition and results of operations together with our audited consolidated financial statements and the accompanying notes beginning on page F-3 of this annual report.



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Overview

We earn income from:

- domestic sales, which consist of sales of oil products (including diesel, gasoline, jet fuel, naphtha, fuel oil and liquefied petroleum gas), natural gas, ethanol, electricity and petrochemical products;
- export sales, which consist primarily of sales of crude oil and oil products;
- international sales (excluding export sales), which consist of sales of crude oil, natural gas and oil products that are purchased, produced and refined abroad; and
- other sources, including services, interest income from investments, share of earnings in equity-accounted investees, foreign exchange variation gains and inflation indexation gains on financial instruments.

Our expenses include:

- costs of sales (mainly comprised of direct labor costs, operating costs and purchases of crude oil, oil products and natural gas); property, plant and equipment maintenance and repairs; depreciation, depletion and amortization of property, plant and equipment, oil fields and signing bonuses (acquisition costs); and oil and gas exploration costs;
- selling (which include expenses for transportation and distribution of our products), general and administrative expenses;
- research and development;
- impairment of assets and other operating expenses; and
- interest expense, inflation indexation and foreign exchange variation losses on debt and other financial instruments.

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 crude oil and oil products (denominated in reais);
- fluctuations in the real vs. U.S. dollar exchange rates and other currencies, as set out in Note 33.2(c) to our audited consolidated financial statements;
- the demand for oil products in Brazil and the amount of imports required to meet the domestic demand;
- the recoverable amounts of assets for impairment testing purposes; and
- the amount of production taxes from our operations that we are required to pay.

Sales Volumes and Prices

The profitability of our operations in any particular accounting period is related to the sales prices and volumes of the crude oil, oil products, natural gas and biofuels that we sell and the relationship between these prices and international prices. Our consolidated net sales in 2016 totaled 1,273,533mboe, representing US\$81,405 million in sales revenues, compared to 1,402,739 mboe, representing US\$97,314 million in sales revenues in 2015 and compared to 1,447,912 mboe, representing US\$143,657 million in sales revenues in 2014.



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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 domestic market. Therefore, the price of oil products in Brazil has a more significant impact on our financial results than crude oil prices. International oil product prices vary over time as the result of many factors, including the price of crude oil. We intend to sell our products in Brazil at parity with international product prices.

The average price of Brent crude oil (as reported by Bloomberg), an international benchmark oil, was US\$44.11 per barrel in 2016, US\$52.31 per barrel in 2015 and US\$98.88 per barrel in 2014. In December 2016, Brent crude oil prices averaged US\$54.07 per barrel. Despite the sharp devaluation of the real throughout 2016, the average price of the Brent crude oil, when expressed in reais, also decreased to R\$152.19 per barrel during 2016 from R\$172.40 per barrel during 2015.

In November 2014, we announced price increases at the refinery gate, totaling 3.0% for gasoline and 5.0% for diesel compared to December 31, 2013 prices and in September 2015 we announced further price increases at the refinery gate totaling 6% for gasoline and 4% for diesel compared to December 31, 2014 prices. In 2016, we announced price adjustments at the refinery gate totaling an increase of 1.4% for gasoline and a decrease of 4.6% for diesel compared to December 31, 2015 prices.

In October 2016, our executive board approved a new pricing policy for diesel and gasoline produced in our refineries. The new policy will be based on two factors: (i) parity with the international prices and (ii) inclusion of a margin to take into account risks inherent in our import operations (e.g., foreign exchange rate, price volatility and demurrage). The new policy provides for price revisions to be evaluated at least once a month. As the goal of the policy is to maintain fuel prices in pace with international market trends, prices may be maintained, reduced or increased. The need for adjustments to fuel prices will be periodically analyzed by our Markets and Prices Executive Group, which includes our CEO, our Chief Refining and Natural Gas Officer, and our CFO and Investor Relations Officer.

During 2016, 79.9% of our sales revenues were derived from sales of oil products, natural gas and other products in Brazil, compared to 78.1% in 2015 and 77.7% in 2014.

For the Year Ended December 31,

	2016			2015			2014		
	Volume	Net Average Price	Sales Revenues	Volume	Net Average Price	Sales Revenues	Volume	Net Average Price	Sales Revenues
	(mbbl, except as otherwise noted)	(US\$)(1)	(US\$ million)	(mbbl, except as otherwise noted)	(US\$)(1)	(US\$ million)	(mbbl, except as otherwise noted)	(US\$)(1)	(US\$ million)
Diesel	285,422	89.40	25,524	336,723	90.70	30,532	365,510	116.50	42,586
Automotive gasoline	199,381	81.60	16,263	201,821	80.90	16,320	226,230	104.80	23,702
Fuel oil (including bunker fuel)	24,526	47.60	1,167	37,880	60.60	2,297	43,494	127.90	5,562
Naphtha	55,221	44.80	2,472	48,404	53.60	2,594	59,443	62.70	3,729
Liquefied petroleum gas	85,486	36.10	3,083	84,592	34.10	2,881	85,723	65.60	5,622
Jet fuel	37,147	69.30	2,573	40,187	82.70	3,325	40,285	108.20	4,357
Other oil products	68,101	49.50	3,372	65,202	53.20	3,468	76,567	75.40	5,771



For the Year Ended December 31,

	2016			2015			2014		
	Volume	Net Average Price	Sales Revenues	Volume	Net Average Price	Sales Revenues	Volume	Net Average Price	Sales Revenues
	(mbbl, except as otherwise noted)	(US\$)(1)	(US\$ million)	(mbbl, except as otherwise noted)	(US\$)(1)	(US\$ million)	(mbbl, except as otherwise noted)	(US\$)(1)	(US\$ million)
Subtotal oil products	755,284	72.10	54,454	814,809	75.40	61,417	897,252	101.80	91,329
Natural gas (boe)	121,994	32.40	3,952	157,815	37.30	5,894	162,633	49.40	8,035
Ethanol, nitrogen products, renewables and other non-oil products	40,843	91.60	3,743	45,063	85.80	3,868	36,181	106.70	3,862
Electricity, services and others . .	—	—	2,753	—	—	4,850	—	—	8,384
Total domestic market . . .	918,121	—	64,902	1,017,687	—	76,029	1,096,066	—	111,610
Exports	202,744	41.60	8,439	186,060	52.10	9,692	143,423	97.10	13,930
International sales	152,668	52.80	8,064	198,992	58.30	11,593	208,423	86.90	18,117
Total international market	355,412	—	16,503	385,052	—	21,285	351,846	—	32,047
Consolidated sales revenues	1,273,533	—	81,405	1,402,739	—	97,314	1,447,912	—	143,657

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

Effect of Taxes on Our Income

In addition to taxes paid on behalf of consumers to federal, state and municipal governments, such as the Domestic Value-Added Tax (*Imposto sobre Circulação de Mercadorias e Serviços*), we are required to pay three main charges on our oil production activities in Brazil: royalties, special participation and retention bonuses. See Item 4. “Information on the Company—Regulation of the Oil and Gas Industry in Brazil—Taxation under Concession Regime for Oil and Gas” and Item 3. “Key Information—Risk Factors—Risks Relating to Brazil.” These charges imposed by the Brazilian federal government are included in our cost of sales.

In addition, we are also subject to tax on our income at an effective rate of 34%, including 25% of corporate income tax and a social contribution tax at an effective rate of 9%, the standard corporate tax rates in Brazil. In 2016 and 2015, we recognized additional income tax expenses as the result of recently enacted Brazilian tax regulations imposing income tax on the income generated by our foreign subsidiaries.

Inflation and Exchange Rate Variation

Inflation

Since the introduction of the *real* as the Brazilian currency in July 1994, except for 1995, 2002 and 2015, inflation in Brazil has remained relatively stable. Inflation was 6.29% in 2016, 10.67% in 2015, and 6.41% in 2014 as measured by IPCA. Inflation has had, and may continue to have, effects on our financial condition and results of operations. See Item 3. “Key Information—Risk Factors—Inflation, and the Brazilian government’s measures to combat inflation, may contribute significantly to economic uncertainty in Brazil, and may materially adversely affect us.”

Exchange Rate Variation

Our main functional currency is the *real*, which is the functional currency of Petrobras and its Brazilian subsidiaries and our presentation currency is the U.S. dollar. Therefore, we maintain our financial records in *reais*, and translate our financial statements into U.S. dollars for presentation purposes based on the average exchange rates prevailing during the period or at the balance sheet date, pursuant to the criteria set out in IAS 21—“The effects of changes in foreign exchange rates.”



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When the *real* appreciates relative to the U.S. dollar, the effect is to generally increase both revenues and expenses when expressed in U.S. dollars. When the *real* depreciates relative to the U.S. dollar, the effect is to generally decrease revenues and expenses when expressed in U.S. dollars.

From 2003 to 2011, considering the average exchange rates of each year, the *real* appreciated against U.S. dollar each year (by an average of 7% per year), except for 2009 (when it depreciated by 9%). In 2016, the *real* depreciated 4.2% against the U.S. dollar, compared to depreciation of 41.9% in 2015, depreciation of 9.1% in 2014; and depreciation of 10.4% in 2013. Through April 25, 2017, the *real* has appreciated by 3% against the U.S. dollar, when compared to December 31, 2016.

Fluctuations in exchange rate have multiple effects on our results of operations in *reais*. The relative pace at which our total revenues and expenses in *reais* increase or decrease with the exchange rate, and its impact on our margins, is affected by our pricing policy in Brazil. Absent changes in the international prices for crude oil, oil products and natural gas, when the *real* appreciates against the U.S. dollar and we do not adjust our prices in Brazil, our margins generally improve. Absent changes in the international prices for 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, margins generally decline.

The depreciation of the *real* against the U.S. dollar also increases our debt service in *reais*, as the amount of *reais* necessary to pay principal and interest on foreign currency debt increases with the depreciation of the *real*. A devaluation of the *real* also increases our costs to import oil and oil products, imported goods and services necessary for our operations and our production taxes. Unless the depreciation of the *real* is offset by higher prices for our products sold in Brazil, a devaluation increases our debt service relative to our cash flows while also reducing our operating margins.

The foreign exchange variations on foreign-denominated assets and liabilities of entities for which the *real* is the functional currency are recorded in profit or loss, while the foreign exchange variations on the translation to the presentation currency are recognized in other comprehensive income in shareholders' equity. As our net debt denominated in other currencies increases, the negative impact of a depreciation of the *real* on our results and net income when expressed in *reais* also increases, thereby reducing the earnings available for distribution. Note 33.2(c) to our audited consolidated financial statements provides further information about our foreign exchange exposure related to assets and liabilities.

Since mid-May 2013, we have designated cash flow hedging relationships in which (a) the hedged items are portions of our highly probable future monthly export revenues in U.S. dollars, (b) the hedging instruments are portions of our long-term debt obligations denominated in U.S. dollars, and (c) the risk hedged is the effect of changes in exchange rates between the U.S. dollar and our functional currency, the *real*. Both long-term debt obligations (hedging instruments) and future exports (hedged items) are exposed to the *real*/U.S. dollar foreign currency risks at their respective spot exchange rate. Cash flow hedge accounting allows gains or losses arising from the effect of changes in the foreign currency exchange rate on the hedging instruments to be recognized in other comprehensive income in shareholders' equity and then recycled from equity to profit or loss in the periods during which the hedged transactions (future exports) occur, rather than being immediately recognized as profits or losses. See "—Critical Accounting Policies and Estimates—Cash Flow Hedge Accounting Involving our Future Exports" and Notes 4.3.6, 5.8 and 33.2(a) to our audited consolidated financial statements for further information about our cash flow hedge.

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 the IFRS and they may increase or decrease when expressed in U.S. dollars as the *real* appreciates or depreciates against the U.S. dollar.

Results of Operations

The differences in our operating results from year to year occur as a result of a combination of factors, including primarily: the volume of crude oil, oil products and natural gas we produce and sell; the price at which we sell our crude oil, oil products and natural gas and the relationship of those prices to the international prices; the level and cost of imports and exports needed to satisfy our demand; production taxes; and the differential between Brazilian and international inflation rates, adjusted by the depreciation or appreciation of the *real* against the U.S. dollar.

- The table below shows the amount by which each of these variables has changed during the last three years. Production volumes presented in this table are prepared in accordance with SPE criteria, which are the criteria we apply to analyze our operating results:

	2016	2015	2014
Crude oil and NGL production (mbbl/d):			
Brazil	2,144	2,128	2,034
International	55	69	85
Non-consolidated international production(1)	25	30	31
Total crude oil and NGL production	<u>2,224</u>	<u>2,227</u>	<u>2,150</u>
Change in crude oil and NGL production	(0.1)%	3.6%	4.4%
Average sales price for crude oil (US\$/barrel):			
Brazil	39.36	42.16	87.84
International	43.52	55.99	82.93
Natural gas production (mmcf/d)(2):			
Brazil	2,910	2,814	2,556
International	486	546	558
Total natural gas production	<u>3,396</u>	<u>3,360</u>	<u>3,114</u>
Change in natural gas production (sold only)	1.1%	7.9%	1.7%
Average sales price for natural gas (US\$/mcf)(2):			
Brazil	5.22	6.04	7.99
International	3.57	3.77	3.53
Year-end exchange rate (reais/US\$)	3.26	3.90	2.66
Appreciation (depreciation) during the year(3)	16.4%	(46.8)%	(13.4)%
Average exchange rate for the year (reais/US\$)	3.48	3.34	2.35
Appreciation (depreciation) during the year(4)	(4.2)%	(41.9)%	(9.1)%
Inflation rate (IPCA)	6.28%	10.67%	6.40%

(1) Non-consolidated companies in Venezuela and in Africa.

(2) Amounts were converted from bbl to cubic feet in accordance with the following scale: 1 bbl = 6 cubic feet.

(3) Based on year-end exchange rate (US\$/R\$)

(4) Based on average exchange rate for the year (US\$/R\$)

Virtually all of our revenues and expenses for our Brazilian operations are denominated and payable in *reais*. Although the fluctuation of the *real* affects our revenues and expenses in different ways, when we translate them into U.S. dollars, we only include them in our result of operations discussion when such revenues and expenses represent a contributing factor to changes in our results of operations as compared to previous periods. In 2016, the average *real* depreciated by 4% when compared to the U.S. dollar (42% in 2015). See Note 2 to our audited consolidated financial statements for the year ended December 31, 2016 for more information about the translation of *real* amounts into U.S. dollars.



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Results of Operations—2016 compared to 2015***Sales Revenues***

Sales revenues decreased by 16% to US\$81,405 million in 2016 from US\$97,314 million in 2015, driven primarily by:

- Decreased domestic revenues (US\$11,127 million) due to lower economic activity in Brazil, mainly as a result of:
 - a) Lower oil products revenues (US\$6,963 million), reflecting an 8% decrease on sales, due to lower demand of diesel, consumption of fuel oil following the decreased thermoelectric generation, as well as lower average prices of jet fuel and naphtha. These effects were partially offset by an increase in average prices of diesel and gasoline;
 - b) Decreased electricity revenues (US\$2,097 million) mainly from electricity generation, due to improved hydrological conditions; and
 - c) Decreased natural gas revenues (US\$1,942 million), as a result of lower thermoelectric demand and of decreased prices.
- Lower revenues from operations abroad (US\$ 3,529 million) pursuant to the disposal of interests in PESA and to lower crude oil and oil product sales prices; and
- Lower export revenues (US\$ 1,253 million), as a result of a decrease in international oil and oil products prices, partially offset by higher export volumes, mainly crude oil, due to lower domestic demand and higher domestic production.

Cost of Sales

Cost of sales decreased by 18% to US\$55,417 million in 2016, compared to US\$67,485 million in 2015, mainly due to:

- Lower import costs of natural gas, crude oil and oil products, generated by lower domestic demand and by the 17% decrease in Brent price;
- Decreased production taxes in Brazil, as a result of lower international crude oil prices;
- Decreased costs from operations abroad attributable to the disposal of PESA and to lower international crude oil prices;
- Lower electricity costs as a result of decreased thermoelectric demand;
- Lower carrying amounts of assets impacted by the impairment losses recognized in 2015 and in September 2016; and
- The higher crude oil production costs, reflecting the increase in depreciation expenses arisen from the lower reserves estimates (unit of production method), which partially offset the aforementioned effects.

Selling Expenses

Selling expenses decreased by 14% to US\$3,963 million in 2016 from US\$4,627 million in 2015, mainly due to (i) lower allowance for impairment of trade receivables from companies in the electricity sector and (ii) decreased freight expenses, as a result of lower domestic sales volume. For further information, see Note 8.4 to our audited consolidated financial statements.



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General and Administrative Expenses

General and administrative expenses in 2016 remained relatively flat compared to 2015. For further information, see Item 6. “Directors, Senior Management and Employees—Employees and Labor Relations.”

Exploration Costs

Exploration costs decreased by 8% to US\$1,761 from US\$1,911 million in 2015 due to (i) lower exploration well costs written off as a dry hole or sub-commercial wells (US\$160 million) and (ii) the decrease in geological and geophysical expenses (US\$45 million). These effects were partially offset by an increase in other exploration expenses (US\$55 million), such as charges related to minimum work program, as specified in the Assignment Agreement, and local content requirements. A breakdown of our exploration costs by nature is set out in Note 15 to our audited consolidated financial statements. For further information on our minimum work program, see Item 10. “Additional Information – Material Contracts – Minimum Work Program” and for further information on local content requirements, see Item 10. “Additional Information—Material Contracts—Brazilian Content.”

Research and Development Expenses

Research and development expenses decreased by 17% to US\$523 million from US\$630 million in 2015, driven by the decrease in gross revenues from highly productive oil fields in Brazil, since the ANP requires that we invest at least 1% of our gross revenues originating from those fields in research and development projects. See Item 5. “Operating and Financial Review and Prospects—Research and Development” for further details about our research and development activities.

Other taxes

Other taxes decreased by 74% to US\$714 million from US\$2,796 million in 2015, mainly due to our decision, in 2015, to benefit from the Federal Tax Amnesty and Refinancing Program (*Programa de Recuperação Fiscal – REFIS*) (US\$1,566 million) and from State Tax Amnesty Programs (US\$314 million). See Note 21 to our audited consolidated financial statements for further information on these tax amnesty and refinancing programs.

Impairment of Assets

We recognized Impairment charges of US\$ 6,193 million in 2016 mainly for exploration and production assets (US\$ 3,272 million), Refining, Transportation and Marketing activities (US\$2,457 million) and Gas and Power (US\$375 million), mainly due to (i) a slower recovery of oil prices, (ii) a decrease in future capital expenditures, reflecting our plan to reduce current debt levels and optimize our investment portfolio, (iii) recent changes in Brazilian political and economic scenario. These changes significantly affected the estimates of our key assumptions for impairment testing. Changes in the political and economic scenario in Brazil also resulted in increases in discount rates.

Certain sales of assets, part of our divestment plan, the annual reviews of our estimated reserves and decommissioning costs and the write-offs related to COMPERJ and Transpetro fleet of vessels projects also contributed to impairment recognition.

Impairment losses in 2016 were 50% lower when compared to 2015. See Notes 4.10, 5.2, 5.3 and 14 to our audited consolidated financial statements for more information about the impairment of our assets.



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Other Expenses, Net

Other expenses, net decreased by 3% to US\$5,207 million in 2016 from US\$5,345 million, mainly attributable to:

- Positive effect related to the review of provision for decommissioning costs, as a result of higher discount rate and the appreciation of the real against the U.S. dollar (US\$ 1,635 million);
- Gross gains on disposal of assets (US\$ 1,051 million), mainly due to (i) gains from the sale of our interest in exploratory block BM-S-8 and in PESA and (ii) lower expenses with respect to areas reverted to ANP and cancelled projects;
- Reversal of the provision for the legal proceeding filed against us due to the favorable decision on our appeal (US\$ 418 million);
- Lower expenses with institutional relations and cultural projects (US\$ 175 million);
- Reclassification of foreign exchange losses derived from the depreciation of Argentine Peso and Yen, from shareholders' equity to the statement of income (cumulative translation adjustment—CTA), due to the disposal of PESA and of Petrobras Nansei Seikyu, respectively (US\$ 1,457 million);
- Higher expenses related to the 2016 PIDV (US\$ 1,113 million); and
- Higher unscheduled stoppages and pre-operating expenses (US\$ 620 million), mainly related to drilling rigs idleness.

Net Finance Income (Expense)

Net finance expense decreased by 8% to US\$7,755 million in 2016 from US\$8,441 million in 2015, resulting from:

- Lower foreign exchange and inflation indexation charges (US\$ 1,566 million), mainly due to:
 - a) Foreign exchange variation of the real on our net debt in U.S. dollar (US\$ 1,275 million), due to the 16.5% appreciation of the real against the U.S. dollar, net of the reclassification of cumulative foreign exchange variation from shareholders' equity to net income due to occurred exports designated for cash flow hedge accounting;
 - b) Lower foreign exchange losses of the real against the Euro, caused by our lower net debt in Euro (US\$ 591 million);
 - c) Higher foreign exchange gains generated by the impact of a 16.5% appreciation of the U.S. dollar against the pound sterling on net debt, compared to the appreciation of 4.9% in 2015 (US\$ 282 million); and
 - d) Lower foreign exchange gains caused by the impact of a 3.1% appreciation of the U.S. dollar against the Euro on our net debt in 2016, compared to a 10.4% appreciation in 2015 (US\$ 497million).
- Higher finance expenses (US\$ 521 million), due to:
 - a) An increase in our average debt, caused by the impact of the depreciation of the average real against the U.S. dollar, net of capitalized borrowing costs (US\$ 950 million);
 - b) Higher unwinding discount on our provision for decommissioning costs (US\$ 431 million); and



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- c) Finance expenses generated by the Tax Amnesty and Refinancing Program (*Programa de Recuperação Fiscal – REFIS*) we have jointed in 2015 (US\$ 768 million).
- Lower finance income (US\$ 359 million), mainly due to lower average balance invested and to lower gains with derivatives on trade operations.

Income Taxes

Although we reported a loss for the fiscal year ended December 31, 2016, income taxes expenses were recognized for the fiscal year ended December 31, 2016. The effective tax rate based on the results decreased to a negative rate of 18.7% in 2016 from a positive rate of 11.7% in 2015. In 2016, the main reconciliation items between the statutory corporate tax rate (34%) and our effective tax rate refer to nondeductible expenses and nontaxable income, such as CTA transferred to income statement, post-retirement health care plan and results in equity accounted investments. These permanent differences for income tax purposes arise to the extent that we dispose of foreign operations that use a functional currency other than the functional currency used by its parent company (ex. PESA), in which expenses related to post-retirement health care benefits are recognized and we account for results in equity accounted investees for each reporting period, respectively.

See Note 21.6 to our audited consolidated financial statements for a reconciliation of statutory tax rates and our tax expense.

Net Income (Loss) by Business Segment

We measure performance at the business segment level based on net income. The following is a discussion of the net income (loss) of our main four business segments for 2016, compared to 2015.

See Item 4. “Information on the Company” and Notes 4.2 and 29 to our 2016 audited consolidated financial statements for more information about our business segments.

	Year Ended December 31,		
	2016(1)	2015(1)	Percentage Change
	(US\$ million)		
Exploration and Production	1,425	(2,480)	(157)
Refining, Transportation and Marketing	5,746	5,727	—
Gas and Power	732	237	209
Distribution	67	(142)	(147)
Biofuel	(323)	(276)	17
Corporate(2)	(11,403)	(11,816)	(3)
Eliminations	(1,082)	300	(461)
Net income	(4,838)	(8,450)	(43)

(1) Excluding non-controlling interests.

(2) Our Corporate segment comprises our financing activities not attributable to other segments, including corporate financial management, central administrative overhead and actuarial expenses related to our pension and medical benefits for retirees.

Exploration and Production

Gain in our Exploration and Production segment was US\$1.425 million in 2016 compared to a loss of US\$2,480 million in 2015. This gain was mainly attributable to higher impairment charges recognized in 2015 for producing properties relating to oil and gas activities in Brazil. See Note 14 to our 2016 audited consolidated financial statements for further information about our impairment losses. These effects were partially offset by a lower gross profit for this segment caused by the higher depreciation, given the reduction in reserves in 2015, which was more relevant in the E&P costs of sales than the reduction in lifting costs and production taxes.



For further information about our proved reserves, see “Supplementary Information on Oil and Gas Exploration and Production” to our audited consolidated financial statements for information on changes in our proved reserves.

Refining, Transportation and Marketing

In 2016, net income in our Refining, Transportation and Marketing segment was US\$ 5,746 million, remaining relatively flat when compared to 2015. The increase in RTM operating income, which mainly reflected higher charges in 2015 with respect to tax expenses derived from our decision to join tax amnesty and refinancing programs and to losses on legal proceedings allocated to this business segment, were substantially offset by higher impairment charges in 2016, as well as losses on equity accounted investments principally related to the associate Braskem.

Gas and Power

Net income was US\$732 million in 2016 compared to US\$237 million in 2015, a US\$495 increase attributable to (i) a reduction in natural gas and LNG imports, resulting in lower acquisition costs, lower tax expenses and in impairment charges and (ii) revenues arisen from contractual fines. These effects were partially offset by the natural gas sales and electricity generation revenues due to the improvement of hydrological conditions in Brazil and higher impairment provision for trade receivables isolated electricity sector in the Northern region of Brazil.

Distribution

Net income was US\$67 million in 2016 compared to the US\$142 million loss in 2015, mainly due to lower sales volumes, caused by the reduction in economic activity in Brazil and lower impairment provision for trade receivables from the isolated electricity sector in the Northern region of Brazil (see Note 8.4 to our audited consolidated financial statements). These effects were partially offset by expenses relating to the new voluntary separation incentive program of our wholly-owned subsidiary Petrobras Distribuidora.

Results of Operations—2015 compared to 2014

Sales Revenues

Sales revenues decreased by 32% to US\$97,314 million in 2015 from US\$143,657 million in 2014, mainly due to:

- Lower oil products domestic revenues (US\$29,912 million), mainly related to gasoline and diesel, which reflected a 9% decrease in domestic demand for oil products, resulting from lower economic activity in Brazil;
- Lower revenues related to foreign market, such as export (US\$4,238 million) and sales abroad (US\$6,524 million), driven by the decrease in crude oil and oil product prices, partially offset by a 55% increase in oil export volume following its higher domestic production and a 6% decrease in feedstock processed by our domestic refineries; and
- Decreased revenues from sales of naphtha (US\$1,135 million), jet fuel (US\$1,032 million) and fuel oil (US\$3,265 million), affected by their lower domestic prices.

Our sales revenues were significantly affected when translated into U.S. dollars. For example, sales revenues expressed in *reais* decreased by 5% in 2015. These effects on total sales revenues were approximately US\$39,572 million, reflecting each component in different ways. See Item 5. “Operating and Financial Review and Prospects—Sales Volumes and Prices” for additional information about our sales revenues.



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Cost of Sales

Cost of sales decreased by 38% to US\$67,485 million in 2015 from US\$109,477 million in 2014, mainly due to:

- Lower crude oil and oil product import unit costs, as well as lower production taxes;
- Decreased crude oil imports on feedstock processing and a lower share of oil product imports in the sales mix as a result of lower domestic demand for oil products; and
- Foreign currency translation effects (depreciation of the real against the U.S. dollar) which reduced the cost of sales when expressed in U.S. dollars. Excluding these effects, cost of sales decreased by 13% when expressed in reais.

These effects were partially offset by an increase in depreciation expenses.

Selling Expenses

Selling expenses decreased by 32% to US\$4,627 million in 2015 from US\$6,827 million in 2014, mainly due to foreign currency translation effects (depreciation of the *real* against the U.S. dollar) which reduced the selling expenses when expressed in U.S. dollars. Excluding those effects, selling expenses remained relatively flat when expressed in *reais*.

General and Administrative Expenses

General and administrative expenses decreased by 30% to US\$3,351 million in 2015 from US\$4,756 million in 2014, mainly due to foreign currency translation effects (depreciation of the *real* against the U.S. dollar). Excluding those effects, general and administrative expenses remained relatively flat when expressed in *reais*. See Item 6. “Directors, Senior Management and Employees—Employees and Labor Relations.”

Exploration Costs

Exploration costs decreased by 38% to US\$1,911 million in 2015 from US\$3,058 million in 2014, primarily due to (i) lower exploration well costs written off as a dry hole or sub-commercial wells (US\$737 million) and (ii) the decrease in geological and geophysical expenses (US\$414 million). A breakdown of our exploration costs by nature is set out in Note 15 to our audited consolidated financial statements.

Research and Development Expenses

Research and development expenses decreased by 43% to US\$630 million in 2015 from US\$1,099 million in 2014, driven by the decrease in gross revenues from high productivity oil fields in Brazil, since the ANP requires that we invest at least 1% of our gross revenues originating from those fields in research and development projects. See Item 5. “Operating and Financial Review and Prospects—Research and Development” for further details about our research and development activities.

Other taxes

Other taxes increased by 268% in 2015 (US\$2,796 million) when compared to 2014 (US\$760 million), primarily due to higher tax expenses attributable to our decision to benefit from the Federal Tax Amnesty and Refinancing Program (*Programa de Recuperação Fiscal*) and State Tax Amnesty Programs (US\$2,036 million). See Note 21 to our audited consolidated financial statements.



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Impairment of Assets

We recognized impairment charges of US\$12,299 million in 2015, mainly due to:

- a decline in international crude oil prices;
- decrease in estimates of proved and probable reserves;
- postponement of certain projects as a result of a downward revision of our projected capital expenditures;
- revision of geological characteristics of the Papa-Terra field reservoir; and
- higher discount rates used to measure the value-in-use of our assets and CGUs driven by an increase in Brazil's risk premium.

Impairment losses were primarily related to domestic and international crude oil and natural gas producing properties (US\$9,290 million) and to the domestic refinery COMPERJ (US\$1,352 million).

The amount of impairment losses in 2015 was significantly affected when translated into U.S. dollars. For example, impairment losses when expressed in *reais* increased by 7% in 2015 when compared to impairment losses recognized in 2014, which were mainly related to domestic refineries, domestic and international crude oil and natural gas producing properties and petrochemical assets. The effects of foreign translation adjustments on impairment losses were approximately US\$6,502 million. See Notes 4.10, 5.2 and 14 to our audited consolidated financial statements for more information about the impairment of our assets.

Write-Offs of Overpayments Incorrectly Capitalized

In 2014, we wrote off US\$2,527 million of capitalized costs representing amounts that we overpaid for the acquisition of property, plant and equipment in prior years resulting from a payment scheme uncovered by the Brazilian Federal Prosecutor's Office in connection with the Lava Jato investigation. We closely monitored the progress of this investigation throughout 2015 and no new facts were discovered that could materially impact our previously recorded write-off or change the methodology adopted with respect to the write-off. See Note 3 to our 2015 audited consolidated financial statements for more information about the Lava Jato investigation.

Other Expenses, Net

Other expenses, net remained relatively flat in 2015 (US\$5,345 million) when compared to 2014 (US\$5,293 million). The total of other expenses net was significantly affected when translated into U.S. dollars. For example, other expenses, net expressed in *reais* increased by 53%, primarily due to (i) higher legal proceedings expenses, mainly related to tax and labor claims and (ii) higher expenses in connection with pension and medical benefits, as a result of an increase in our net actuarial liability for the fiscal year ended December 31, 2014, attributable to the actuarial valuation review of our pension and medical benefits and the use of a lower discount rate. The effects of foreign translation adjustments on other expenses, net were approximately US\$2,450 million.

Net Finance Income (Expense)

Net finance expense was US\$8,441 million in 2015, a US\$6,806 million increase compared to 2014 (US\$1,635 million), resulting from:

- Higher interest expenses (US\$2,514 million) attributable to: (i) an increase in our net debt (US\$124 million); (ii) a decrease in the level of capitalized borrowing costs due to a lower balance of assets under construction, reflecting relevant projects concluded during 2014, as well as write-offs of assets and impairment losses recognized in the fiscal year ended December 2014 (US\$1,827 million); and (iii) interest expenses (US\$768 million) related to tax expenses attributable our decision to benefit from the Tax Amnesty and Refinancing Program (*Programa de Recuperação Fiscal*);



- Foreign exchange losses caused by the impact of a 47% depreciation of the real against the U.S. dollar in 2015 on our net debt (compared to a 13.4% depreciation in 2014), partially offset by the application of our cash flow hedge accounting; and
- Foreign exchange losses caused by the impact of a 31.7% depreciation of the real against the Euro on our net debt (compared to a 0.02% depreciation in 2014).

Income Taxes

We reported a loss for the fiscal year ended December 31, 2015, and consequently recognized tax loss carryforwards for that period. The effective tax rate based on the results expressed in U.S. dollars decreased to 11.7% in 2015 from 15.0% in 2014. Excluding foreign currency translation effects (depreciation of the *real* against the U.S. dollar), the effective tax rate when expressed in *reais* remained relatively flat in 2015 (14.7%) when compared to 2014 (15.1%). In 2015, the main reconciliation items between statutory corporate tax rates and our effective tax rate refer to (i) additional income taxes on income of our foreign subsidiaries attributable to amendments to Brazilian tax law; (ii) nontaxable income (deductible expenses) mainly related to results in equity-accounted investments and our health care plan actuarial liability expenses and (iii) tax loss carryforwards (unrecognized tax losses) according to a non-expectation of future taxable profit for certain subsidiaries. See Note 21.6 to our audited consolidated financial statements for a reconciliation of statutory tax rates and our tax expense.

Net Income (Loss) by Business Segment

We measure performance at the business segment level based on net income. The following is a discussion of the net income (loss) of our main four business segments for 2015, compared to 2014. In the fourth quarter of 2015, we changed our reportable business segments to reflect the reallocation of our international activities into the business segment to which the underlying activities correspond, thus reducing our reportable business segments from six to five. For comparative purposes, business segment results for the fiscal year ended December 31, 2014 are presented based on this new business segment structure.

See Item 4. "Information on the Company" and Notes 4.2 and 29 to our 2015 audited consolidated financial statements for more information about our business segments.

	Year Ended December 31,		
	2015(1)	2014(1)	Percentage Change
	(US\$ million)		
Exploration and Production	(2,480)	14,151	(118)%
Refining, Transportation and Marketing	5,727	(15,761)	(136)%
Gas and Power	237	(347)	(168)%
Biofuel	(276)	(127)	117%
Distribution	(142)	565	(125)%
Corporate(2)	(11,816)	(6,292)	88%
Eliminations	300	444	(32)%
Net income	(8,450)	(7,367)	15%

(1) Excluding non-controlling interests.

(2) Our Corporate segment comprises our financing activities not attributable to other segments, including corporate financial management, central administrative overhead and actuarial expenses related to our pension and medical benefits for retirees.



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Exploration and Production

Loss in our Exploration and Production segment was US\$2,480 million in 2015 compared to a net income of US\$14,151 million in 2014. This loss was mainly attributable to the lower crude oil sales/transfer prices, reflecting the recent decline in international crude oil prices and to the impairment of domestic and international crude oil and natural gas producing properties (US\$9,290 million). See Note 14 to our 2015 audited consolidated financial statements for further information about our impairment losses. These effects were partially offset by a 4% increase in crude oil and NGL production and by the appreciation of the U.S. dollar against the real.

See Item 4. "Information on the Company—Additional Reserves and Production Information—Changes in Proved Reserves" for information on changes in our proved reserves.

Refining, Transportation and Marketing

Net income in our Refining, Transportation and Marketing segment (RT&M) was US\$5,727 million in 2015, compared to a US\$15,761 million loss in 2014, attributable to: (i) decrease in crude oil purchase/transfer costs due to lower crude oil international prices; (ii) lower share of crude oil imports on our feedstock processing and oil product imports in our sales mix; and (iii) higher diesel and gasoline prices, reflecting price increases in November 2014 and in September 2015.

These effects were partially offset mainly by the decreased oil product domestic demand as a result of lower economic activity in Brazil, the impairment charges recognized for COMPERJ's refining assets (US\$1,352 million) and also by foreign currency translation effects (depreciation of the real against the U.S. dollar).

The improved result in our RT&M segment also reflects (i) non-recurrent charges recognized in 2014 (such as the write-offs of overpayments incorrectly capitalized (US\$1,403 million) and the write-off of capitalized costs in Premium I and Premium II refineries (US\$1,236 million)), as well as (ii) lower recognition of impairment charges in 2015 (US\$1,664 million) as compared to 2014 (US\$12,912 million).

Gas and Power

Net income was US\$237 million in 2015 compared to a US\$347 million loss in 2014, attributable to (i) lower natural gas import acquisition costs (LNG and Bolivian gas); (ii) increase in natural gas sales margins, resulting from higher natural gas average prices; and (iii) lower impairment of trade receivables from companies in the isolated electricity sector in the Northern region of Brazil (see Note 8.4 to our audited consolidated financial statements).

These effects were partially offset by a decrease of electricity prices in the spot market, impairment losses recognized for Nitrogen Fertilizers Plants III and V (see Note 14 to our audited consolidated financial statements), higher tax expenses related to VAT tax on natural gas due to our decision to benefit from State tax amnesty programs (see Note 21.3 to our audited consolidated financial statements) and foreign currency translation effects (depreciation of the real against the U.S. dollar).

These effects were partially offset by foreign currency translation effects (depreciation of the real against the U.S. dollar).

Distribution

Loss was US\$142 million in 2015 compared to a net income of US\$565 million in 2014, mainly due to foreign currency translation effects (depreciation of the *real* against the U.S. dollar), to lower domestic sales volumes (7%), increased losses with trade receivables from companies that operate in the isolated electricity sector in the Northern region of Brazil (see Note 8.4 to our audited consolidated financial statements) and impairment of assets.



Additional Business Segment Information

Additional selected financial data by business segment for 2016, 2015 and 2014 is set out below:

	For the Year Ended December 31,		
	2016	2015	2014
	(US\$ million)		
Exploration and Production			
Sales revenues to third parties(1)(2)	1,480	1,502	2,275
Intersegment sales revenues	32,195	34,178	66,336
Total sales revenues(2)	33,675	35,680	68,611
Net income (loss)(3)	1,425	(2,480)	14,151
Capital expenditures and investments	13,509	19,131	25,500
Property, plant and equipment	123,056	109,724	140,582
Refining, Transportation and Marketing			
Sales revenues to third parties(1)(2)	45,498	51,870	78,947
Intersegment sales revenues	17,090	22,451	35,484
Total sales revenues(2)	62,588	74,321	114,431
Net income (loss)(3)	5,746	5,727	(15,761)
Capital expenditures and investments	1,168	2,534	7,882
Property, plant and equipment	35,515	33,032	50,273
Gas and Power			
Sales revenues to third parties(1)(2)	6,911	11,072	16,643
Intersegment sales revenues	2,490	2,073	1,730
Total sales revenues(2)	9,401	13,145	18,373
Net income (loss)(3)	732	237	(347)
Capital expenditures and investments	717	793	2,571
Property, plant and equipment	13,094	14,674	22,237
Biofuel			
Sales revenues to third parties(1)(2)	9	16	28
Intersegment sales revenues	231	213	238
Total sales revenues(2)	240	229	266
Net income (loss)(3)	(323)	(276)	(127)
Capital expenditures and investments	96	43	112
Property, plant and equipment	100	91	205
Distribution			
Sales revenues to third parties(1)(2)	27,507	32,854	45,764
Intersegment sales revenues	420	552	1,129
Total sales revenues(2)	27,927	33,406	46,893
Net income (loss)(3)	67	(142)	565
Capital expenditures and investments	139	255	487
Property, plant and equipment	1,936	1,868	2,685

(1) As a vertically integrated company, not all of our segments have significant third-party revenues. For example, our Exploration and Production segment accounts for a large part of our economic activity and capital expenditures, but has little third-party revenues.

(2) Revenues from commercialization of oil to third parties are classified in accordance with the points of sale, which could be either the Exploration and Production or Refining, Transportation and Marketing segments.

(3) Excluding non-controlling interests.



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Liquidity and Capital Resources

Overview

Our principal uses of funds in 2016 were for debt service obligations (US\$37,968 million) and capital expenditures (US\$13,737). We met these requirements with cash provided by operating activities (US\$26,114 million), proceeds from financing (US\$18,897 million) and cash provided by the disposal of assets (US\$2,205 million). As of December 31, 2016, although our cash flow from operations was more than sufficient to meet our capital expenditures, our positive free cash flow (cash flow from operations after capital expenditures) was less than the resources needed to fund our debt principal and interest expenditures.

As of December 31, 2016, our foreign currency debt totaled US\$93,951 million, representing approximately 79% of our total financial debt. Following the 17% appreciation of the *real* against the U.S. dollar in 2016, the amount of *reais*, which is the currency of most of our revenues, necessary to service our foreign currency debt in the near term has decreased. See Item 3. “Key Information—Risk Factors—Risks Relating to Our Operations—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,” “Contractual Obligations” and Note 33.6 to our audited consolidated financial statements for further information about our liquidity risks and our contractual obligations and commitments (including debt obligations) as of December 31, 2016.

In addition, the loss by us and by the Brazilian federal government of our investment grade ratings have affected the confidence of investors in the Brazilian economy and in our business generally, making it more costly both to incur new debt and to refinance our short-term debt obligations.

In 2017, our major cash needs are to meet our budgeted capital expenditures for the year (revised after the release of our 2017-2021 Plan and currently amounting to US\$19.8 billion) and to make principal and interest payments of US\$16 billion on our debt.

Financing Strategy

Our financing strategy is to fund our necessary capital expenditures and to preserve our cash balance and liquidity while meeting our principal and interest payment obligations.

We will pursue our financing strategy in 2017 and going forward by the following means: (i) using the potential proceeds from the sale of certain of our assets under our divestment program for the 2017-2018 period, (ii) reducing planned capital expenditures to be in line with our operating cash flows, (iii) reducing operating costs by improving efficiency and renegotiating contracts with suppliers, (iv) incurring new debt from traditional funding sources, new financing structures for extending debt maturities with certain of our bank creditors and prepay some expensive loans, and (v) drawing down our cash balance, cash equivalents and marketable securities.

In 2017, approximately US\$4 billion has been disbursed to us through the issuance of global notes in the international market, maturing in 5 and 10 years. The net proceeds of this issuance were entirely used to repurchase global notes previously issued by us (see Note 35 to our audited consolidated financial statements).

Government Regulation

We are required to submit our annual capital expenditures budget (*Orçamento Anual de Investimentos*, or OAI) to the MPBM and the MME. Following review by these governmental authorities, the Brazilian Congress must approve the budget. Although the total level of our annual capital expenditures is regulated, the specific application of funds is left to our discretion.



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The MPBM oversees the total amount of medium and long-term debt that we and our Brazilian subsidiaries can incur through the annual budget approval process. Before raising medium and long-term foreign currency debt, we and our Brazilian subsidiaries must also obtain the approval of the National Treasury Secretariat. All of our foreign currency denominated debt, as well as the foreign currency denominated debt of our Brazilian subsidiaries, requires registration with the Central Bank. We also have to obtain an authorization from the Central Bank, in accordance with applicable law, in order to make any eventual remittances of funds abroad required by guarantee instruments we have entered into in connection with the incurrence of foreign currency denominated debt.

However, the incurrence of debt by our non-Brazilian subsidiaries, including PGF, is not subject to registration with the Central Bank or approval by the National Treasury Secretariat.

All medium and long-term debt incurred by Petrobras or its subsidiaries requires the approval of our board of executive officers, within the parameters established by our board of directors, except for the issuance of debentures, which require the approval of our board of directors.

Sources of Funds

Our Cash Flow

In 2016, the resources needed to fund our capital expenditures (US\$13,737 million) and service our debt (US\$37,968 million) were met by cash flow from operations (US\$26,114 million), proceeds from financing (US\$18,897 million) and cash provided by the disposal of assets (US\$2,205 million). As of December 31, 2016, our balance of cash and cash equivalents amounted to US\$21,205 million, compared to US\$25,058 million as of December 31, 2015 and our balance of government bonds and time deposits with maturities of more than three months remained relatively flat (US\$784 million) as compared to US\$779 million as of December 31, 2015.

We maintained our liquidity cushion consisting of our balance of cash and cash equivalents, as well as government bonds and time deposits with maturities of more than three months, amounting to US\$21,989 million as of December 31, 2016 as compared to US\$25,837 million as of December 31, 2015.

Net cash provided by operating activities also remained relatively the same in 2016 compared to 2015. It was mainly generated by lower production taxes in Brazil and lower crude oil, oil products and natural gas imports costs, along with a higher share of domestic crude oil on processed feedstock. These effects were partially offset by the lower prices of crude oil and oil product exports and decreased sales volume in Brazil due to lower economic activity.

In 2016, proceeds from financing totaled US\$18,897 million. These financings were entered into with the Export Credit Agencies – ECAs, the banking and capital markets and development banks. We used the proceeds to repurchase global notes previously issued, to settle certain debts with the BNDES in advance and also to push forward other debts. Global notes issued on the international market totaled US\$ 9.75 billion, with maturities of 5 and 10 years. We also entered into a sale and leaseback operation with the Industrial and Commercial Bank of China (ICBC) in the amount of US\$ 1 billion and into a financing transaction with the CDB in the amount of US\$ 5 billion.



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Proceeds in 2016 from disposals of assets totaled US\$ 2,205 million, resulting mainly from sales part of our divestment program, such as the sale of interests in PESA, Petrobras Chile Distribución and the exploratory block BM-S-8 and Nansei Sekiyu–NSS. See Note 10 to our audited consolidated financial statements for further information regarding disposals of assets under our divestment program. We expect further proceeds derived from the disposal of assets, as our divestment program for the period 2017-2018 forecasts proceeds of approximately US\$ 21 billion. For further information on our divestment program, please see Item 4. “Information on the Company—Overview of the Group.”

The uses of cash were primarily for capital expenditures and investments in operating units, which totaled US\$13,737 million in 2016, a decrease of 36% compared to 2015 (US\$21,502 million), mainly due to a decrease in capital expenditures in our Refining, Transportation and Marketing and Exploration and Production business segments.

Due to a loss in 2015, we did not pay dividends in 2016 as occurred in 2015. Our board of directors proposed no distribution of dividends in 2017 for profits accrued in the year ended December 31, 2016 because we also reported a loss for the fiscal year.

Short-Term Debt

Our outstanding short-term debt serves many purposes, including supporting our working capital and our imports of crude oil and oil products. As of December 31, 2016, our total short-term debt amounted to US\$358 million and the current portion of our long-term debt amounted to US\$7,779 million, compared to US\$1,523 million and US\$11,500 million as of December 31, 2015, respectively.

Long-Term Debt

Our outstanding long-term debt consists primarily of securities issued in the international capital markets, funding from development banks (such as the CDB and the BNDES), loans from Brazilian and international commercial banks and amounts outstanding under facilities guaranteed by export credit agencies and multilateral agencies. The non-current portion of our total long-term debt amounted to US\$108,371 million as of December 31, 2016, compared to US\$111,482 million as of December 31, 2015. This decrease was primarily due to pre-payment of debt, partially offset by the effects of foreign currency translation on our debt denominated in *reais* (appreciation of the *real* against the U.S. dollar). See Note 17 to our audited consolidated financial statements for a breakdown of our debt, a roll-forward schedule of our non-current debt by source and other information.



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The following international debt issues are included in these figures at December 31, 2016:

Notes	Carrying amount as of December 31, 2016
	(US\$ million)
PGF's 3.250% Global Notes due 2017(1)	283
PGF's 3.500% Global Notes due 2017(*) (1)	625
PGF's Floating Rate Global Notes due 2017(1)(2)	140
PGF's 2.750% Global Notes due 2018(3)	569
PGF's 4.875% Global Notes due 2018(*) (4)	604
PGF's 5.875% Global Notes due 2018(*)	545
PGF's 8.375% Global Notes due 2018(*)	277
PGF's 7.875% Global Notes due 2019(*)	1,836
PGF's 3.000% Global Notes due 2019	1,449
PGF's 3.250% Global Notes due 2019(5)	1,367
PGF's Floating Rate Global Notes due 2019(6)	750
PGF's 4.875% Global Notes due 2020	1,496
PGF's 5.750% Global Notes due 2020(*)	2,488
PGF's Floating Rate Global Notes due 2020(7)	499
PGF's 3.750% Global Notes due 2021(8)	786
PGF's 5.375% Global Notes due 2021(*)	5,298
PGF's 5.875% Global Notes due 2022(*) (9)	629
PGF's 4.250% Global Notes due 2023(10)	727
PGF's 4.375% Global Notes due 2023	3,465
PGF's 6.250% Global Notes due 2024	2,490
PGF's 4.750% Global Notes due 2025(11)	835
PGF's 6.250% Global Notes due 2026(*) (12)	848
PGF's 5.375% Global Notes due 2029(13)	541
PGF's 6.625% Global Notes due 2034(14)	730
PGF's 6.875% Global Notes due 2040(*)	1,472
PGF's 6.750% Global Notes due 2041(*)	2,366
PGF's 5.625% Global Notes due 2043	1,711
PGF's 7.250% Global Notes due 2044	989
PGF's 6.850% Global Notes due 2115	2,019
PGF's 8.375% Global Notes due 2021	6,720
PGF's 8.750% Global Notes due 2026	2,965

(*) Originally issued by PifCo.

(1) Outstanding amounts paid in full after December 31, 2016

(2) Floating rate equal to a three-month U.S. dollar LIBOR plus 2.360%.

(3) Issued by PGF on January 14, 2014 in the amount of €1.5 billion.

(4) Issued by PifCo on December 9, 2011 in the amount of €1.25 billion.

(5) Issued by PGF on October 01, 2012 in the amount of €1.3 billion.

(6) Floating rate equal to a three-month U.S. dollar LIBOR plus 2.140%

(7) Floating rate equal to a three-month U.S. dollar LIBOR plus 2.880%.

(8) Issued by PGF on January 14, 2014 in the amount of €750 million.

(9) Issued by PifCo on December 9, 2011 in the amount of €600 million.

(10) Issued by PGF on October 01, 2012 in the amount of €700 million.

(11) Issued by PGF on January 14, 2014 in the amount of €800 million.

(12) Issued by PifCo on December 12, 2011 in the amount of £700 million.

(13) Issued by PGF on October 01, 2012 in the amount of £450 million.

(14) Issued by PGF on January 14, 2014 in the amount of £600 million.



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Off Balance Sheet Arrangements

As of December 31, 2016, we had no off-balance sheet arrangements that have, or are reasonably likely to have, a material effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Uses of Funds

Capital Expenditures and Investments

We invested a total of US\$15,859 million in 2016, a 31% decrease when compared to our investments of US\$23,058 million in 2015. Our investments in 2016 were primarily directed toward increasing oil and gas production. Of our total capital expenditures in 2016, US\$13,509 million was invested in exploration and development projects in Brazil and abroad.

The following table sets forth our consolidated capital expenditures for each of our business segments for 2016, 2015 and 2014:

	For the Year Ended December 31(2)		
	2016	2015(1)	2014(1)
	(US\$ million)		
Exploration and Production	13,509	19,131	25,500
Refining, Transportation and Marketing	1,168	2,534	7,882
Gas and Power	717	793	2,571
Distribution	139	255	487
Biofuel	96	43	112
Corporate	230	302	452
Total	15,859	23,058	37,004

- (1) In the fourth quarter of 2015, we changed our reportable business segments to reflect the reallocation of our international activities into the business segment to which the underlying activities correspond, thus reducing our reportable business segments from six to five.
- (2) Consolidated capital expenditures for each of our business segments are based on our 2017-2021 Plan cost assumptions and financial methodology.

We announced projected capital expenditures of US\$74.5 billion for 2017-2021 period (initially released in our 2017-2021 Plan and updated in 2017). For further information on our 2017-2021 Plan, see Item 4. "Information on the Company—2017-2021 Plan." We plan to meet our budgeted capital expenditures primarily through cash flow from our operations, structured facilities and project finance loans, commercial bank loans, partnerships and divestments, issuances of debt securities in the international capital markets and other sources of capital. Our actual capital expenditures may vary substantially from the projected numbers set forth above as a result of market conditions and the cost and availability of the necessary funds.

Dividends

We did not pay dividends for the year ended December 31, 2015. Our board of directors proposed no distribution of dividends in 2017 for profits accrued in the year ended December 31, 2015 because we reported a loss for the fiscal year. See Note 23.5 to our audited consolidated financial statements.

For more information on our dividend policy, including details about changes we made to our policy in 2016 and a description of the minimum dividend to which our preferred shareholders are entitled under our bylaws, see "Mandatory Distribution" and "Payment of Dividends and Interest on Capital" in Item 10. "Additional Information—Memorandum and Articles of Incorporation."



Contractual Obligations

The following table summarizes our outstanding contractual obligations and commitments at December 31, 2016:

	Total	Payments Due by Period			
		< 1 year	1-3 years	3-5 years	> 5 years
		(US\$ million)			
Contractual obligations					
Balance sheet items(1):					
Debt obligations(2)	118,126	9,755	32,114	35,090	41,167
Finance lease obligations	244	18	48	35	143
Provision for decommissioning costs	10,252	405	1,956	109	7,782
Total balance sheet items	128,622	10,178	34,118	35,234	49,092
Other long-term contractual commitments					
Natural gas ship-or-pay	6,197	1,283	2,534	2,380	0
Service contracts	69,416	24,528	16,702	8,019	20,167
Natural gas supply agreements	7,271	1,051	2,753	3,467	0
Operating leases	96,918	11,395	16,610	14,663	54,250
Purchase commitments	18,008	13,655	2,758	810	785
Total other long-term commitments	197,810	51,912	41,357	29,339	75,202
Total	326,432	62,090	75,475	64,573	124,294

(1) Excludes the amount of US\$37,842 million related to our pension and medical benefits obligations, which are partially funded by US\$15,545 million in plan assets. Information on employees' post-retirement benefit plans, including a schedule of expected maturity of pension and medical benefits obligations, is presented in Note 22 to our audited consolidated financial.

(2) Includes accrued interest, short-term and long-term debt (current and non-current portions). Information about our future interest and principal payments (undiscounted) for the coming years is presented in Note 33.6 to our audited consolidated financial statements.

Critical Accounting Policies and Estimates

Information about those areas that require the most judgment or involve 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. See note 5 "Critical accounting policies: key estimates and judgments" to our audited consolidated financial statements. Additional information about our accounting policies and new accounting standards and interpretations are provided in Notes 4 and 6 to our audited consolidated financial statements.

The accounting estimates we make in these contexts require us to make assumptions about matters that are highly uncertain. Note 5 to our audited consolidated financial statements addresses the estimates that we consider most important based on the degree of uncertainty, the potential events that may negatively affect our estimates and the likelihood of a material impact if we used a different estimate. These assumptions are based on past transactions and other relevant information and are periodically reviewed by our management. Actual results could differ from these estimates.

The following addresses only those estimates that we consider most important based on the degree of uncertainty and the likelihood of a material impact if we used a different estimate. There are many other areas in which we use estimates about uncertain matters, but the reasonable likelihood of changes based on the use of different estimates in those cases is not material to our financial presentation.



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Oil and gas reserves

Note 5.1 to our audited consolidated financial statements addresses qualitative information on oil and gas reserves estimates, such as uncertainties associated with the methods and assumptions involved in determining oil and gas reserves, as well as estimates underlying the process through which we determine these reserves and the main impacts of these in our financial statements. Reserve quantities information, such as annual changes in proved reserves, including quantitative data and qualitative discussion, is presented in the “Supplementary information on Oil and Gas Exploration and Production” section of our audited consolidated financial statements.

Impairment testing

Information on impairment testing is presented in detail in our consolidated audited financial statements. It is considered a significant accounting policy, as described in detail in Notes 4.10 and 4.11 to our audited consolidated financial statements, as well as a critical accounting estimate. For information about the impairment of certain of our assets, see Item 5. “Operating and Financial Review and Prospects—Results of Operations—2016 compared to 2015” and Item 5. “Operating and Financial Review and Prospects—Results of Operations—2015 compared to 2014”, Item 5. “Operating and Financial Review and Prospects—Critical Accounting Policies and Estimates” and Notes 5.2 and 14 to our audited consolidated financial statements.

Note 5.2 to our audited consolidated financial statements describes the key assumptions for impairment testing of our property, plant and equipment and intangible assets: average Brent prices and *real*/U.S. dollar average exchange rate. Note 5.2 addresses the process through which we estimate these assumptions, which takes into account our business and management plan and our strategic plan, and also discusses the related uncertainties and potential events that we reasonably expect could negatively affect our assumptions. For further information, see Item 3. “Key Information—Risk Factors—Business Risks—We are exposed to the effects of fluctuations in the prices of oil, gas and oil products.”

Identifying cash-generating units (CGUs) is also a critical accounting policy as described in Note 5.3 to our audited consolidated financial statements. The aggregation of assets into CGUs requires management judgment based on the consideration of certain assumptions and our business and management model. Note 5.3 addresses the underlying assumptions for the determination of our business segment CGUs.

A comprehensive disclosure about impairments and the impacts of impairment testing for 2016, 2015 and 2014 is presented in Note 14 to our audited consolidated financial statements, which also includes impairment related to assets held for sale and impairment losses on equity-method investments. For further information, see Item 3. “Key Information—Risk Factors—Business Risks—Developments 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 of operations and financial condition.”

Pension and other post-retirement benefits

As set out in Note 4.17 to our audited consolidated financial statements, actuarial commitments related to post-employment defined benefit plans and health-care plans are based on actuarial calculations that are revised annually by an independent qualified actuary. The most significant financial and demographic assumptions when measuring the post-retirement benefits recognized in our financial statements are described in Note 5.4 to our audited consolidated financial statements. Note 22 to our audited consolidated financial statements presents substantive disclosure on our net actuarial liability, describing qualitative and quantitative information about our main defined pension and health care plans, including the changes in the amounts recognized in our financial statements, a sensitivity analysis of the defined benefit plans and detailed data concerning actuarial assumptions.



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Estimates related to contingencies and legal proceedings

As described in Note 5.5 to our audited consolidated financial statements, we are a defendant in numerous legal proceedings involving issues arising from the normal course of our business for which, based on legal counsel and our management's best estimates, we estimate the amounts of the obligations and the probability that an outflow of resources will be required. Note 30 to our audited consolidated financial statement provides information regarding provisions for legal proceedings, judicial deposits made in connection with legal proceedings, as well as detailed disclosure about lawsuits or proceedings for which we are unable to make a reliable estimate of the expected financial effect that might result from resolution of the proceeding.

Decommissioning costs estimates

Decommissioning costs estimates are a critical accounting policy where, as described in Note 4.14 to our audited consolidated financial statements, we accrue as part of the cost of an asset, a corresponding liability in the form of the estimated costs of future obligations based on the present value of the expected future cash outflows, discounted at a risk-adjusted rate associated with performing environmental restoration, and dismantling and removing a facility when we terminate its operations.

Note 5.6 to our audited consolidated financial statements outlines the main uncertainties when performing the complex calculation of estimating decommissioning costs and Note 20 to our audited consolidated financial statements provides quantitative and qualitative information about the provision for decommissioning costs.

Deferred income taxes

Deferred income taxes are recognized on temporary differences between the tax base of an asset or liability and its carrying amount. Note 4.16 to our audited consolidated financial statements provides information on the recognition of deferred income taxes.

As described in Note 5.7 to our audited consolidated financial statements, deferred income tax assets involve significant estimates and judgments by our management, as deferrals are recognized to the extent that it is probable that the entity will have sufficient taxable profit in future periods. This note also addresses the assumptions used when forecasting future taxable profit, supported by our 2017-2021 Plan, and mainly driven by Brent crude oil prices, foreign exchange rates and our projected net finance expenses (income).

Additionally, note 21.6 to our audited consolidated financial statements presents the changes in the deferred income taxes and their expected timing of reversal.

Cash flow hedge accounting involving our future exports

As set out in note 4.3.6 to our audited consolidated financial statements, since mid-May 2013 we have designated cash flow hedging relationships in which (a) the hedged items are portions of our highly probable future monthly export revenues in U.S. dollars, (b) the hedging instruments are portions of our long-term debt obligations denominated in U.S. dollars, and (c) the risk hedged is the effect of changes in exchange rates between the U.S. dollar and our functional currency, the *real*. Both long-term debt obligations (hedging instruments) and future exports (hedged items) are exposed to the *real*/U.S. dollar foreign currency risks at their respective spot exchange rates. See also Item 3. "Key Information—Risk Factors—Risks Relating to Our Operations—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."

Note 5.8 to our audited consolidated financial statements addresses how we estimate highly probable future exports. Note 5.1 d) to our audited consolidated financial statements also describes the impacts of oil and gas reserves estimates on highly probable future exports designated in cash flow hedging relationships.



Note 33.2 to our audited consolidated financial statement contains further information on how we designate cash flow hedging relationships between a portion of our long-term debt obligations denominated in U.S. dollars and our highly probable U.S. dollar denominated future export revenues, the impact of these hedge relationships on our financial statements, such as the amounts recognized in our shareholder's equity and our statement of income for the last fiscal years, as well as a schedule of the expected recycling of cumulative foreign exchange gains or losses from shareholders' equity to our income statement in future periods, among other detailed information.

In March 2017, we received an official communication from the CVM that required us to restate our financial statements for all periods since we began to apply cash flow hedging. We filed before the CVM a request to suspend the effects of this communication, which was granted by the CVM collegiate body. We also appealed the CVM decision and have taken all the measures to safeguard our interests. However, we cannot assure that we will prevail in our appeal and, depending on its outcome, we may be required to restate our financial statements for the periods indicated, and cease or modify our cash flow hedge accounting practices going forward. For further information on the risks relating to the restatement of our financial statements as a result of the CVM's analysis into our cash flow hedge accounting, see Item 3. "Key Information—Risk Factors— Compliance, Legal and Regulatory Risks—We may have to restate our financial statements as a result of the CVM's analysis in connection with our hedge accounting practices."

If we cease our cash flow hedge accounting practices retroactively, our total comprehensive income (loss) and shareholders' equity for the fiscal years ended December 31, 2015, 2014 and 2013 would not be affected as the impacts would change our net income (loss) and our other comprehensive income (loss) inversely. The following table sets out the impact of a potential restatement of the fiscal years ended December 31, 2016, 2015, 2014 and 2013:



	2016		2015		2014		2013	
	As reported	Pro forma adjustment(1)	As reported	Pro forma adjustment(1)	As reported	Pro forma adjustment(1)	As reported	Pro forma adjustment(1)
Income (loss), including profit sharing, before finance income (expense), results in equity-accounted investments and income taxes	4,308	4,308	(1,130)	(1,130)	(7,407)	(7,407)	15,694	15,694
Net finance income (expense)	(7,755)	5,865	(8,441)	(27,516)	(1,635)	(7,376)	(2,791)	(8,714)
Results in equity-accounted investments	(218)	(218)	(177)	(177)	218	218	507	507
Income (loss) before income taxes	(3,665)	9,955	(9,748)	(28,823)	(8,824)	(14,565)	13,410	7,487
Income taxes	(684)	(5,313)	1,137	7,623	1,321	3,274	(2,578)	(566)
Net income (loss)	(4,349)	4,642	(8,611)	(21,200)	(7,503)	(11,291)	10,832	6,921
Actuarial gains (losses) on defined benefit pension plans (net of tax)	(4,238)	(4,238)	(67)	(67)	(4,790)	(4,790)	5,095	5,095
Available-for-sale securities (net of tax)	—	—	—	—	—	—	(28)	(28)
Cash flow hedge—highly probable future exports (net of tax)	8,991	—	(12,589)	—	(3,788)	—	(3,911)	—
Cash flow hedge – others	8	8	10	10	7	7	18	18
Cumulative translation adjustments	10,986	10,986	(29,248)	(29,248)	(15,606)	(15,606)	(20,397)	(20,397)
Share of other comprehensive income (losses) in equity-accounted investments	341	341	(861)	(861)	(263)	(263)	(265)	(265)
Total comprehensive income (loss)	11,739	11,739	(51,366)	(51,366)	(31,943)	(31,943)	(8,656)	(8,656)
Shareholders' equity	77,550	77,550	66,055	66,055	116,978	116,978	149,123	149,123

(1) Assuming adjustment for retroactive changes in hedge accounting treatment.

For the fiscal year ended December 2016, loss would reverse to a net income and, as a consequence, we may be required to distribute mandatory dividends subject to approval by our shareholders at a general shareholders' meeting. See Item 10. "Additional Information – Mandatory Distribution."



If we cease our cash flow hedge accounting practices going forward, the cumulative foreign exchange rate variation gains or losses in our shareholder's equity would be recycled to our statement of income in future periods, pursuant to the schedule set out in note 33.2 to our audited consolidated financial statements. In addition, the effect of prospective exchange rate changes on our U.S. dollar-denominated long-term debt obligations would be immediately recognized as finance income or expense in our consolidated statement of income, instead of being recognized in our shareholders' equity and recycled to profit or loss when the future export revenues occur.

Write-off – for overpayments incorrectly capitalized

In the third quarter of 2014, we wrote off US\$2,527 million of capitalized costs representing amounts that we overpaid for the acquisition of property, plant and equipment in prior years. To account for these overpayments, we developed an estimation methodology, as set out in note 3 to our audited consolidated financial statements, which involves a significant degree of uncertainty. As we also describe in note 5.9 to our audited consolidated financial statements, we continue to monitor the ongoing investigations and the availability of other information concerning the amounts it may have overpaid in the context of the payment scheme and, if reliable information becomes available that indicates with sufficient precision that our estimate should be modified, we will evaluate materiality and, if so, adjust. However, we believe we have used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized and there is no evidence that would indicate the possibility of a material change in the amounts written-off.

Allowance for impairment of trade receivables

As described in Notes 4.3.3 and 5.10 to our audited consolidated financial statements, our management continuously assesses whether there is objective evidence that trade receivables are impaired (impacts on the estimated future cash flows) and recognizes allowances for impairment of trade receivables to cover losses. The amounts recognized as provision for impairment of trade and other receivables are presented in note 8.3 to our audited consolidated financial statements. Note 8.4 to our audited consolidated financial statements provides further discussion on the provision for uncollateralized receivables from the isolated electricity system in the northern region of Brazil.

Research and Development

We are deeply committed to research and development as a means to extend our reach to new production frontiers and achieve continuous improvement in operations. We have a history of successfully developing and implementing innovative technologies, including the means to drill, complete and produce wells in increasingly deepwater.

We spend a significant percentage of our revenues in research and development, what makes us one of the largest research and development investors among the world's major oil companies. Our Brazilian oil and gas concession agreements require us to invest at least 1% of our gross revenues originating from high productivity oil fields on research and development, of which up to half is invested in our research facilities in Brazil and the remainder is invested in Brazilian universities and institutions accredited by the ANP for this purpose.

In 2016, we spent US\$523 million on research and development, equivalent to 0.64% of our sales revenues, while in 2015 we spent US\$630 million, equivalent to 0.65% of our sales revenues. In 2014, we spent US\$1,099 million, equivalent to 0.76% of our sales revenues. For more information about changes on these expenses, see section "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Our research and development activities are based on strategic choices that we make regarding technological development, which we call our "Technological Focus," namely:

- Process safety, integrity and reliability of plants and equipment;
- Protection of our value in environmental and social matters;



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- Opening of new exploratory frontiers;
- Integration, increased accessibility and quality of reservoir and oil system databases;
- Increase of reservoir recovery factor;
- Reduction of the oil price breakeven point and of the operating cost;
- Assets decommissioning;
- Flexibility of the downstream productive chain;
- Value aggregation to downstream products;
- Productive processes optimization and efficient use of energy;
- Integration and optimization of the logistic chain; and
- Transition to low carbon matrix.

In the three-year period ended December 31, 2016, our research and development operations were awarded 106 patents in Brazil and 118 overseas. Our portfolio of patents covers all of our areas of activities.

We have operated a dedicated research and development facility in Rio de Janeiro, Brazil since 1963. As a result of its expansion in 2010, this is one of the largest facilities of its kind in the energy sector and the largest in the southern hemisphere, with laboratories especially dedicated to pre-salt technologies. As of December 31, 2016, this facility had 1,458 employees, 92% of which are dedicated to research and development.

We also have several semi-industrial scale prototype plants throughout Brazil that are in proximity to our industrial facilities and that are aimed at scaling up new industrial technologies at reduced costs. In 2016, we conducted research and development through joint research projects with more than 100 universities and research centers in Brazil and abroad and participated in technology exchange and assistance partnerships with several oilfield service companies, small technology companies and other operators.

Trends

Brazil has been hit by a severe recession in 2015, which continued into 2016, when the GDP decreased by 3.6%. This decrease resulted in a significant deterioration in business and consumer expectations and in a sharp drop in domestic demand, in investments and in private consumption. Despite the recent decline in the demand for oil products, mainly attributable to this recent downturn of the economy in Brazil, we still expect that the demand for oil products in Brazil will return to grow in the medium- and long-terms, driven primarily by a future economic recovery from the current recession in Brazil and the increase in purchasing power of the Brazilian population.

Rising vehicle ownership rates, population growth and the need to transport goods from production sites to end-consumers connect the anticipated medium- and long-terms economic growth with additional demand for oil products. However, future economic downturns, internationally as well as in Brazil, could negatively affect these assumptions.

In recent years, we met any incremental growth in demand by increasing imports of oil and oil products and improving the throughput of our refineries, since our oil production and our refining capacity were not enough to meet the increased demand. Higher import of oil and oil products increased our cost of sales and decreased our refining margins in recent years, because we had not fully adjusted our domestic prices to reflect the higher international cost of oil.



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However, this dynamic has changed in 2015. Refining margins were partially restored as a result of falling international crude oil prices. In 2016, oil prices remained at low levels, sustaining refining margins at favorable levels.

Also, as a result of the increase of (i) the biodiesel blend in diesel and (ii) ethanol consumption driven by an increasing share of flexfuel fleet in Brazil, we expect that biofuels consumption will increase in Brazil over the long-term, resulting in a reduction in the pace of growth in Brazilian demand for gasoline and diesel. However, in the medium term, ethanol supply is limited to productivity gains from improvements in the management of cane fields, since investment capacity has been reduced due to high indebtedness levels in the Brazilian ethanol industry. In the long-term, international agreements in favor of reducing greenhouse gas emissions may play a role in increasing the consumption of biodiesel and ethanol. In December 2015, the UN Climate Conference was held in Paris and it adopted the first global agreement to reduce greenhouse gas emissions and mitigate climate change impacts.

The price we realize for the crude oil we export is determined by international oil prices, although we generally sell our crude oil at a discount compared to Brent crude oil and other light oil benchmark prices because it is heavier and thus more expensive to refine. After a strong decline through the second half of 2014, oil prices remained at low levels in 2015, ending the year with Brent crude oil trading at US\$35.75/barrel. The 2015 annual average price was US\$52.31 per barrel, a decrease of 47% compared to the previous year. In 2016, oil price decreased further, with Brent crude oil trading at US\$44.11/barrel.

Worldwide, non-OPEC oil supply declined 0.8 mmbbl/d in response to continued low oil prices. Even in the United States, the oil production showed signs of resilience in face of low prices in 2015 and declined in 2016 by 0.5 mmbbl/d. OPEC oil production, by contrast, increased by 1.1 mmbbl/d, partially offsetting non-OPEC production decline. Iranian oil production recovery was responsible for a significant share of this growth. After fulfilling all the requests from a Joint Cooperation Plan of Action signed in 2015, the sanctions on its oil exports were lifted and Iranian oil production was allowed to get back to pre-sanction levels. Although not as strong as 2015, oil demand increased in 2016 by 1.5 mmbbl/d. The combination of supply decline and demand growth contributed to diminish the oversupply in the oil market in 2016.

In November 2016, in its 171st Ordinary Meeting, OPEC decided to cut its oil production by 1.2 mmbbl/d, limiting its output to 32.5 mmbbl/d. The new ceiling, which will be effective from January 1, 2017, will be implemented during the first six months of 2017 and can be further renewed for an additional period of six months. For the first time in the last fifteen years, OPEC countries managed to reach an agreement with non-OPEC countries to cut production by an additional volume of 0.56 mmbbl/d. Even if we consider that OPEC might follow its historical track record of not fully complying with its production cuts, we expect that the global oil market will reach an equilibrium throughout 2017.

This low crude oil price environment has posed challenges for technological development and innovation in the oil and gas industry. Upstream projects are either being developed at a slower pace or postponed. Oil and gas companies are prioritizing technologies and techniques that assure lower costs and higher efficiency in the short- and medium term, although maintaining and increasing oil and gas reserves is still a long-term objective.

Each year, we review and revise our long-term business and management plan in order to adapt to changing market conditions and to revise our capital expenditure levels in accordance with updated scenarios and projected cash flows.



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Item 6. Directors, Senior Management and Employees**Directors and Senior Management****Directors**

Our board of directors, which we refer to as the *conselho de administração*, is composed of a minimum of seven and maximum ten members and is responsible for, among other things, establishing our general business policies. The members of the board of directors are elected at the annual general meeting of shareholders, including the employee representative previously selected by means of a separate voting procedure. The term of office may not exceed two years and members may be reelected at most three consecutive times. For further information regarding the attributions and duties of our board of directors, see Exhibit 1.1 for a copy of our bylaws.

Under Brazilian Corporate Law, shareholders representing at least 10% of the company's 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 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 of the company. For a company like Petrobras, the applicable threshold is 5%. Thus, shareholders representing 5% of our voting capital may demand the adoption of a cumulative voting procedure.

Our bylaws enable (i) minority preferred shareholders that together hold at least 10% of the total capital stock (excluding capital stock held by the controlling shareholders) to elect and remove one member to our board of directors, in a separate voting procedure at the general meeting; (ii) minority common shareholders 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; and (iii) our employees to directly elect one member to our board of directors by means of a separate voting procedure, pursuant to Law No. 12,353 and MPBM's Act No. 26. Our bylaws provide that, regardless of the rights above granted to minority shareholders, the Brazilian federal government always has the right to elect the majority of our directors, independently of their number. In addition, under Law No. 10,683, one of the board members elected by the Brazilian federal government must be indicated by the Minister of Planning, Budget and Management—MPBM. The maximum term for a director is two years, and re-election is permitted three times consecutively. In accordance with the Brazilian Corporate Law, the shareholders may remove any director from office at any time with or without cause at an extraordinary meeting of shareholders. Following an election of board members pursuant to the cumulative voting procedure, the removal of any board member by an extraordinary meeting of shareholders will result in the removal of all of the other members, after which new elections must be held.

In accordance with Law No. 13,303, 25% of the members of our board of directors, and at least one member of our board of directors in the case of adoption of multiple voting by minority shareholders, must comply with independence requirements.



We currently have nine directors. The following table sets forth certain information with respect to these directors:

Name	Date of Birth	Position	Current Term Expires	Business Address of Permanent Directors
Luiz Nelson Guedes de Carvalho(1)	November 18, 1945	Chair	April 2018	Avenida Professor Luciano Gualberto, 908, FEA3, Cidade Universitária, São Paulo, SP ZIP code: 05508-010
Jerônimo Antunes(1)	November 18, 1955	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 rd floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Segen Farid Estefen(1)	January 20, 1951	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 rd floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Francisco Petros Oliveira Lima Papathanasiadis(1)	September 14, 1964	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 rd floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Durval Joé Soledade Santos(1)	December 13, 1948	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 rd floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Pedro Pullen Parente(1)	February 21, 1953	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 18 rd floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Guilherme Affonso Ferreira(2)	May 09, 1951	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 rd floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Marcelo Mesquita de Siqueira Filho(3)	December 20, 1969	Director	April 2018	Avenida Niemeyer, 2, sala 201, Leblon, Rio de Janeiro, RJ ZIP code: 22.450-220
Betania Rodrigues Coutinho(4)	January 17, 1976	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 rd floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030

- (1) Appointed by the controlling shareholder.
(2) Appointed by the minority preferred shareholders.
(3) Appointed by the minority common shareholders.
(4) Appointed by our employees.

Luiz Nelson Guedes de Carvalho—Mr. Carvalho has been a member of our board of directors since May 2015 and our chairman since December 2015. Mr. Carvalho also chaired the audit committee of our board of directors from April 2015 to September 2015. He has been a member of the board of directors of BM&FBOVESPA (and the coordinator of its audit committee) since 2013 and also the chairman of the audit committee of Grupo Pão de Açúcar—GPA since 2014. He is currently a professor and doctor of Accounting and Controlling at Universidade de São Paulo—USP. He is a specialist in litigation involving Issues of Corporate and International Accounting, Risk Management, and Auditing. He is a member of boards of directors and audit committees of other publicly-held companies. He currently serves as a member of the accounting pronouncements committee. Mr. Carvalho has previously served as a member of the board of directors of XBRL International Inc., a member of the Financial Crisis Advisory Group—FCAG, the first independent president of the Standards Advisory Council—SAC at IASB (from July 2005 to December 2008), consultant at the World Bank, and has served as a member of the board of directors of Banco Nossa Caixa, Caixa Econômica Federal, Banco Bilbao Vizcaya Argentaria Brasil—BBVA, Vicunha Têxtil S.A., Banco Fibra S.A., among others. Mr. Carvalho also served as Deputy Governor and head of banking supervision of the Central Bank of Brazil (from 1991 to 1993) and as commissioner of the CVM (from 1990 to 1991), among others. Mr. Carvalho received a bachelor's degree in economics from Universidade de São Paulo—Faculdade de Economia e Administração e Contabilidade and in accounting from Faculdades São Judas Tadeu and a master's and a Ph.D degree in accounting and controllership from Universidade de São Paulo—Faculdade de Economia e Administração e Contabilidade.



Jerônimo Antunes—Mr. Antunes has been a member of our board of directors since May, 2016. He is currently an accounting professor in FEA/USP, where he has been a professor since 1999. He has been a professor of several MBA and accounting, auditing, finance and business management courses at FIPECAFI-USP since 2000, has taught at FIA-USP since 2006 and also teaches at other higher education institutions. He is also a member of the board of directors and a coordinator of the audit committee for Petrobras Distribuidora and Basic Sanitation Utility Company of the State of Sao Paulo—Sabesp. Mr. Antunes has served as an independent auditor of businesses for over 30 years. He has been contracted as an expert accountant in several disputes at the Brazil-Canada Chamber of Commerce and the Judiciary Branch since 2005. He received a bachelor's degree in accounting and business administration, a master's and a PhD. in controlling and accounting from FEA-USP. He has previously served as an alternate member of our board of directors.

Segen Farid Estefen—Professor Estefen has been a member of our board of directors since May, 2015, and chairman of the board of directors of Petrobras Distribuidora from November 2015 to April 2016. He is professor of ocean structures and subsea engineering professor from the Universidade Federal do Rio de Janeiro—COPPE, where he held the position of dean from 1998 to 2001. He is also the general manager of the Subsea Technology Laboratory and the coordinator of the Ocean Renewable Energy Group, both at Universidade Federal do Rio de Janeiro—COPPE, and is a member of the advisory committee of the Ocean, Offshore and Arctic Engineering division of the American Society of Mechanical Engineers (ASME), fellow of the Society for Underwater Technology—SUT (UK), technical coordinator of the Embrapii COPPE unit for subsea engineering and member of the *Academia Nacional de Engenharia*—ANE. He received a bachelor's degree in civil engineering from the Universidade Federal de Juiz de Fora, a master's degree in ocean engineering from Universidade Federal do Rio de Janeiro—COPPE, a Ph.D degree in civil engineering from Imperial College of Science, Technology and Medicine (London) and he was a post-doctoral research fellow at the Institute for Marine Technology, Norwegian University of Science and Technology.

Francisco Petros Oliveira Lima Papathanasiadis—Mr. Papathanasiadis has been a member of our board of directors since May, 2016. He is currently managing partner at Fernandes, Figueiredo, Françaço and Petros Law Firm. He has worked for over thirty years in various financial institutions, notably Unibanco, Brasilpar and Sul America Group, in the Brazilian financial and capital markets. He was the deputy chairman and the chairman of the Brazilian Association of capital Markets (ABAMEC-Sao Paulo) from 1999 to 2001, and the first chairman of the supervisory board of the capital markets analysts at APIMEC from 2010 to 2014. He has previously served as an alternate member of our board of directors.

Durval José Soledade Santos—Mr. Santos has been a member of our board of directors since May, 2016. He currently serves in the lawyers council of the Bar Association of Brazil (OAB), in the Rio de Janeiro section. He is currently a guest Professor at the LLMDS Course, the FGV Law School in Rio de Janeiro and a professor of corporate law promoted by the OAB/RJ capital market committee. He also acts as vice chairman of the independent investigation committee at Eletrobras. He previously served as a board member of the corporate governance committee of Forjas Taurus Inc.; and as a member of the financial and investment committee at Odebrecht Agroindustrial Inc. He received a law degree from Federal Fluminense University in 1974. He has an executive MBA from COPPE/UFRJ. He holds a master's degree in development economics from PUC/BNDES and a degree in corporate law from Cândido Mendes University.

Pedro Pullen Parente—Mr. Parente has been a member of our board of directors since June, 2016. He began his public service career at Banco do Brasil in 1971 and was transferred to the Central Bank in 1973, in both cases following public examination. He has been a consultant for the International Monetary Fund and public institutions in Brazil, including several State Departments and the National Constituent Assembly of 1988, and has occupied various government positions in the economics area. He was Minister of State between 1999 and 2002, having led the team handling the transition from President Fernando Henrique Cardoso's government to President Lula's administration. During this period, he played an important role as President of the Energy Crisis Management Chamber. He was a member of the Board of Directors of Petrobras between March 24, 1999 and December 31, 2002 and Chairman of the Board as of March 25, 2002. He was Chief Operating Officer of RBS Group between 2003 and 2009 and President and CEO of Bunge Brasil from 2010 to 2014. He is currently a member of the Board of Directors of SBR-Global, as well as an Executive Partner of the Prada group of consulting and financial advisory companies. He has also been Chairman of the Board of Directors of the BM&FBOVESPA—Securities, Commodities and Futures Exchange since March 2015.



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Guilherme Affonso Ferreira—Mr. Ferreira has been a member of our board of directors since May, 2015, and he is also a member of the board of directors of Sul America S.A, Gafisa S.A., Valid S.A, Arezzo S.A. and T4F S.A. and a member of the board of directors of non-governmental organizations such as the Institute of Citizenship, AACD, Solidarity Sport, among others. Mr. Ferreira received a bachelor's degree in engineering from the Polytechnic School of the Universidade de São Paulo-USP and has studied political science at Macalester College.

Marcelo Mesquita de Siqueira Filho—Mr. Mesquita has been a member of our board of directors since August, 2016. Mr. Mesquita has a degree in Economics from PUC-Rio, in French Studies from Nancy University II and an OPM (Owner/President Management) from Harvard (HBS). He is a co-founding partner of Leblon Equities (since 2008) and co-manager of equity funds and of Private Equity investments. He has 26 years of experience in the Brazilian stock market, having worked 10 years at UBS Pactual (1998-2008) and 7 years at Banco Garantia (1991-1998). At UBS Pactual, he was the co-head of Brazilian Equity Capital Markets (2007-2008); co-head of Brazilian Equities (2005-2007); and head of Brazil Equity Research & Strategy Analysis (1998-2006). At Banco Garantia he was a commodities stocks analyst (1991-1997) and Investment Banker (1997-1998). Since 1995, he was appointed by investors as one of the leading analysts of Brazil according to several surveys made by Institutional Investor magazine. He was ranked “#1 Brazil Analyst” from 2003 to 2006 (#3 in 2002, #2 in 2001 and #3 in 2000). He was also ranked as “#1 Stock Strategist in Brazil” from 2003 to 2005. Marcelo Mesquita worked in more than 50 transactions in the Brazilian stock market (IPOs), both in Garantia and UBS Pactual. Currently he is also a member of the Boards of Directors of BR Home Centers S.A., and Tamboro Educacional S.A.

Betania Rodrigues Coutinho—Ms. Coutinho has been a member of our board of directors since April, 2016. She has been a petroleum engineer at Petrobras since 2004, and she has also been an administration adviser and representative of our employees since April, 2016. Previously, she was a deputy professor at the Federal University of Espirito Santo—UFES. She has a master's degree in civil engineering, with an emphasis on environmental geotechnics.

Executive Officers

Our board of executive officers, which we refer to as the *diretoria*, is composed of the Chief Executive Officer (CEO) and seven executive officers, and is responsible for our day-to-day management. Our executive officers are Brazilian citizens residing in Brazil. Pursuant to our bylaws, the board of directors elects the executive officers, including the CEO, and in electing executive officers to their respective areas, must consider personal qualification, expertise and specialization. The maximum term for our executive officers is two years, with no more than three consecutive re-elections allowed. The board of directors may remove any executive officer from office at any time with or without cause. Four of our current executive officers are experienced Petrobras career managers, engineers or technicians. For further information regarding our board of executive officers, see Exhibit 1.1 for a copy of our bylaws.

On August 4, 2016, an area focused on strategy, organization and management system was created, which, after the statutory changes occurred on November 30, 2016, began to absorb the activities of the risk area, previously supervised by the Chief of Governance and Compliance Officer.



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The following table sets forth certain information with respect to our executive officers:

Name	Date of Birth	Position	Current Term
Pedro Pullen Parente	February 21, 1953	Chief Executive Officer	April 2018
Ivan de Souza Monteiro	November 15, 1960	Chief Financial Officer and Chief Investor Relations Officer	April 2018
Roberto Moro	November 8, 1962	Chief Production Development and Technology Officer	April 2018
Solange da Silva Guedes	November 22, 1960	Chief Exploration and Production Officer	April 2018
Jorge Celestino Ramos	October 11, 1956	Chief Refining and Natural Gas Officer	April 2018
Hugo Repsold Júnior	July 23, 1959	Chief Human Resources, HSE and Services Officer	April 2018
João Adalberto Elek Junior	November 26, 1958	Chief Governance and Compliance Officer	April 2018
Nelson Luiz Costa Silva	September 14, 1955	Chief Strategy, Organization and Management System Officer	April 2018

Pedro Pullen Parente—Mr. Parente has been our Chief Executive Officer since June 2016. For biographical information regarding Mr. Parente, see “—Directors.”

Ivan de Souza Monteiro—Mr. Monteiro has been our Chief Financial Officer and Chief Investor Relations Officer since February 2015. Mr. Monteiro previously served as the vice-president of Financial Management and Investor Relations of Banco do Brasil from June 2009 to February 2015, where he has held different positions, including the position of Chief Commercial Officer and vice-president of Finance, Capital Markets and Investor Relations. He was also president of the Supervision Committee of BB AG, a Banco do Brasil subsidiary in Austria, from April 2014 to February 2015 and president of BB Banco de Investimentos S.A. from June 2009 to February 2012 (and vice-president from February 2012 to February 2015). Mr. Monteiro was also a member of the board of directors of Banco Votorantim Participações S.A. from September 2009 to February 2015, Ultrapar Participações S.A. from March 2013 to February 2015, BB Seguridade Participações S.A. from August 2013 to February 2015 and an alternate member of the board of directors of Mapfre BB SH-2 Participações S.A. from June 2013 to February 2015. Mr. Monteiro holds a degree in electronic engineering and telecommunications from INATEL-MG and an MBA in finance from IBMEC-RJ and in management from the Pontifícia Universidade Católica do Rio de Janeiro—PUC-Rio.

Roberto Moro—Mr. Moro has been our Chief Production Development and Technology Officer since April 2016. Mr. Moro joined Petrobras in 1981 and has held various positions in Petrobras’ Engineering Projects, including the position of Chief Engineering, Technology and Procurement Officer from February 2015 to March 2016, General Manager for the implementation of Engineering Projects for E&P and Engineering Executive Manager for Subsea Projects from October 2013 to February 2015. Mr. Moro holds a degree in mechanical engineering from Universidade Gama Filho and a specialization in project management from Fundação Getulio Vargas-FGV.

Solange da Silva Guedes—Ms. Guedes has been our Chief Exploration and Production Officer since February 2015. Ms. Guedes joined Petrobras in 1985 and has held various positions in Petrobras’ E&P business segment, including the position of Executive Manager of Petrobras’ upstream activities in Northern and Northeastern Brazil from February 2003 to April 2008, Executive Manager of Engineering Production in the E&P business segment from April 2008 to December 2013 and Corporate Executive Manager in E&P from December 2013 to February 2015. Ms. Guedes holds a degree in Civil Engineering from the Universidade Federal de Juiz de Fora—UFJF, a master’s degree in civil engineering from the Universidade Federal do Rio de Janeiro—UFRJ, a PhD in oil engineering from the Universidade Estadual de Campinas—UNICAMP and an MBA in management from COPPEAD/UFRJ.



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Jorge Celestino Ramos—Mr. Ramos has been our Chief Refining and Natural Gas Officer since April 2016. Mr. Ramos joined Petrobras in 1983 and has held various positions in Petrobras' distribution and refining segments, including the position of Chief Downstream Officer from February 2015 to March 2016, Executive Manager of Logistics in Downstream from April 2014 to February 2015 and Executive Manager of Operations of Petrobras Distribuidora from February 2007 to April 2014. Mr. Ramos holds a degree in chemical engineering from the Universidade do Estado do Rio de Janeiro—UERJ and he holds an MBA in marketing from Escola Superior de Propaganda e Marketing—ESPM and in management from Fundação Getúlio Vargas-FGV.

Hugo Repsold Júnior—Mr. Repsold has been our Chief of Corporate Affairs since August 2016. Mr. Repsold joined Petrobras in 1985 and has held various positions at Petrobras, including the position of Chief Human Resources, HSE and Services Officer from April 2016 to August 2016, Chief Gas and Power Officer from February 2015 to March 2016, Corporate Executive Manager of Gas and Power from May 2012 to February 2015 and Executive Manager of Performance and Executive Manager of Strategy from September 2011 to February 2012. Mr. Repsold holds a degree in Mechanical Engineering from the Universidade Federal Fluminense-UFF, a degree in economics from the Universidade do Estado do Rio de Janeiro-UERJ and a master's degree in energy planning from the Universidade Federal do Rio de Janeiro (Coppe/PPE-UFRJ).

João Adalberto Elek Junior—Mr. Elek Junior has been our Chief Governance and Compliance Officer since December 2016 and, previously, he was our Chief Governance, Risk and Compliance Officer, from January 2015 to November 2016. Mr. Elek Junior was Chief Financial Officer at Fibria from August 2010 to February 2012. He has also worked at Telmex and AT&T in Brazil and Latin America, from May 2000 to February 2007, and he served as Chief Financial and Investor Relations Officer at the cable TV and telecommunications firm NET Serviços from March 2007 to July 2010. Mr. Elek Junior also worked for 20 years at Citibank, where he was Chief Financial Officer for retail services from November 1996 to May 2000. Mr. Elek Junior holds a bachelor's degree in electronic engineering from Pontifícia Universidade Católica do Rio de Janeiro—PUC-Rio, an MBA in marketing planning from COPPEAD/UFRJ and graduate studies in mergers and acquisitions from Columbia Business School.

Nelson Luiz Costa Silva—Mr. Silva has been our Chief Strategy, Organization and Management System Officer since August 2016. Mr. Silva has had a 40 year career in oil and gas, mining and manufacturing, 25 years of which spent overseas. Prior to joining Petrobras, Mr. Silva was CEO of BG Group in South America and President of BHP Billiton global aluminum business and subsequently Marketing Director based in London and Singapore. Mr. Silva has also held several senior executive positions at Vale, based in Brussels, Tokyo and Rio, he was CEO of America Latina Logística railways based in Buenos Aires and Managing Director of Embraer Europe, based in Paris. Mr. Silva is also a Non-Executive Director of Compass Group Plc. Mr. Silva is graduated in Naval Engineering from Universidade de São Paulo with post-graduation studies at Fundação Getúlio Vargas in São Paulo.

Compensation

For 2016, the aggregate amount of compensation we paid to all members of the board of directors and executive officers of Petrobras (parent company) was US\$5.5 million. As of December 31, 2016 we had eight executive officers and 9 board members. The average monthly number of members of our board of directors that received compensation throughout 2016 was 9.33, while the number of executive officers that received compensation during this period was 7.67. See Note 19.3 to our audited consolidated financial statements for further information regarding compensation of our employees and officers.

In addition, the members of our board of directors and executive officers receive medical assistance benefits, as it is generally provided to our employees and their families. Our executive officers also receive supplementary social security benefits and housing allowance.

We have no service contracts with members of our board of directors providing for benefits upon termination of employment. We have a remuneration and succession committee in the form of an advisory committee. See “—Other Committees.”



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Share Ownership

As of March 31, 2017, the members of our board of directors, our executive officers, and the members of our fiscal council, as a group, beneficially held a total of 37,104 common shares and 5,148 preferred shares of our company. 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 any other person has any option to purchase our common or preferred shares. Petrobras does not have a stock option plan for its directors, officers or employees.

Fiscal Council

We have a permanent fiscal council (*Conselho Fiscal*) in accordance with applicable provisions of the Brazilian Corporate Law, composed of up to five members. As required by the Brazilian Corporate Law our fiscal council is independent of our management and external auditors. The fiscal council's responsibilities include, among others: (i) monitoring management's activities and (ii) reviewing our annual report and financial statements. The members and their respective alternates are elected by the shareholders at the annual general shareholder's meeting. Holders of preferred shares without voting rights and minority common shareholders are each entitled, as a class, to elect one member and his respective alternate to the fiscal council. The Brazilian federal government has the right to appoint the majority of the members of the fiscal council and their alternates. One of these members and his respective alternate are appointed by the Minister of Finance, representing the Brazilian Treasury. The members of the fiscal council are elected at our annual general shareholders' meeting for a one-year term and two consecutive re-elections are permitted.

The following table lists the current members of our fiscal council:

<u>Name</u>	<u>Year of First Appointment</u>
Adriano Pereira de Paula (*)	2016
Luiz Augusto Fraga Navarro de Britto Filho	2016
Marisete Fátima Dadald Pereira	2011
Reginaldo Ferreira Alexandre	2013
Walter Luis Bernardes Albertoni	2013

The following table lists the alternate members of our fiscal council:

<u>Name</u>	<u>Year of First Appointment</u>
Paulo José dos Reis Souza (**)	2016
César Acosta Rech	2016
Agnes Maria de Aragão da Costa	2015
Mário Cordeiro Filho	2013
Roberto Lamb	2013

(*) On December 27, 2016, Mr. William Baghdassarian renounced and on January 1, 2017 he left his position as a member of our fiscal council. Mr. Baghdassarian's alternate, Mr. Paulo José dos Reis Souza took office on January 2, 2017. However, on March 27, 2017 Mr. Adriano Pereira de Paula was nominated and took office on March 28, 2017.

(**) On March 20, 2017, Mr. Paulo José dos Reis Souza, who represented the Brazilian federal government, resigned from office, effective on March 27, 2017. On March 28, 2017 Mr. Adriano Pereira de Paula took office, after being nominated at the extraordinary general meeting (AGE) held on March 27, 2017.



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Audit Committee

We have a statutory Audit Committee that advises our board of directors, composed exclusively of members of our board of directors. Our Audit Committee must be composed by at least three members.

On June 17, 2005, our board of directors approved the appointment of our Audit Committee to satisfy the audit committee requirements of the Sarbanes-Oxley Act of 2002 and Rule 10A-3 under the Securities Exchange Act of 1934. On February 26, 2016, our board of directors approved changes to the written charter of our Audit Committee so that it now adheres to the rules set forth in Instrução CVM No. 509/2011 (“ICVM 509”) applying to statutory audit committees.

The Audit Committee is responsible for, among other matters:

- monitoring, analyzing, and making recommendations to our board of directors with respect to the appointment and dismissal of our independent auditors as well as evaluating the independence of our independent auditors for issuing an opinion on the financial statements and their qualifications and expertise as a whole;
- 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 the Company’s economic and financial situation, for filing with the CVM, the SEC and the *Comisión Nacional de Valores* (CNV);
- advising our board of directors and our management, in consultation with internal and independent auditors and our risk management and internal controls units, in monitoring the quality and integrity of our internal control over financial reporting systems, our financial statements and related financial disclosures;
- reviewing and submitting proposals to our board of directors relating to the resolution of conflicts between management and the independent auditor relating to our financial statements;
- assess and monitor, together with our internal management and audit area, the adequacy of actions to prevent and combat fraud and corruption;
- evaluating and monitoring, in conjunction with our management and our internal auditors, the company’s transactions with related parties, including by conducting, at least once a year, a review of all related-party transactions and pre-approving related party transactions above certain materiality levels in accordance with ICVM No. 480/09; and
- 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.

The current members of our Audit Committee are Jerônimo Antunes, Durval José Soledade Santos and Marcelo Mesquita de Siqueira Filho. All members of our Audit Committee satisfy the requirements set forth in Rule 10A-3 under the Exchange Act.



Other Committees

Since July 1, 2015, our board of directors has a total of four additional statutory advisory committees:

- Comitê de Indicação, Remuneração e Sucessão (Appointment, Remuneration and Succession Committee), responsible for advising our board of directors with respect to the compensation of members of our senior management and with respect to our general compensation policies and mechanisms, among other matters. Since September 2016, this Committee has also been responsible for advising our board of directors with respect to the changes proposed to our appointment policy; verifying the compliance of the appointment of the members of our fiscal council, our board of directors, our executive board and external participants from our board of directors' advisory committees, among other matters. The current members of our Appointment, Remuneration and Succession Committee are Francisco Petros Oliveira Lima Papathanasiadis, Jerônimo Antunes and Tales José Bertozzo Bronzato;
- Comitê de Segurança, Meio Ambiente e Saúde (Health, Safety and Environmental Committee), responsible for advising our board of directors with respect to global policies related to the strategic management of health, safety and environmental issues, among other matters. The current members of our Health, Safety and Environmental Committee are Betania Rodrigues Coutinho, Segen Farid Estefen and Sonia Aparecida Consiglio;
- Comitê Financeiro (Finance Committee), responsible for advising our board of directors with respect to risks and strategies concerning financial management. The current members of our Finance Committee are Guilherme Affonso Ferreira, Francisco Petros Oliveira Lima Papathanasiadis, Carlos Antonio Rocca and Clemir Carlos Magro; and
- Comitê Estratégico (Strategic Committee), responsible for advising our board of directors with respect to our Strategic Plan, business plan and other guidelines related to our strategy. Since December 2016, our Strategic Committee has held monthly seminars to promote the debate on our strategic issues in order to consolidate its vision and understanding with greater comprehensiveness and adequacy in these matters and to improve the solidity of its recommendations for the decisions of our board of directors. The current members of our Strategic Committee are Segen Farid Estefen, Guilherme Affonso Ferreira, Reinaldo Guerreiro and Guilherme José Macedo Pinheiro de Lima.

Also, on December 23, 2014, our board of directors announced the formation of a special committee that serves as a reporting line for the internal investigations led by two independent law firms: U.S. firm Gibson, Dunn & Crutcher LLP and Brazilian firm Trench, Rossi e Watanabe Advogados (the "Special Committee"). These internal investigations are focused on collecting evidence regarding the nature, extent and impact of alleged illegal acts that may have been committed against Petrobras, as have been reported in testimony under plea bargain agreements provided to Brazilian courts, as well as to investigate related facts and circumstances that may have a significant impact on our business and results of operations.

This Special Committee acts independently, but it has a direct reporting line to our board of directors. It is responsible for: (i) the approval of independent law firms' plan for the internal investigation; (ii) receiving and analyzing information produced by the independent law firms; (iii) ensuring that the independence of the investigations is not compromised; (iv) analyzing, recommending to our board for its approval and enabling the implementation of the recommendations made by the independent law firms; (v) communicating and/or authorizing communication between the independent law firms and the competent authorities, including regulators, regarding the investigation status, its results, as well as measures taken by us in connection with such investigations; (vi) preparing a final report about the results of the independent law firms investigations, as well as providing us with the Special Committee's recommendations to improve our internal policies and procedures.



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The Special Committee is composed of three members: two independent individuals from outside the company, a Brazilian and a non-Brazilian, with notable technical expertise, in addition to our Chief Governance, Risk and Compliance Officer.

The following table sets forth certain information with respect to the members of the Special Committee:

Name	Date of Birth	Position
Ellen Gracie Northfleet	February 16, 1948	Member of the Special Committee
Andreas Pohlmann	January 24, 1958	Member of the Special Committee
João Adalberto Elek Junior	November 26, 1958	Member of the Special Committee

Ellen Gracie Northfleet—Chief Justice Northfleet has been a member of our Special Committee since December 2014. She has served as Chief Justice of the Brazilian Supreme Court from 2006 to 2008 and was a Justice of the Brazilian Supreme Court from December 2000 to August 2011. Ms. Northfleet was also a Justice of the Regional Federal Court of Appeals -4th Region (*Tribunal Regional Federal—4ª Região*) from 1989 to 2000 and a Federal Prosecutor (*Procuradora da República*) from 1973 to 1989. Ms. Northfleet is recognized in Brazil and abroad for her expertise and experience with complex legal issues. Ms. Northfleet has an LL.B degree from the Universidade Federal do Rio Grande do Sul-UFRGS and a post-graduate degree in social anthropology from UFRGS as well.

Andreas Pohlmann—Dr. Pohlmann has been a member of our Special Committee since December 2014 and a partner at Pohlmann & Company since February 2012. Dr. Pohlmann has served as Chief Compliance Officer of Siemens AG from September 2007 to May 2010 and from May 2010 until November 2011 as a member of the executive board of Ferrostaal AG, responsible for compliance and administration. Dr. Andreas Pohlmann was also the Chief Compliance Officer and member of the Executive Committee of SNC-Lavalin Group Inc. in Montreal, Canada, from 2013 to 2014. Dr. Andreas Pohlmann holds a law degree from Goethe University in Frankfurt and a PhD in law from Tuebingen University.

João Adalberto Elek Junior—Mr. Elek Junior has been a member of our Special Committee since January 2015. For biographical information regarding Mr. Elek Junior, see “—Executive Officers”.

In addition, our board of directors has other advisory committees that contribute to discussions on the topics covered by such committees and, ultimately, to our decision-making process:

- *Comitê de Minoritários* (Minority Committee), responsible for advising our board of directors on transactions with related parties involving us and the Brazilian federal government, on a permanent basis including following the revision process of the Assignment Agreement. The current members of the Minority Committee are Mr. Marcelo Mesquita de Siqueira Filho and Mr. Guilherme Affonso Ferreira, who have been elected by minority shareholders and preferred shareholders, and Ms. Lavinia Rocha Hollanda, an external member with knowledge in technical-financial analysis of investment projects; and
- *Comitê de Comunicação e Responsabilidade Social* (Communication and Social Responsibility Committee), a non-permanent committee, responsible for discussing topics relating to communication, sponsorship and social responsibility. The current members of our Communication and Social Responsibility Committee are Betania Rodrigues Coutinho, Francisco Petros Oliveira Lima Papathanasiadis, Guilherme Affonso Ferreira, Jerônimo Antunes and Segen Farid Estefen, who are chairmen of the permanent committees of our board of directors.



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Ombudsman

The Petrobras General Ombudsman's Office has been an official part of our corporate structure since October 2005, when it became directly linked to the board of directors. The General Ombudsman's Office is the official channel for receiving and responding to denunciations and information regarding possible irregularities in accounting, internal controls and auditing. The General Ombudsman's Office reports directly to our board of directors and guarantees the anonymity of informants.

Our board of directors has approved the Policies and Directives of the Petrobras Ombudsman, which is an important step in aligning the General Ombudsman's practices with those of the other ombudsman offices in our group, contributing to the improvement of our corporate governance. These policies establish a three-year mandate for the Ombudsman Officer, during which he cannot be discretionarily dismissed by the management, ensuring his independence in performing his duties.

The Ombudsman Officer has also been appointed by our management as the person responsible for the implementation of the Public Access to Information Law (Law No. 12,527/2011), which regulates the constitutional right for people to have access to public information. This law states that all information produced or held in custody by the government and not classified as confidential must become accessible to all citizens. In this respect, the General Ombudsman's Office ensures compliance with the rules on access to information by the public, monitors the implementation of this law and submits periodic reports to our board of directors. It also makes recommendations and provides guidance to our business units with respect to the enforcement of this law.

The Ombudsman Officer, together with our Ethics Commission, is also responsible for implementing the Public Federal Employee Conflict of Interest Law (Law No. 12,813/2013) within Petrobras. This law regulates the circumstances in which a conflict may arise between the public interest and the interests of certain current and past employees of the Brazilian federal government, which includes Petrobras, and establishes subsequent restrictions on the activities performed by such people.

The responsibilities of the General Ombudsman Officer includes tasks such as receiving and analyzing demands from our employees concerning the existence of conflict of interests, communicating to stakeholders the results of those analyses, performing preliminary reviews about the existence of potential conflicts of interest, verifying potential conflicts of interest before authorizing employees to engage in certain activities, as well as informing employees on how to prevent or avoid those conflicts.



In May 2015, our board of directors approved an unified Whistleblower Channel applicable for all Petrobras units and all Petrobras subsidiaries. This channel, which began operating in November 2015, and is overseen by the General Ombudsman Office, is in charge of registering formal fraud and reported corruption allegations. Our board of directors also approved the hiring of an independent third party company responsible for receiving any complaints recorded through the Whistleblower Channel. Further information about our Whistleblower program is available at <https://contatoseguro.com.br/petrobras>.

In 2016, the General Ombudsman Office established a methodology for classifying allegations of fraud and corruption received by Petrobras based on a risk matrix. This measure has had the key objective of setting up a strategic approach to the areas responsible for investigation and enabling senior management to understand the severity of the fraud and corruption allegations received. This methodology was also able to offer an overview of the potential risks related to the facts described in those allegations.

Employees and Labor Relations

We attract and retain valuable employees by offering competitive compensation and benefits, merit-based promotions and a profit-sharing plan.

The table below shows our employee numbers for the last three years:

	As of December 31,		
	2016	2015	2014
Petrobras employees:			
Parent company	51,255	56,874	58,618
Subsidiaries	13,936	14,740	15,293
Abroad	3,638	6,856	6,997
Total Petrobras Group	68,829	78,470	80,908
Parent company by region:			
Southeastern Brazil	36,766	40,326	41,207
Northeastern Brazil	10,560	12,344	12,818
Other locations	3,929	4,205	4,593
Total parent company	51,255	56,874	58,618

The table below sets forth the main expenses related to our employees for the last three years:

	2016	2015	2014
	(US\$ million)		
Salaries	5,353.7	5,723.5	8,001.4
Employee training	41.8	92.8	155.1
Profit-sharing distributions	—	—	444

We maintain relations with 17 Brazilian oil workers' unions and one federation. Approximately 45% of our employees are unionized. We negotiate collective bargaining agreements annually. These agreements are composed of social clauses (which relate to labor and safety conditions and general benefits, among other matters), that are valid for two years, and economic clauses, that are valid for one year. In September 2016, we began negotiations over the economic clauses of the collective bargaining agreements. Negotiations concluded in March 2017, after Petrobras offered an 8.57% increase in salaries and an 8.97% increase in benefits, as well as the option, for administrative workers, to reduce the daily working hours from 8 hours to 6 hours in exchange for a 25% pay cut. Despite the delay in concluding negotiations, there have been no strikes or significant protests that impact production.



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Knowledge Transfer Initiatives

We have developed knowledge management corporate practices, such as our Mentoring Program, Shadowing, Knowledge Inventory, Communities of Practice, Lessons Learned, Job Rotation, Storytelling, Tutoring and other initiatives in order to ensure the preservation, sharing and use of knowledge within Petrobras.

We systematically include knowledge management actions in our Voluntary Separation Incentive Program (PIDV), in order to preserve knowledge within company and ensure the continuity of our operations.

In addition, we have been developing customized projects with our business segments to identify, preserve, share and apply relevant knowledge that may positively impact our results.

We have been investing efforts to include knowledge management in our management processes, since it is considered an important tool to manage people, culture, projects and processes.

Voluntary Separation Incentive Program—PIDV

In January 2014, we launched a voluntary separation incentive program with the goal of contributing to the achievement of the performance targets set forth under our previous strategic plan, including the improvement of our productivity.

This voluntary separation incentive program has been developed along with knowledge management and managerial succession tools so that all knowledge is retained by Petrobras in this process, allowing a planned and systematic voluntary separation of the employees that enroll in this program. Voluntary separation of employees under this program must achieve the following results: (i) adjust the number of our personnel to our business needs, (ii) achieve our interests in line with employees' expectations, (iii) preserve existing knowledge within Petrobras and (iv) permit the development of leadership succession plans.

The target group of this voluntary separation incentive program were 12,196 of our employees over the age of 55, regardless of their position in our company, that would be eligible to retire under the Brazilian Social Security National Institute rules until the end of incentive program enrollment period (March 31, 2014). Over 7,634 employees have taken advantage of our voluntary separation incentive program and were classified into different categories with retirement dates as far into the future as May 2017. From the launch of the program until December 2016, 6,878 employees retired under the program.

In April 2016, we announced a new voluntary separation incentive program the ("2016 PIDV"), open to all of our employees, and designed to adjust the size of our workforce to our 2017-2021 Plan, raising productivity and adding value for us. The 2016 PIDV was developed based on the premise of preserving a sufficient number of employees to ensure the regular continuity of our operations, while adjusting the size of our workforce in all business segments. We had 11,866 employees enrolled in the 2016 PIDV and, accordingly, we charged to our results of operation the amount of US\$1.1 billion. A cost saving amounting to US\$6.5 billion is expected for the 2017-2021 period.

See Note 22.6 to our audited consolidated financial statements for more information about our voluntary separation incentive programs.

In addition, in January 2016 Petrobras Distribuidora adopted a voluntary separation incentive program to encourage voluntary disconnection. The target group of this program included retired employees over the age of 55 years as of December 30, 2015. In October, 2016, Petrobras Distribuidora announced a new voluntary separation incentive program ("PIDV BR 2016"). Dismissals started in January, 2017 and 1,105 employees have already enrolled. Petrobras Distribuidora had 3,714 employees in the end of 2016, which corresponds to a decrease of 341 employees (8.4%) compared to 2015.

Employees Internal Relocation Program—Mobiliza

In 2013, we launched an internal relocation program with a view to make compatible our human resources organizational needs with the interests of its employees by offering to our employees relocation opportunities in areas that were expected to demand an increase in the number of employees. In this way, by re-allocating our current human resources within our organization, we reduced the need for additional short-term hiring. Between 2013 and 2015, 1,866, and in 2016, 155 employees, were relocated under this program. In light of our 2017-2021 Plan, staff mobility has become especially relevant to our activities. As a consequence, in December 2016, we structured a program to make it continuous (Continuous Corporate Mobility Process).

Pension and Health Care Plan

We sponsor a defined benefit pension plan, known as Petros, and a variable contribution pension plan, known as Petros 2, which together cover 96.86% of our employees.

The main purpose of our pension plans has been to supplement the social security pension benefits of our retired employees. Employees, as participants of the plans, make mandatory monthly contributions. Our historical funding policy has consisted of making monthly contributions to the plans in the amounts determined by pension fund regulations and actuarial appraisals – employees' equal amount. Contributions are intended to provide not only for benefits attributed to services rendered up to the present date but also for those expected to be earned in the future.

The table below shows the benefits paid, contributions made, and outstanding pension and medical liabilities for 2016, 2015 and 2014:

	2016	2015	2014
	(US\$ million)		
Total benefits paid – pension and medical plans	1,701	1,569	1,647
Total contributions – pension and medical plans(1)	650	651	812
Actuarial liabilities(2)	22,297	12,850	17,287

(1) Includes contributions by sponsors and employees.

(2) Unfunded pension and medical plans obligations.

As of August 9, 2002, Petros interrupted admitting new participants and since 2003 we have been engaged in complex negotiations with representatives of the Brazilian Oil Worker's National Union to address the deficits of the plan and develop a supplementary pension plan. Accordingly, we signed with Petros a terms of financial commitment ("TFC") to cover obligations under the pension plan, which amounts are due in 20 years, with 6% per year semiannual coupon payments based on the updated balance. As of December 31, 2016, the balance of TFC was US\$3.6 billion. We have also been subject to material legal proceedings in connection with the Petros Plan. In August 2007, we approved new regulations for the Petros Plan that readjust benefits based on an inflation index rather than through salary readjustments proposed by the sponsors and retirement benefits readjustments proposed by the Brazilian Social Security National Institute.

In 2007, we implemented Petros 2, a variable contribution or mixed pension plan, for employees with no supplementary pension plan. A portion of this plan has defined benefits characteristics including risk coverage for disability and death, a guaranty of a minimum benefit and a lifetime income, and the related actuarial obligations are recorded according to the projected credit unit method. The portion of the plan with defined contribution characteristics, earmarked for forming a reserve for programmed retirement, is recognized in the results for the year as the contributions are made.



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In July 2016, Petros announced a deficit of US\$6.9 billion, according to what is set out in the Resolution no. 22/2015 of National Council of Private Pension (CNPC), which regulates deficit management issues. Such amount has exceeded the tolerance limit called LTDA (Limit of Accumulated Technical Deficit), which is US\$2.0 billion as applied to Petros. Thus, at least a net amount of US\$4.9 billion will have to be borne in equal parts between sponsors (50%) and participants and beneficiaries (50%) pursuant to the parity rules under Brazilian law. This equation carries a maturity of 1.5 times the liability duration and its term is estimated to expire in 18 years.

In addition, according to Resolution no. 22/2015 of CNPC, the Petros Foundation should have developed and approved an adjustment plan (to be approved by the sponsors), by December 31st, 2016, to be implemented within 60 days. However, the Petros Foundation has filed a request for an Adjustment Term of Conduct (TAC) with the National Supplementary Pension Authority (PREVIC), requesting a postponement of 210 days after TAC's approval, due to technical and management reasons. Therefore, it is estimated that we, as Petros Plan sponsor, will only initiate payment of extra contributions after the term defined in the TAC. We maintain a health care benefit plan (AMS), which offers medical benefits and covers all employees (active and retired) together with their dependents. We manage the plan, with the employees contributing 25% of the total amount to cover principal risks and a portion of the costs relating to other types of coverage in accordance with participation tables defined by certain parameters, including salary levels.

Our commitment related to future benefits to plan participants is calculated on an annual basis by an independent actuary, 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.

In addition, some of our consolidated subsidiaries have their own benefit plans.

In 2016, contributions paid by Petrobras and its subsidiaries (sponsors) to the pension and medical plans with defined benefit characteristics amounted US\$760 million and contributions paid to the variable portion of our Petros 2 pension plan amounted to US\$267 million.

For further information on risks related to Petros Plan, see Item 3. "Key Information—Risk Factors—Risks Relating to Our Operations—Our commitment to meet the obligations of our pension plan ("Petros") and health care benefits may be higher than what is currently anticipated, and we may be required to make additional contributions of resources to Petros." Also, see Notes 4.17, 5.4 and 22 to our audited consolidated financial statements for more information about our Employee Benefits.

Item 7. Major Shareholders and Related Party Transactions

Major Shareholders

Our capital stock is composed of common shares and preferred shares, all without par value. On March 31, 2017, there were 1,359,005,530 outstanding common shares and 1,010,148,500 outstanding preferred shares represented by ADRs. The ratio of our common and preferred shares to ADRs is two shares to one ADR. Except for the increase of our share capital in the past three fiscal years, in the amount of approximately R\$21 million, due to the absorption of a portion of our tax incentive reserves into our share capital, there has been no change in the past three fiscal years in the amount of our issued share capital, the number of our common and preferred shares or the voting rights of our common and preferred shares. See Exhibit 1.1 for a copy of our bylaws.

As of March 31, 2017, approximately 18.26% of our preferred shares and approximately 18.03% of our common shares were held of record in the United States directly or in the form of ADSs.



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Under the Brazilian Corporate Law, as amended, the number of non-voting shares of our company may not exceed two-thirds of the total number of shares. The Brazilian federal government is required by law to own at least a majority of our voting stock and currently owns 50.26% of our common shares, which are our only voting shares. The Brazilian federal government does not have any different voting rights, but as long as it holds a majority of our voting stock, it will have the right to elect a majority of our directors, irrespective of the rights our minority shareholders may have to elect directors, set forth in our bylaws.

The following table sets forth information concerning the ownership of our common shares and preferred shares as of March 31, 2017, by the Brazilian federal government, certain public sector entities and our officers and directors as a group. In addition, as of April 4, 2017, BlackRock, Inc. ("BlackRock") notified us that BlackRock acquired preferred shares issued by us and owns 233,062,868 preferred shares and 23,607,381 ADRs, representing preferred shares. BlackRock owns an aggregate of 280,277,630 preferred shares, representing approximately 5% of our preferred shares.

Shareholder	Common Shares	%	Preferred Shares	%	Total Shares	%
Brazilian federal government . . .	3,740,470,811	50.26	0	0.00	3,740,470,811	28.67
BNDES	734,202,699	9.87	161,596,958	2.88	895,799,657	6.87
BNDES Participações S.A.—						
BNDESPar	11,700,392	0.16	1,254,203,296	22.39	1,265,903,688	9.70
Caixa de Previdência dos						
Funcionários do Banco do						
Brasil — PREVI	14,945,115	0.20	357,066,575	6.37	372,011,690	2.85
Other Brazilian public sector						
entities	2,312,788	0.03	666,994	0.01	2,979,782	0.02
All members of the board of						
directors (permanent and						
alternate), executive officers						
and members of our fiscal						
council (permanent and						
alternate) (25 people in						
total)	5,148	0.00	37,104	0.00	42,252	0.00
Others	2,938,817,189	39.49	3,828,471,861	68.34	6,767,289,050	51.88
Total	7,442,454,142	100.00	5,602,042,788	100.00	13,044,496,930	100.00

Related Party Transactions

In order to comply with Law No. 13,303/16 and ICVM No. 480/09, our board of directors approved a new policy for transactions with related parties, which became effective in January 2017, and in situations where there are possible conflicts of interest in these operations, so as to secure our interests, with the aim of transparency in our procedures and better corporate governance practices. This policy also aims to guarantee the adequate and diligent decision-making process by the administration of the company.

Beginning in 2017, any related-party transaction we are involved in, that meet the criteria of materiality established in ICVM No. 480/09, will be initially analyzed by the Statutory Audit Committee, which has to report its conclusions to our board of directors on a monthly basis.

For additional information regarding our principal transactions with related-parties, see Note 19 to our audited consolidated financial statements.



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Board of Directors

Direct transactions with members of our board of directors or our executive officers must follow the conditions of an arms-length transaction and market practice guiding transactions with third parties. None of the members of our board of directors, our executive officers or close members of their families has had any direct interest in any transaction we effected that is or was unusual in its nature or conditions, or material to our business during the year, and which remains in any way outstanding or unperformed. In addition, we have not entered into any transaction with related parties which is or was unusual in its nature or conditions during the current or the three immediately preceding financial years, nor is any such transaction proposed, that is or would be material to our business.

We have no outstanding loans or guarantees to the members of our board of directors, our executive officers, our 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 Item 6. “Directors, Senior Management and Employees—Share Ownership.”

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. The above-mentioned transactions amounted to a net liability of US\$9,370 million as of December 31, 2016. See Note 19.1 to our audited consolidated financial statements for further information about such transactions.

As of December 31, 2016, we had a receivable (the Petroleum and Alcohol Account) from the Brazilian federal government, our controlling shareholder, of US\$268 million. For further information, see Note 19.2 to our audited consolidated financial statements.

In addition, we are allowed to invest in securities issued by the Brazilian federal government in Brazil and also abroad, provided that the legal and regulatory requirements are met and taking into consideration market’s best practices and the conservatism that should guide our investments.

As of December 31, 2016, the value of securities issued by the Brazilian federal government that have been directly acquired and held by us amounted to US\$1,113 million.

Eletrobras’ Subsidiaries

In 2016, we recognized in income statement an allowance for impairment, net of reversals, of US\$307 million (as compared to US\$676 million in 2015), to cover certain trade receivables due Eletrobras’ subsidiaries that operate in the isolated electricity sector in the Northern region of Brazil. See Note 8.4 to our audited consolidated financial statements.

Item 8. Financial Information**Consolidated Statements and Other Financial Information**

See Item 18. “Financial Statements” and “Index to Financial Statements.”



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Legal Proceedings

We are currently party to numerous legal proceedings relating to civil, administrative, tax, labor, 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. Our material legal proceedings are described in Note 30 to our audited consolidated financial statements included in this annual report, and that description is incorporated by reference under this Item.

Class Action

Between December 8, 2014 and January 7, 2015, five putative securities class action complaints were filed against us in the SDNY. These actions were consolidated on February 17, 2015 (the “Consolidated Securities Class Action”). The Court appointed a lead plaintiff, Universities Superannuation Scheme Limited (“USS”), on March 4, 2015. USS, together with two other plaintiffs—Union Asset Management Holding AG (“Union”) and Employees’ Retirement System of the State of Hawaii (“Hawaii”)—filed a consolidated amended complaint (“CAC”) on March 27, 2015 that purported to be on behalf of investors who: (i) purchased or otherwise acquired Petrobras securities traded on the NYSE or pursuant to other transactions in the U.S. during the period January 22, 2010 and March 19, 2015, inclusive (the “Class Period”), and were damaged thereby; (ii) purchased or otherwise acquired during the Class Period certain notes issued in 2012 pursuant to a registration statement filed with the SEC in 2009, or certain notes issued in 2013 or 2014 pursuant to a registration statement filed with the SEC in 2012, and were damaged thereby; and (iii) purchased or otherwise acquired Petrobras securities on the Brazilian stock exchange during the Class Period, who also purchased or otherwise acquired Petrobras securities traded on the NYSE or pursuant to other transactions in the U.S. during the same period.

The CAC alleged, among other things, that in our press releases, filings with the SEC and other communications, we made materially false and misleading statements and omissions regarding the value of our assets, the amounts of our expenses and net income, the effectiveness of our internal controls over financial reporting, and our anti-corruption policies, due to alleged corruption purportedly in connection with certain contracts, which allegedly artificially inflated the market value of our securities.

On April 17, 2015, Petrobras, PGF and underwriters of notes issued by PGF (the “Underwriter Defendants”) filed a motion to dismiss the CAC.

On July 9, 2015, the judge presiding over the Consolidated Securities Class Action ruled on the motion to dismiss, partially granting our motion. Among other decisions, the judge dismissed claims relating to certain debt securities issued in 2012 under the Securities Act of 1933, as time barred by the Securities Act’s statute of repose and ruled claims relating to securities purchased on the Brazilian stock exchange must be arbitrated, as established in our bylaws. The judge rejected other arguments presented in the motion to dismiss the CAC and, as a result, the Consolidated Securities Class Action continued with respect to other claims.

As allowed by the judge, a second consolidated amended complaint was filed on July 16, 2015, a third consolidated amended complaint (“TAC”) was filed on September 1, 2015, which, among other things, extended the Class Period to end on July 28, 2015 and added Petrobras America, Inc. as a defendant, and a fourth consolidated amended complaint (“FAC”) was filed on November 30, 2015. The TAC and FAC, brought by lead plaintiff Union, Hawaii, and an additional plaintiff, North Carolina Department of State Treasurer, or North Carolina (collectively, “class plaintiffs”) – brought those claims alleged in the CAC that were not dismissed or were allowed to be re-pleaded under the judge’s July 9, 2015 ruling.

On October 1 and December 7, 2015, Petrobras, PGF, Petrobras America, Inc. and the Underwriter Defendants filed motions to dismiss the TAC and the FAC, respectively.



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On December 20, 2015, the judge ruled on the motion to dismiss the FAC, partially granting the motion. Among other decisions, the judge dismissed the claims of USS and Union based on their purchases of notes issued by PGF for failure to plead that they purchased the notes in U.S. transactions. The judge also dismissed claims under the Securities Act of 1933 for certain purchases for which class plaintiffs had failed to plead the element of reliance. The judge rejected other arguments presented in the motion to dismiss the TAC and FAC and, as a result, the Consolidated Securities Class Action continues with respect to the remaining claims.

On October 15, 2015, class plaintiffs filed a motion for class certification in the Consolidated Securities Class Action, and on November 6, 2015, Petrobras, PGF, Petrobras America, Inc. and the Underwriter Defendants opposed the motion. On February 2, 2016, the judge granted plaintiffs' motion for class certification, certifying a Securities Act Class, represented by Hawaii and North Carolina, and an Exchange Act Class represented by USS.

On June 15, 2016, the United States Court of Appeals for the Second Circuit ("Second Circuit") granted Petrobras' motion requesting interlocutory appellate review of the class certification decision. The parties completed briefing the appeal on September 8, 2016. Petrobras and the other defendants moved in district court for a stay of all district court proceedings pending the Second Circuit's decision on the merits of the appeal of the class certification, which the judge denied on June 24, 2016. Defendants then moved in the Second Circuit for a stay of all district court proceedings pending a decision on the appeal of the class certification decision. On August 2, 2016, the Second Circuit granted Defendants' motion and stayed all district court proceedings. Oral argument regarding the appeal was held before the Second Circuit on November 2, 2016.

In addition to the Consolidated Securities Class Action, to date, 33 lawsuits have been filed by individual investors before the same judge in the SDNY (six of which have been stayed), and one has been filed in the United States District Court for the Eastern District of Pennsylvania (collectively, "Opt-out Claims"), consisting of allegations similar to those in the Consolidated Securities Class Action (each such lawsuit by individual investors an "Opt-out Action"). On August 21, 2015, Petrobras, PGF and underwriters of notes issued by PGF filed a motion to dismiss certain of the Opt-out-Claims in the SDNY, and on October 15, 2015, the judge ruled on the motion to dismiss, partially granting the motion. Among other decisions, the judge dismissed several Exchange Act, Securities Act and state law claims as barred by the relevant statutes of repose. The judge denied other portions of the motion to dismiss and, as a result, these actions will continue with respect to other claims brought by these class plaintiffs.

In the action in the Eastern District of Pennsylvania, Petrobras and PGF filed a motion to dismiss on May 13, 2016, and the district judge denied the motion on November 1, 2016, allowing the action to continue. On February 23, 2017, the Company filed a motion for the judge to recuse herself, which the judge granted on March 7, 2017. On March 8, 2017, the case was reassigned to a different judge, and the parties are currently engaged in discovery.

On October 31, 2015, the SDNY judge ordered that the Opt-out Claims before him in the SDNY and the Consolidated Securities Class Action be tried together in a single trial not to exceed a total of eight weeks. On November 5, 2015, the judge scheduled the trial to begin on September 19, 2016; however, the trial is now stayed due to the stay imposed by the Second Circuit decision on August 2, 2016. On November 18, 2015, the judge ordered that any Opt-out Claim filed before him in the SDNY after December 31, 2015 will be stayed in all respects until after the completion of the trial.

On October 21, 2016, our board of directors approved agreements to settle Opt-out Claims in four cases:

- Dodge & Cox Int'l Stock Fund, et al. v. Petróleo Brasileiro S.A.—Petrobras, et al., No. 15-cv-10111 (JSR), Janus Overseas Fund, et al. v. Petróleo Brasileiro S.A.—Petrobras, et al., No. 15-cv-10086 (JSR),
- PIMCO Funds: PIMCO Total Return Fund, et al. v. Petróleo Brasileiro S.A., et al., No. 15-cv-8192 (JSR), and



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- Al Shams Investments Ltd., et al. v. Petroleo Brasileiro S.A.—Petrobras, et al., No. 15-cv-6243 (JSR). The terms of the settlements are confidential.

On November 23, 2016, Petrobras' board of directors approved agreements to settle Opt-out Claims in eleven cases:

- Ohio Public Employees Retirement System v. Petróleo Brasileiro S.A.—Petrobras, et al., No. 15-cv-3887 (JSR),
- Abbey Life Assurance Company Limited, et al. v. Petroleo Brasileiro S.A.—Petrobras, No. 15-cv-6661 (JSR),
- Aberdeen Emerging Markets Fund, et al. v. Petroleo Brasileiro S.A.—Petrobras, 15-cv-3860 (JSR),
- Aberdeen Latin American Income Fund Limited, et al. v. Petroleo Brasileiro S.A.—Petrobras, 15-cv-4043 (JSR),
- Delaware Enhanced Global Dividend and Income Fund, et al. v. Petroleo Brasileiro S.A.—Petrobras, 15-cv-6643 (JSR),
- Dimensional Emerging Markets Value Fund, et al. v. Petroleo Brasileiro S.A.—Petrobras, 15-cv-2165 (JSR),
- Manning & Napier Advisors, LLC, et al. v. Petroleo Brasileiro S.A.—Petrobras, No. 15-cv-10159 (JSR),
- Russell Investment Company, et al. v. Petroleo Brasileiro S.A.—Petrobras, No. 15-cv-7605 (JSR),
- Skagen AS, et al. v. Petroleo Brasileiro S.A.—Petrobras, et al., No.15-cv-2214 (JSR),
- State of Alaska Department of Revenue, Treasury Division, et al. v. Petroleo Brasileiro S.A.—Petrobras, No. 15-cv-8995 (JSR), and
- State Street Cayman Trust Co., Ltd., v. Petroleo Brasileiro S.A.—Petrobras, No. 15-cv-10158 (JSR).

On February 24, 2017, Petrobras' board of directors approved agreements to settle Opt-out Claims in four cases:

- New York City Employees Retirement System, et al. v. Petróleo Brasileiro S.A. – Petrobras et al., No. 15-cv-2192 (JSR),
- Transamerica Income Shares, Inc., et al v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-3733 (JSR),
- Internationale Kaptialanlagegesellschaft mbH v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-6618 (JSR), and
- Lord Abbett Investment Trust – Lord Abbett Short Duration Income Fund, et al v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-7615 (JSR).

Based on the settlements reached and the status of certain other Opt-out claims, the Company charged to statement of income the amount of R\$1,215 (US\$372) in 2016. The terms of the settlements are confidential and Petrobras denies all allegations of wrongdoing and continues to defend itself vigorously in all pending actions. The settlements are aimed at eliminating the uncertainties, burdens and expense of ongoing litigation.

The terms of these settlements are confidential. Based on the settlements reached, and the status of certain other Opt-out Claims, we recognized a provision of US\$372 million in 2016.



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The Consolidated Securities Class Action and certain Opt-out Claims involve highly complex issues that are subject to substantial uncertainties and depend on a number of factors such as the novelty of the legal theories, the information produced in discovery, the timing of court decisions, rulings by the court on key issues, analysis by retained experts, and the possibility that the parties negotiate in good faith toward a resolution. In addition, the claims asserted are broad, span a multi-year period and involve a wide range of activities, and the contentions of the plaintiffs in the Consolidated Securities Class Action and certain Opt-Out Claims concerning the amount the amount of alleged damages are varied, and at this stage, their impact on the course of the litigation is complex and 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 the Consolidated Securities Class Action and certain Opt-Out Claims.

Depending on the outcome of the litigation, we may be required to pay substantial amounts, which could have a material adverse effect on our financial condition, consolidated results of operations or consolidated cash flows for an individual reporting period. We have engaged a U.S. firm as legal counsel and intend to defend these actions vigorously.

We are also currently a party to class actions commenced in Argentina and Holland, and to arbitration proceedings commenced in Brazil, all of which are currently in their initial stages. In each case, the proceedings were brought by investors and consist of allegations similar to those in the Consolidated Securities Class Action and the Opt-Out Claims.

Other Legal Proceedings

We are currently a party in an arbitration in Brazil and a lawsuit in the District Court of the District of Columbia in Washington D.C. against investors of Sete Brasil. In these proceedings, EIG Management Company claims that Sete Brasil induced investors to transfer money to Sete Brasil and that we were among the parties responsible for the financial situation of Sete Brasil, which proposed a judicial recovery action (*recuperação judicial*.) In the action in the District of Columbia, the district judge partially granted a motion to dismiss on March 30, 2017, allowing the action to proceed as to certain claims.

In addition, we recently filed four arbitrations with the ICC against the ANP's decision to unify unconnected fields of Petrobras (i.e., Lula and Cernambi; Baúna and Piracaba; Tartaruga Verde and Tartaruga Mestiça; and Parque das Baleias). However, the ANP, was successful in suspending, through judicial injunctions, the ongoing arbitration proceedings, taking the controversy to judicial courts. We await a decision by the Brazilian Superior Court of Justice (*Conflito de Competência nº 139.519/RJ*), which will determine the competent court (whether the judiciary branch or the arbitral tribunal) to resolve these disputes. If the courts or the arbitral tribunal decides in favor of the unifications determined by the ANP such decision may have a negative impact on the net present value of these projects.

In addition, the BM-S-11 consortium, in which we own (as operator) a participation of 65%, in partnership with BG E&P Brasil (25%), a subsidiary of Royal Dutch Shell plc, and Petrogal Brasil (10%), received a notice on March 30, 2017 from the ANP, charging the consortium the amount of R\$ 2,6 billion with respect to the Lula field, in the Santos Basin's pre-salt layer. The assessment derives from the ANP's recalculation of oil prices and the portion related to the Brazilian federal government participation, from May 2013 to December 2016. The consortium understands that it complied with the applicable rules, in force since 2000, and will challenge the assessment with the ANP.



Investigations Carried out by Authorities

We have also received a subpoena from the SEC relating to the allegations concerning the Lava Jato investigation and are fully cooperating with the SEC, as well as with the DoJ, as to their investigation into this matter. See Item 3. “Key Information—Risk Factors—Ongoing SEC and DoJ investigations regarding the possibility of non-compliance 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.” Additionally, the São Paulo State Prosecutor’s Office initiated an administrative civil proceeding in order to investigate the existence of potential damages caused by us to those investing in our shares listed in the Brazilian stock exchange as a result of the impact caused by the findings identified in the Lava Jato investigation.

Lava Jato Investigation

In 2009, the Brazilian federal police began an investigation aimed at criminal organizations engaged in money laundering in several Brazilian states. 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. Beginning in 2014, the Brazilian Federal Prosecutor’s Office focused part of its investigation on irregularities involving Petrobras’ contractors and suppliers, and uncovered a broad payment scheme that involved a wide range of participants, including former Petrobras personnel. Recently, the testimony of several executives of Odebrecht – one of the contractors involved in the payment scheme – was released. Among other allegations, such testimony alleges that while our former CEO Aldemir Bendine was CEO of Petrobras, he received bribes through an intermediary in relation to a transaction not involving Petrobras. All of the allegations are yet to be assessed by the authorities and may result in police investigations, and eventually in criminal cases against the individuals concerned, or in a determination that the allegations are unfounded. It is 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. For further information regarding the Lava Jato investigation and its impacts on us, see Note 3 to our audited consolidated financial statements.

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 for the sale of goods and assets. Four of such proceedings were suspended due to injunctions granted by the Federal Courts of Pernambuco and Mato Grosso do Sul states. These relate to: (i) the assignment of concession rights in Baúna and Tartaruga Verde; (ii) the sale of share participation of BR Distribuidora; (iii) the assignment of rights of a set of onshore oil fields; and (iv) the sale of UFN III.

In addition, there is an audit procedure instated by the TCU relating to our proceedings for the sale of goods and assets. In December 2016, the TCU granted a preliminary award preventing us from initiating new divestment projects or concluding projects in progress, except for transactions in an advanced phase of negotiations. On March 15, 2017, the TCU reversed such preliminary decision and approved a new divestment process methodology. The reversal of the TCU’s preliminary decision allowed us to reinstate our partnerships and divestments program under modified procedures. We were allowed to continue with our divestment projects related to the sale of our participation (i) in Baúna and Tartaruga Verde and (ii) in Campo de Saint Malo in the Gulf of Mexico. The new divestment process methodology approved by the TCU mainly requires a more transparent process and is now applicable to all of our divestment projects. We decided not to proceed with: (i) the sale of Baúna and Tartaruga Verde, due to the Brazilian federal judiciary’s injunctions in the state of Sergipe, as well as the infeasibility of the proposal and (ii) the execution of the sale agreements given the fact that the expected results from the sale became frustrated.

At the end of March, in order to comply with the TCU’s decision and adopt the new divestment methodology, we terminated all our ongoing divestment projects. All projects to be included in our divestment portfolio will follow the revised methodology approved by the TCU.



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Internal Commissions

We periodically establish ad hoc internal commissions (*comissões internas de apuração*) to evaluate our compliance with applicable law and regulations. The scope of each internal commission is established by our management. Upon the conclusion of each internal commission's evaluation, its material findings are used to improve our compliance efforts.

Since the date our last annual report was filed, we have established a number of new internal commissions to evaluate past transactions including pursuant to concerns mentioned in public press reports, including:

- A commission formed on March 31, 2016 to investigate possible irregularities in the contracting process for extending the Petrobras Research Center—CENPES;
- A commission formed on May 18, 2016 to investigate possible reception of improper payments by company employees;
- A commission formed on May 18, 2016 to investigate possible irregularities in the joint-venture contract with the MPX company;
- A commission formed on June 9, 2016 to investigate possible irregularities in investments made in the Republic of Benin;
- A commission formed on June 10, 2016 to investigate possible irregularities in agreements executed with Confab Industrial S. A.;
- A commission formed on June 21, 2016 to investigate possible irregularities in the contracting process for hiring the offloading vessel Overseas Chinook;
- A commission formed on June 23, 2016 to investigate possible irregularities in sponsorship contracts;
- A commission formed on July 15, 2016 to investigate possible irregularities in contracts for importing asphalt;
- A commission formed on July 19, 2016 to investigate possible irregularities in contracts executed with Odebrecht Óleo & Gás S.A. and UTC Engenharia S.A.;
- A commission formed on August 25, 2016 to investigate possible irregularities in contracts executed with Obrasplan Locação e Comércio de Equipamentos Ltda.;
- A commission nominated on September 8, 2016 to investigate possible irregularities in contracts executed with Gentech;
- A commission nominated on September 29, 2016 to investigate possible irregularities in contracts executed with ETESCO;
- A commission nominated on September 29, 2016 to investigate the contracting process for the semi-submersible drilling units SS-74, SS-86 and the FPSO Piranema with SEVAN Corporation;
- A commission nominated on September 30, 2016 to evaluate the approval process of investments made by Petros;
- A commission nominated on November 4, 2016 to investigate possible irregularities in the contracting process for the vessel BS Itacaré;
- A commission nominated on November 8, 2016 to investigate possible irregularities in agreements executed with SAIPEM;
- A commission nominated on November 23, 2016 to investigate possible irregularities in the process of negotiating contracts with Subsea Drilling and Lupatech;
- A commission nominated on November 23, 2016 to evaluate the contracting process for the Petrobras administrative facility in the State of Espírito Santo;



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- A commission nominated on November 28, 2016 to evaluate the contracting processes for the hulls of the FPSO's P-66, P-67, P-68, P-69, P-70, P-71, P-72, and P-73;
- A commission nominated on December 23, 2016 to investigate possible irregularities related to Araucária Nitrogenados S.A.'s acquisition; and
- A commission nominated on December 23, 2016 to investigate possible irregularities in the creation of Complexo Petroquímico Suape—SPS, which is formed by Companhia Petroquímica de Pernambuco (Petroquímica Suape) and Companhia Integrada Têxtil de Pernambuco (Citepe).

After analyzing documentation produced internally, the work of each of these commissions will be or has been completed, and if the findings in some instances indicate that certain of Petrobras' former and current employees did not comply with certain of our internal policies, such findings will be or have been sent to applicable Brazilian authorities, as the case may be (including the Federal Prosecutor's Office, Federal Police, CVM and CGDU) for their assessment. These Brazilian authorities may take legal measures against the individuals involved, and we may take certain actions in accordance with applicable labor laws and our applicable employment and other policies.

Independent from the findings of our internal commissions, and to mitigate potential risks of further non-compliance to our internal policies, we continued to develop and implement a number of measures aimed at improving corporate governance, our management of processes, risk management and controls, including those related to fraud and corruption. See Item 15. "Controls and Procedures."

Dividend Distribution

In 2016, a policy of distribution of dividends by our board of directors was approved, in accordance with Law 13,303/16, with the goal of establishing the rules and procedures related to the matter, in a way that is transparent and in accordance with the legal, statutory norms and other internal regulations.

The table below describes the amount of cash paid in the last three years to our shareholders, in the form of dividends and interest on capital.

	For the Year Ended December 31,		
	2016	2015	2014
	(US\$ million)		
Total amounts paid	—	—	3,918

Our board of directors proposed no distribution of dividends in 2017 and 2016 for profits accrued in the years ended December 31, 2016 and 2015 because we reported losses in such fiscal years. See Note 23.5 to our audited consolidated financial statements.

For information about dividend distribution requirements under Brazilian Corporate Law and our bylaws, see Item 10. "Additional Information—Memorandum and Articles of Incorporation—Payment of Dividends and Interest on Capital," and Item 10. "—Mandatory Distribution."



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Item 9. The Offer and Listing**Trading Markets**

Our shares and ADSs are listed or quoted on the following markets:

Common Shares	São Paulo Stock Exchange (BM&FBOVESPA)—São Paulo (ticker symbol PETR3); Mercado de Valores Latinoamericanos en Euros (Latibex)—Madrid, Spain (ticker symbol XPBR); Bolsa de Comercio de Buenos Aires (BCBA)—Buenos Aires, Argentina (ticker symbol APBR)
Preferred Shares	São Paulo Stock Exchange (BM&FBOVESPA)—São Paulo (ticker symbol PETR4); Mercado de Valores Latinoamericanos en Euros (Latibex)—Madrid, Spain (ticker symbol XPBRA); Bolsa de Comercio de Buenos Aires (BCBA)—Buenos Aires, Argentina (ticker symbol APBRA)
Common ADSs	New York Stock Exchange (NYSE)—New York (ticker symbol PBR)
Preferred ADSs	New York Stock Exchange (NYSE)—New York (ticker symbol PBRA)

Our common and preferred shares have been traded on the BM&FBOVESPA since 1968. Our ADSs representing two common shares and our ADSs representing two preferred shares have been traded on the New York Stock Exchange since 2000 and 2001, respectively. The Bank of New York Mellon serves as depositary for both the common and preferred ADSs.

Our common and preferred shares have been traded on the LATIBEX since 2002. The LATIBEX is an electronic market created in 1999 by the Madrid Stock Exchange in order to enable trading of Latin American equity securities in euro denominations.

Our common and preferred shares have been traded on the *Bolsa de Comercio de Buenos Aires* (Buenos Aires Stock Exchange) since 2006.

Share Price History

The following table sets forth information for our common shares and preferred shares, as reported by the BM&FBOVESPA, and for our common and preferred ADSs, as reported by the New York Stock Exchange, for the periods indicated. The ratio of our common and preferred shares to ADRs is two shares to one ADR.

	Reais Per Common Share		Reais Per Preferred Share		U.S. Dollars Per Common ADS		U.S. Dollars Per Preferred ADS	
	High	Low	High	Low	High	Low	High	Low
2012	27.75	18.24	25.60	17.64	32.12	17.64	29.74	16.99
2013	16.57	15.57	17.63	16.78	14.20	13.34	15.05	14.33
2014	23.29	8.52	24.56	9.18	20.65	6.26	21.86	6.66
2015								
First quarter	9.95	8.04	10.25	8.18	7.65	5.01	7.97	5.10
Second quarter	15.66	10.08	14.38	10.21	10.19	6.35	9.38	6.41
Third quarter	13.64	7.67	12.30	6.44	8.83	3.72	7.93	3.13
Fourth quarter	10.75	8.31	8.80	6.64	5.68	4.11	4.68	3.29
2016								
First Quarter	10.70	5.91	8.49	4.20	5.86	2.90	4.63	1.99
Second Quarter	13.57	9.60	10.25	7.58	7.71	5.30	5.90	4.12
Third Quarter	16.39	11.34	14.22	9.29	10.18	6.88	8.82	5.57
July 2016	14.01	11.34	12.03	9.29	8.68	6.88	7.29	5.57
August 2016	15.19	12.97	13.09	11.25	9.44	7.91	7.99	6.81
September 2016	16.39	14.65	14.22	13.00	10.18	8.92	8.82	7.79
Fourth Quarter	19.38	15.59	18.20	13.97	12.41	9.57	11.59	8.22
October 2016	19.38	15.59	18.20	13.97	12.41	9.59	11.59	8.59
November 2016	18.47	16.27	17.21	14.00	11.43	9.57	10.70	8.22
December 2016	18.65	16.35	16.15	14.01	10.94	9.88	9.32	8.45
2017								
First Quarter	18.35	13.70	16.09	13.00	11.54	8.81	10.34	8.36
January	18.35	16.14	16.04	14.66	11.54	10.26	10.14	9.49
February	17.16	15.77	16.09	14.70	11.04	10.08	10.34	9.35
March	16.43	13.70	15.52	13.00	10.58	8.81	9.98	8.36

BM&FBOVESPA

As of December 31, 2016, our common and preferred shares represented approximately 9.0% of the total market capitalization of the BM&FBOVESPA and Petrobras was the most actively traded company of the BM&FBOVESPA. At December 31, 2016, the aggregate market capitalization of the 349 companies listed on the BM&FBOVESPA was approximately US\$745 billion and the ten largest companies represented approximately 56% of the total market capitalization of all listed companies. All the outstanding shares of an exchange-listed company may trade on the BM&FBOVESPA, but in most cases, only a portion of the listed shares are actually available for trading by the public. The remainder is held by small groups of controlling persons, by governmental entities or by one principal shareholder.



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Trading directly on the BM&FBOVESPA by a holder not deemed to be a resident of Brazil for Brazilian tax and regulatory purposes (a non-Brazilian holder) is subject to certain limitations under Brazilian foreign investment legislation. Non-Brazilian holders may only trade on the BM&FBOVESPA in accordance with the requirements of CMN Resolution No. 4,373 and ICVM No. 560/2015. CMN Resolution No. 4,373 requires that securities held by non-Brazilian holders be maintained in the custody of, or in deposit accounts with, financial institutions duly authorized by the CVM.

In addition, CVM Rule 560/2015 establishes limited situations where non-Brazilian holders are allowed to trade securities outside Brazilian stock exchanges or qualified over-the-counter markets, such as in transactions involving subscription, redemption, refund of shares and conversion of debentures into shares.

According to Brazilian regulations, the transfer of the ownership of investments from a non-Brazilian holder to another party through a private transaction is only allowed in limited situations, such as transfers resulting from transactions involving merger, split, amalgamation, corporate reorganizations, stock swaps, or a transfer resulting from bequest or inheritance. Such transfers are also permitted in situations where (i) the final beneficial owner of the transferred investment remains unchanged and (ii) the total amount of securities or financial assets owned, directly or indirectly, by all investors taking part in the transaction remains unchanged. CVM may authorize trades or transfers in other situations upon request by the interested investor. See Item 10. "Additional Information—Exchange Controls" for further information.

Item 10. Additional Information

Memorandum and Articles of Incorporation

General

We are a publicly-traded company duly registered with the CVM under identification number 9512. Article 3 of our bylaws establishes our corporate purposes as research, prospecting, extraction, processing, trade and transportation of crude oil from wells, shale and other rocks, of crude oil derivatives, of natural gas and other fluid hydrocarbons, as well as other related or similar activities, such as activities connected with energy, including research, development, production, transportation, distribution, sale and trade of all forms of energy, as well as other related or similar purposes.

Set forth below is certain information concerning our issued share capital and a brief summary of some significant provisions of our bylaws and Brazilian corporate law. This description does not purport to be complete and is qualified by reference to our bylaws (an English translation of which we have filed with the SEC) and to Brazilian corporate law. See Exhibit 1.1 for a copy of our bylaws.

Qualification of Directors and Executive Officers

Members of our board of executive officers must be Brazilian nationals and reside in Brazil, but do not need to be shareholders. Under our bylaws, shareholders establish the aggregate compensation, or allocate the compensation on an individual basis, payable to directors, executive officers and members of our fiscal council. In the event shareholders do not allocate the compensation on an individual basis, our board of directors may do so.

In addition, Law No. 12,353/2010 requires that public and mixed-capital companies with 200 or more employees, and their subsidiaries, in which the Brazilian federal government holds a majority of the voting rights directly or indirectly, include as a member of the board of directors a representative elected by the company's employees by means of a separate voting procedure.



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Law No. 13,303/2016 and Decree No. 8.945/2016 define new requirements and limitations for the election of our executive officers, members of our management and our board of directors, including prohibiting the election of any person who acted, in the last thirty-six months, as a participant in the decision-making process of a political party or in any work connected to organizing, structuring and performing an electoral campaign.

In addition, under Law No. 13,303/2016, Decree No. 8.945/2016, our bylaws and our Appointment Policy, our board of directors must be composed of at least 25% (twenty-five percent) independent members, which shall in no case be less than one, in the event there is a decision for the exercise of the right of cumulative voting by minority shareholders, pursuant to Brazilian Corporate Law.

An independent member of our board of directors, as described in article 22 of Law No. 13,303/16 and in article 36 of Decree No. 8.945/16, is characterized by:

- not having any connection with us or our subsidiaries, except for participation in our board of directors and ownership of our capital stock;
- not being related, up to the third degree or by adoption, to our Chief Executive Officer, the Minister of State, Secretary of State, Federal District or Municipality, or any of the administrators of any other state-owned company or mixed-capital company or our subsidiaries, in which we own more than 50% of shares;
- not having maintained, in the last three years, a connection of any nature with us or our subsidiaries, that could compromise his or her independence;
- not being or not having been, in the last three years, an employee or an executive officer of ours or an entity connected to us;
- not being a supplier or a buyer, directly or indirectly, of our services or products or those of our subsidiaries, in a manner that would cause the loss of independence;
- not being an employee or a manager of any entity that is offering or demanding services or products to us or our subsidiaries, in a manner that would cause the loss of independence; and
- not receiving other remuneration from us or our subsidiaries other than that related to his or her position as director, with the exception of resources derived from share interest.

Allocation of Net Income

At each annual general shareholders' meeting, our board of directors and board of executive officers are required to recommend how net income for the preceding fiscal year is to be allocated. Under Brazilian Corporate Law, net income is obtained after deduction of statutory holdings of the employees, managers and beneficiary parties (articles 190 and 191 of the Brazilian Corporate Law). In addition, in accordance with Brazilian Corporate Law, the amounts available for dividend distribution or payment of interest on capital equals net income less any amounts allocated from such net income to the legal reserve.

We are required to maintain a legal reserve, to which we must allocate 5% of net income for each fiscal year until the amount for such reserve equals 20% of our paid-in capital. However, we are not required to make any allocations to our legal reserve in a fiscal year in which the legal reserve, when added to our other established capital reserves, exceeds 30% of our capital. The legal reserve can only be used to offset losses or to increase our capital. After the creation of the legal reserve, the fixed or minimum cumulative dividends to which holders of preferred shares have priority, including those that were not timely distributed, should be distributed.

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.



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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 distributable 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 general 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.

Mandatory Distribution

Under Brazilian Corporate Law, the bylaws of a Brazilian corporation such as ours may specify a minimum percentage of the amounts available for distribution by such corporation for each fiscal year that must be distributed to shareholders as dividends or interest on capital, also known as the mandatory distributable amount, which cannot be lower than 25% of the adjusted net income for the fiscal year. Under our bylaws, the mandatory distributable amount has been fixed at an amount equal to not less than 25% of our adjusted net income, after deducting allocations to the legal reserve, the minimum dividends, which the controlling shareholders have priority in, tax incentives reserve (if any), contingency reserve (if any), and adding reversed contingency reserve amounts from prior years (if any), as set forth in the Brazilian Corporate Law. Furthermore, the net income that is not allocated to the reserves above, to fund working capital needs and investment projects as described above, or to the statutory reserve must be distributed to our shareholders as dividends or interest on capital.

As a Brazilian corporation with a class of non-voting shares and pursuant to our bylaws, holders of preferred shares will have priority in the event of the reimbursement of capital and are entitled to minimum annual non-cumulative preferential dividends, to the extent that we declare dividends, equal to the higher of (i) 5% of their pro rata share of our paid-in capital, or (ii) 3% of the book value of their preferred shares (the greater prevailing), participating, equally with the ordinary shares, in the increases of the share capital resulting from the incorporation of reserves and profits.

To the extent that we declare dividends on our common shares in any particular year in an amount that exceeds the minimum preferential dividends due to our preferred shares, holders of preferred shares would be entitled to an additional dividend amount per share, such that holders of preferred shares will receive the same additional dividend amount per share paid to holders of common shares. Holders of preferred shares participate equally with common shareholders in share capital increases obtained from the incorporation of reserves and profits.



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The Brazilian Corporate Law, however, permits a publicly held company such as ours to suspend the mandatory distribution if the board of directors and the fiscal council report to the annual general shareholders' meeting that the distribution would be inadvisable in view of the company's financial condition. In this case, the board of directors must file a justification for such suspension with the CVM. Profits not distributed by virtue of the suspension mentioned above shall be allocated to a special reserve and, if not absorbed by subsequent losses, shall be distributed as soon as the financial condition of the company permits such payments.

Payment of Dividends and Interest on Capital

We have a new dividend distribution policy that defines the rules and the procedures related to the distribution of dividends, in a transparent manner. Our dividend distribution policy seeks to grant our short, medium and long-term financial sustainability, and is based on the assumption that we need financial flexibility and stability for the maintenance of our businesses.

The decision to distribute dividends and other earnings depends on a number of factors, including our financial results and condition, cash necessity, future prospects of current and potential markets in which we operate, existing investment opportunities, maintenance and expansion of our production capacity. We are required by the Brazilian Corporate Law and by our bylaws to hold an annual general shareholders' meeting by the fourth month after the end of each fiscal year at which, among other things, the shareholders have to decide on the distribution of the net profit of the fiscal year and on the amount of dividends and/or interest on capital to be distributed to shareholders based on our management's proposal. The payment of annual dividends is based on the financial statements prepared for the relevant fiscal year.

Law No. 9,249/1995, as amended, provides for distribution of interest attributed to shareholders' equity to shareholders as an alternative form of distribution. Such interest is limited to the daily *pro rata* variation of the TJLP interest rate, the Brazilian federal government's long-term interest rate. The effective payment or credit of interest is dependent 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 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 expense, 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 profit reserves.

Any payment of interest on capital to holders of ADSs or other shareholders, whether or not they are Brazilian residents, is subject to Brazilian withholding taxes at the rate of 15% or 25%. The 25% rate applies if the beneficiary is resident in a tax haven. See “—Taxation Relating to Our ADSs and Common and Preferred Shares—Brazilian Tax Considerations.” The amount paid to shareholders as interest attributed to shareholders' equity, net of any withholding tax, may be included as part of any mandatory distribution of dividends. Under the 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 mandatory dividend.



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Under the Brazilian Corporate Law and our bylaws, dividends generally are required to be paid within 60 days following the date the dividend was declared, unless a shareholders' resolution sets forth another date of payment, which, in either case, must occur prior to the end of the fiscal year in which the dividend was declared. The amounts of dividends due to our shareholders are subject to financial charges at the SELIC rate from the end of each fiscal year through the date we actually pay such dividends. Shareholders have a three-year period from the dividend payment date to claim dividends or interest payments with respect to their shares, after which the amount of the unclaimed dividends reverts to us.

Our board of directors may distribute dividends or pay interest based on the profits reported in interim financial statements. The amount of interim dividends distributed cannot exceed the amount of our capital reserves.

Shareholders' Meetings

Our shareholders have the power, through voting at a general 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 powers exclusive to our other corporate governing bodies.

Since 2012, we have convened our shareholders' meetings by publishing a notice in the *Diário Oficial do Estado do Rio de Janeiro* and *Jornal Valor Econômico*. The notice must be published no fewer than three times, beginning at least 30 calendar days prior to the scheduled meeting date. The notice must contain the meeting's agenda and, in the case of a proposed amendment to the bylaws, an indication of the subject matter. For ADS holders, we are required to provide notice to the ADS depository at least 30 calendar days prior to a shareholders' meeting. Upon receipt of our shareholders' meeting notice, the depository must mail a notice, in a form of its choice, to the ADS holders. This notice must contain (i) the information from our notice of meeting sent to the ADS depository; (ii) a statement that owners of record, as of a specific record date, can instruct the depository as to the exercise of their voting rights, subject to Brazilian law as well as our bylaws; and (iii) a statement as to the manner in which these instructions can be given to the depository.

The board of directors or, in some specific situations set forth in the Brazilian Corporate Law, the shareholders or our fiscal council, call our general shareholders' meetings. A shareholder may be represented at a general shareholders' meeting by an attorney-in-fact, so long as the attorney-in-fact was appointed within a year of the meeting. The attorney-in-fact must be a shareholder, a member of our management or a lawyer. In the case of public companies, the shareholder may be also represented by a financial institution. The attorney-in-fact's power of attorney must comply with certain formalities set forth by Brazilian law and our bylaws.

Other than the exceptions provided by law, in order for a valid action to be taken at a shareholders' meeting, shareholders representing at least one quarter of our issued and outstanding common shares must be present at the meeting. However, in the case of a general meeting to amend our bylaws, shareholders representing at least two-thirds of our issued and outstanding common shares must participate in person. If no such quorum is present, the board may call a second meeting giving at least eight calendar days' notice prior to the scheduled meeting in accordance with the rules of publication described above. The quorum requirements will not apply to the second meeting, subject to the voting requirements for certain matters described below. Our shareholders may also register online to exercise their voting rights electronically in shareholders' meetings. In addition, our shareholders may also vote electronically in proxy contests (*pedido público de procuração*). Electronic participation in shareholders' meetings is not available to our ADS holders. ADS holders may instruct the depository in advance to vote on their behalf at the shareholders' meetings, pursuant to depository's operational procedures and the deposit agreement.



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In 2015, CVM issued Instruction No. 561/15 ("ICVM 561/15"), considering that the participation of shareholders in certain general meetings is a condition to voting. ICVM 561/15 creates a mechanism that allows for shareholders to exercise their right to vote remotely, prior to the date of the meeting. This rule starts applying to us and our shareholder in 2017.

Voting Rights

Pursuant to the Brazilian Corporate Law and our bylaws, each of our common shares carries the right to vote at a general meeting of shareholders. The Brazilian federal government is required by law to own at least a majority of our voting stock. Pursuant to Brazilian Corporate Law and our bylaws, except for (i) the right to appoint one member of our board of directors and one member of our fiscal council, and (ii) very few circumstances related to adversely affected preferred shares (as further discussed below), our preferred shares do not confer voting rights.

Holders of common shares, voting at a general shareholders' meeting, have the exclusive power to:

- amend our bylaws;
- approve any capital increase;
- approve any capital reduction;
- 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;
- suspend the rights of a shareholder who has not fulfilled the obligations imposed by law or by our bylaws;
- accept or reject the valuation of assets contributed by a shareholder in consideration for increase of capital stock;
- approve corporate restructurings, such as mergers and spin-offs;
- participate in a centralized group of companies, as defined under the Brazilian Corporate Law;
- approve the disposal of the control of our wholly-owned subsidiaries;
- 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 and our fiscal council, including the compensation due during the period of six months of forfeiture provided for in our bylaws;
- approve the cancellation of our registration as a publicly-traded company;
- decide on our dissolution;
- waive the right to subscribe to shares or convertible debentures issued by our wholly-owned subsidiaries or affiliates; and
- approve the requirements of our nomination policy, in addition to the requirements provided by laws applicable to boards of director and fiscal councils.



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Except as otherwise provided by law, resolutions of a general shareholders' meeting are passed by the majority of the outstanding common shares. Abstentions are not taken into account.

The approval of holders of at least one-half of the issued and outstanding common shares is required for the following actions involving our company:

- reduction of the mandatory dividend distribution;
- merger into another company or consolidation with another company, subject to the conditions set forth in the Brazilian Corporate Law;
- participation in a group of companies subject to the conditions set forth in the Brazilian Corporate Law;
- change of our corporate purpose, which must be preceded by an amendment in our bylaws by federal law as we are controlled by the government and our corporate purpose is established by law;
- spin-off of a portion of our company, subject to the conditions set forth in the Brazilian Corporate Law;
- transfer of all our shares to another company or receipt of shares of another company in order to make the company whose shares are transferred a wholly-owned subsidiary of such company, known as incorporação de ações; and
- selection of a specialized company to work out the appraisal of our shares by economic value, in cases of the cancellation of our registry as a publicly-traded company or deviation from the standard rules of corporate governance defined by a stock exchange or an entity in charge of maintaining an organized over-the-counter market registered with the CVM, in order to comply with such corporate governance rules and with contracts that may be executed by un and such entities.

Under Brazilian Corporate law, if a shareholder has a conflict of interest with the company in connection with any proposed transaction, the shareholder may not vote in any decision regarding such transaction. For example, an interested shareholder may not vote to approve the valuation of assets contributed by that shareholder in exchange for capital stock or, when the shareholder is a member of senior management, to approve the management's report on the company's financial statements. 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 the company any gain it may have obtained as a result of the transaction.

Under Brazilian Corporate Law, the following actions shall be submitted for approval or ratification by the outstanding adversely affected preferred shares before they are submitted for approval of at least half of the issued and outstanding common shares:

- creation of preferred shares or increase in 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 the company's bylaws;
- change in the preferences, privileges or redemption or amortization conditions of any class of preferred shares; and
- creation of a new class of preferred shares entitled to more favorable conditions than the existing classes.

Decisions on our transformation into another type of company are not allowed by Law No. 13.303/2016.



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Under Brazilian Corporate Law, minority shareholders representing at least 10% of the company's 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 of the company. For a company like Petrobras, the threshold is 5%. Thus, shareholders representing 5% of our voting capital may demand the adoption of a cumulative voting procedure.

Furthermore, minority common shareholders also have the right to appoint and/or dismiss one member to or from our board of directors and to appoint or dismiss one member to or from our fiscal council (and such members' respective alternate). The shareholders must prove the uninterrupted ownership of the shares held during the period of at least 3 months, immediately prior to the general meeting.

Preferred shareholders holding, individually or as a group, 10% of our total capital also have the right to appoint and/or dismiss one member to or from our board of directors. Preferred shareholders have the right to separately appoint one member to our fiscal council (and such member's respective alternate). The shareholders must prove the uninterrupted ownership of the shares held during the period of at least 3 months, immediately prior to the general meeting.

If neither the holders of voting common shares nor the holders of preferred shares have, respectively, the quorum required above, they may aggregate their shares to elect jointly a member to our board of directors, attending to, in this event, the quorum of 10% (ten percent) of the total share capital.

In addition, pursuant to Law No. 12,353, our employees have the right to appoint or dismiss one member of our board of directors in accordance with a separate voting procedure.

Our bylaws and Brazilian Corporate Law provide that, independently from the exercise of the rights above granted to minority shareholders, through cumulative voting process, the Brazilian federal government always has the right to appoint the majority of our directors and members of our fiscal council.

Preemptive Rights

Pursuant to the Brazilian Corporate Law, 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 the number of shares held by them. In the event of a capital increase in the same proportion of the number of shares of all existing classes, each shareholder shall exercise the preemptive right over shares identical to those owned. If the issued shares are of existing classes but introduce a change in their proportions to the capital stock, the preference will be exercised over shares and classes identical to those owned by the shareholders. Such preference will only extend to the other shares if they are insufficient to assure, in the increased capital, the same proportion of the capital stock as before the increase. If there is an issuance of shares of a class different from the existing classes, each shareholder shall exercise a preference, in proportion to the number of shares held, over the shares of all classes of the increase. In the event of an increase through capitalization of credit or subscription in assets, shareholders will always be assured the preemptive right and, if applicable, the amounts paid by them will be delivered to the holder of the credit to be capitalized or the asset to be incorporated. The general assembly will fix a period of at least 30 days following the publication of notice of the issuance of new shares or securities convertible into shares for exercise of the right.



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In the event of a capital increase by means of the issuance of new shares, holders of ADSs, 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. See Item 3. “Key Information—Risk Factors—Risks Relating to Our Equity and Debt Securities.”

Redemption and Rights of Withdrawal

Brazilian law provides that, under limited circumstances, shareholders have the right to withdraw their equity interest from the 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 the 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; or
- to 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;
- to merge into another company or to consolidate with another company; or
- to participate in a centralized group of companies as defined under the Brazilian Corporate Law;
- to reduce the mandatory distribution of dividends;
- to change our corporate purposes;
- to spin-off a portion of our company;
- to transfer all of our shares to another company or to receive shares of another company in order to make the company whose shares are transferred a wholly owned subsidiary of our company, known as *incorporação de ações*; or
- to acquire control of another company at a price that exceeds the limits set forth in the 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 does 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 norms given by the SEC.



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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 corporate actions 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.

Other Shareholders' Rights

According to the Brazilian Corporate Law, neither a company's bylaws nor actions taken at a general meeting of shareholders may deprive a shareholder of some specific rights, such as:

- the right to participate in the distribution of profits;
- the right to participate in any remaining residual assets in the event of liquidation of the company;
- the right to supervise the management of the corporate business as specified in the Brazilian Corporate Law;
- the right to preemptive rights in the event of a subscription of shares, debentures convertible into shares or subscription bonuses (other than with respect to a public offering of such securities, as may be set out in the bylaws); and
- the right to withdraw from the company in the cases specified in the Brazilian Corporate Law.

Liquidation

Under Brazilian corporate law and our bylaws, in the event of a liquidation, holders of preferred shares are entitled to receive, prior to any distribution to shareholders.

Conversion Rights

According to our bylaws, 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 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 issue price of the shares subscribed or acquired.

Form and Transfer

Our shares are registered in book-entry form and we have hired Banco do Brasil to perform all the services of safe-keeping and transfer of shares. To make the transfer, Banco do Brasil makes an entry in the register, debits the share account of the transferor and credits the share account of the transferee.



Our shareholders may choose, at their individual discretion, to hold their shares through the *Central Depositária*. Shares are added to the *Central Depositária* system through Brazilian institutions, which have clearing accounts with the *Central Depositária*. Our shareholder registry indicates which shares are listed on the *Central Depositária* system. Each participating shareholder is in turn registered in a registry of beneficial shareholders maintained by the *Central Depositária* and is treated in the same manner as our registered shareholders.

Dispute Resolution

Our bylaws provide for mandatory dispute resolution through arbitration, in accordance with the rules of the *Câmara de Arbitragem do Mercado*, with respect to any dispute regarding us, our shareholders, the executive officers, directors and fiscal council members and involving the provisions of the Brazilian Corporate Law, our bylaws, the rules of the CMN, the Central Bank of Brazil and the CVM or any other capital markets legislation, including the provisions of any agreement entered into by us with any stock exchange or over-the-counter entity registered with the CVM, relating to adoption of differentiated corporate governance practices established by these entities and their respective corporate regulations, as the case may be.

In accordance with Law No. 9,307/1996, entities that are part of the direct and indirect public administration, as we and our controlling shareholder are, 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 non-negotiable rights (*direitos indisponíveis*), such as those deemed to relate to public interest. Therefore, decisions of the Brazilian federal government exercised through voting in any general shareholders' meeting, if based or related to public interest, will not be subject to an arbitration proceeding.

Self-Dealing Restrictions

In accordance with our Relevant Act or Fact Disclosure and Negotiation of Securities Policy, approved by our board of directors in June 2016, the trading by us or any related party of securities issued by us, our subsidiaries or our affiliates (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 statutory provisions, 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.

Restrictions on Non-Brazilian Holders

Non-Brazilian holders face no legal restrictions on the ownership of our common or preferred shares or of ADSs based on our common or preferred shares, and are entitled to the rights and preferences of such common or preferred shares, as the case may be.



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However, 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 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 BM&FBOVESPA. 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 BM&FBOVESPA.

In addition, Annex II to 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.

Transfer of Control

According to Brazilian law and our bylaws, the Brazilian federal government is required to own at least the majority of our voting shares. Therefore, any change in our control would require a change in the applicable legislation.

Disclosure of Shareholder Ownership

Brazilian regulations require that (i) direct or indirect controlling shareholders, (ii) shareholders who have elected members of our board of directors or of our fiscal council, as well as (iii) any 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 disclose its share ownership or divestment, immediately after the event, to the CVM and the BM&FBOVESPA.

Material Contracts

Assignment Agreement (Contrato de Cessão Onerosa)

On September 3, 2010, we entered into an agreement with the Brazilian federal government, under which it 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 Assignment Agreement was entered into pursuant to specific provisions of Law No. 12,276. The draft of the Assignment Agreement was approved by our board of directors on September 1, 2010 and by the CNPE on September 1, 2010, following a negotiation between us and the Brazilian federal government based on independent experts reports obtained by us and the ANP according to a valuation procedure as required by Law No. 12,276. See Exhibit 2.11 for an English translation of the Assignment Agreement.

Basic Terms

Purpose. Under the Assignment Agreement, we paid an initial contract price for the right to conduct activities of exploration and production of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas, subject to a maximum production of five bnboe. Although the Assignment Agreement grants certain rights to us that are similar to those of a concession, the Assignment Agreement is a specific regime for exploration and production, not a concession under Brazilian law.



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Area Covered. The Assignment Agreement covers six firm blocks plus one contingent block, located in the pre-salt areas and identified in the Assignment Agreement. These blocks are located in the Santos Basin and have expected geological characteristics similar to the discoveries made elsewhere in the pre-salt area. On February 7, 2014, we returned to the Brazilian federal government the contingent block related to the Assignment Agreement because we have confirmed that the maximum volume initially provided for in the Assignment Agreement can be reached in the other six firm blocks (i.e., without the need of any contribution from the contingent block).

Supervision and Inspection. The ANP has regulatory authority and inspection rights over our activities in the areas subject to the Assignment Agreement, as well as over our compliance with the Assignment Agreement.

Costs and Risks. All our exploration, development and production activities under the Assignment Agreement will be conducted at our expense and at our risk.

Price

The initial contract price for our rights under the Assignment Agreement was R\$74,807,616,407, which was equivalent to US\$42,533,327,500 as of September 1, 2010. As provided by Law No. 12,276, the contract price was determined by negotiation between us and the Brazilian federal government, based on the reports of independent experts obtained by us and by the ANP, which took into consideration a number of factors, including market conditions, oil prices at that time and industry costs.

We used part of the proceeds from our 2010 global equity offering for the payment of the initial contract price, including the use of LFTs we received from the Brazilian federal government in such global offering. The LFTs were valued at the same price at which they were valued for purposes of the global offering.

The Assignment Agreement sets forth the initial prices and volumes for each block, as follows:

INITIAL EVALUATIONS			
	Volume	Price	Value
	(millions of boe)	(US\$/boe)	(US\$)
Block 1			
Florim (now Itapu)	467	9.0094	4,207,389,800
Block 2			
Franco (now Búzios)	3,058	9.0400	27,644,320,000
Block 3			
Guará South (now Sapinhoa South)	319	7.9427	2,533,721,300
Block 4			
Surrounding Iara (now Atapu, Berbigão North, Berbigão South, Sururu North and Sururu South)	600	5.8157	3,489,420,000
Block 5			
Tupi South(now Lula South)	128	7.8531	1,005,196,800
Block 6			
Tupi Northeast (now Sepia)	428	8.5357	3,653,279,600
Block 7 (contingent block)			
Peroba	—	—	—
Initial Contract Price of the Assignment Agreement			42,533,327,500



Duration

The term of the Assignment Agreement is 40 years, which may be extended for additional five years, upon our request, in cases of (i) force majeure, (ii) delay in obtaining applicable environmental licenses, provided that such delay is attributable only to the relevant environmental authority, (iii) suspension of the activities by determination of the ANP, or (iv) changes in the geological conditions forecast for each area. The extension will only apply to areas in which the ANP identifies the occurrence of one of the events specified above. The ANP will take into account the period of time of the delay occurred to determine the length of the extension, subject to the five-year limit indicated above. In addition, the duration of the Assignment Agreement is subject to the revision process.

Revision

The Assignment Agreement is subject to a revision process. We have notified the Brazilian federal government and the ANP ten months before the date for the declaration of commerciality of each area covered by the agreement, in order to initiate the arrangements for such revision process, which began immediately after the declaration of commerciality of each field in each of the blocks. The revision process, for all the areas subject to the Assignment Agreement, is currently ongoing and there is no formal or official date for its conclusion.

The conclusion of the revision process may result in the renegotiation of (i) the contract price, (ii) the maximum production volume of five bnbbl of oil equivalent, (iii) the contract duration, and (iv) the minimum levels of goods and services to be acquired from Brazilian providers.

If the revised contract price is higher than the initial contract price, we may agree with the Brazilian federal government on one or more of the following payment options: (i) a payment to be made by us, in cash or LFTs, to the Brazilian federal government in an amount equal to the difference between the revised contract price (resulting from the revision process) and the initial contract price; or (ii) a reduction in the maximum production volume of five bnbbl of oil equivalent. If the revised contract price is lower than the initial contract price, then the Brazilian federal government will pay us in cash, LFTs, securities issued by us or through other means agreed between us, the difference between the revised contract price and the initial contract price. In either case, the difference between the revised contract price and the initial contract price in U.S. dollars will be converted into reais, based on the average PTAX exchange rate for the purchase of U.S. dollars published by the Central Bank of Brazil for the 30 days preceding the revision of each area and will be updated by the interest rate of the Brazilian Special Clearance and Custody System (Sistema Especial de Liquidação e Custódia), or the SELIC rate, until the payment date. Payments must be made within three years of the completion of the revision process.

The amounts shall be agreed based on the reports by independent certifiers, hired by us and ANP, as established in the Assignment Agreement. To date, there are neither definitions on the outcome of the review, nor on the compensation method. Only after the conclusion of the certification process and the issuance of the respective reports, will we and the government's representatives start the negotiations concerning the amount of the Assignment Agreement and the payment method.

Phases

Our activities under the Assignment Agreement are divided into two phases:

- *Exploration phase.* This phase comprises the appraisal for purposes of determining the commerciality of any discoveries of oil, natural gas and other fluid hydrocarbons. The exploration phase began upon the execution of the Assignment Agreement and ended with the declaration of commerciality of each respective reservoir discovered in each area covered by the Assignment Agreement.



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- *Production Phase.* The production phase for a particular discovery begins as of the date of the declaration of commerciality by us to the ANP, and it lasts until the termination of the Assignment Agreement. It comprises a development period, during which we will carry out activities pursuant to a development plan approved by the ANP. Following the development period, we may start production upon notice to the ANP.

Minimum Work Program

During the exploration phase, which is now concluded, we were required to undertake a minimum work program, as specified in the Assignment Agreement as well as additional activities outside the scope of the minimum work program, that were approved by the ANP. We accomplished the minimum work program in all blocks and performed additional activities in some blocks.

Reallocation of Volumes

After the conclusion of the Assignment Agreement revision process, the Brazilian federal government and us may negotiate the reallocation of the volume of oil and natural gas originally assigned for each block, observing the revised price per barrel of oil equivalent applicable to each area, in the following scenarios: (i) the relevant environmental authority does not grant a permanent license for the performance of oil and natural gas exploration and production activities in a certain block or field, or (ii) the production of the volume allotted for any block is not feasible under petroleum industry best practices due to the geological features of the reservoirs, observing the economic parameters established in the revision process (as discussed above).

Once reallocations are completed, the number of barrels of oil equivalent to be produced in the new block will equal the product of (i) the number of barrels of oil equivalent that were reallocated from the original block to the new block and (ii) the value of the barrel of oil equivalent in the original block, to be divided by the value of the barrel of oil equivalent in the new block.

If it is not possible to reallocate all of the volumes of oil and natural gas not produced by us, the reallocation procedure will be performed in part, and the Brazilian federal government will pay us the amount resulting from the multiplication of the volume not subject to the reallocation by the value of the barrel in the block to which the reallocation has been made. This dollar amount will be converted to *reais* using the average PTAX exchange rate for the purchase of U.S. dollars for the 30 days preceding the date of the reallocation process of such block, and updated by the SELIC rate during the period between the date of the reallocation process of such block and the date of payment by the Brazilian federal government.

If it is determined that it is not possible to reallocate any volumes of oil, natural gas and other hydrocarbons fluids as described above, the Brazilian federal government will reimburse us for an amount equivalent to total volume of barrels of oil equivalent that was not produced multiplied by the dollar price of barrel of oil equivalent applicable to the relevant block, converted in *reais* using the average PTAX exchange rate for the purchase of U.S. dollars for the 30 days preceding the date of the reallocation process, and updated by the SELIC rate from the date of the reallocation process of such block to the date of payment by the Brazilian federal government.

The manner and terms of payment of the reimbursement in either case will be negotiated by us and the Brazilian federal government. Payments will be made no later than three years after the conclusion of the reallocation process.



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Unitization

A reservoir covered by a block assigned to us under the Assignment Agreement may extend to adjacent areas outside such block. In such case, we must notify the ANP immediately after identifying the extension and we will be prevented from performing the exploration and production activities within such block, until we have negotiated an unitization agreement with the third-party concessionaire or contractor under a different exploration and production regime who has rights over such adjacent areas, unless otherwise authorized by the ANP. The ANP will determine the deadline for the execution of an unitization agreement by the parties. If the adjacent area is not licensed (e.g., not granted for E&P activities to any other party), the Brazilian federal government, represented by PPSA or by ANP, shall negotiate with us.

If the parties are unable to reach an agreement within a deadline established by the ANP, the agency 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 mandatory return to the Brazilian federal government of the area subject to the unitization process.

Extensions to adjacent areas were identified and notified to the ANP in three of the six blocks of the Assignment Agreement. The ANP authorized us to continue our exploratory activities and instructed us to start negotiating the necessary unitization agreements with third-party concessionaires. These negotiations are being conducted for all three blocks, with no impact on the development phase of these projects.

Environmental

We are required to preserve the environment and protect the ecosystem in the area subject to the Assignment Agreement 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 Assignment Agreement requires us to purchase a minimum proportion of goods and services from Brazilian providers and to extend equal treatment to such providers to compete with foreign companies. The minimum Brazilian content requirement is included in the Assignment Agreement and specifies certain equipment, goods and services, as well as different levels of required content, in accordance with the different phases and periods of activities under the Assignment Agreement. The minimum Brazilian content requirement is 37% for the exploration phase. For the development period, it is (i) 55% for the development periods beginning production by 2016, (ii) 58% for the development periods beginning production between 2017 and 2019, and (iii) 65% for the development periods beginning production from 2020. Despite the minimum percentages set forth for each development period timeframes, the average global percentage of Brazilian content in the development period shall be at least 65%. If we fail to comply with the Brazilian content obligations, we may be subject to fines imposed by the ANP. The Assignment Agreement allows the ANP to grant waivers from the local content requirements, in cases where any of the Assignment Agreement area operational needs (in terms of technology, pricing and timing) cannot be met by local suppliers.



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In 2016, the rules governing the minimum Brazilian content requirement were discussed by us and different Brazilian government bodies in order to foster a more competitive market. A program to encourage the competitiveness of suppliers in the productive chain of the oil and gas sector was instituted as part of the Brazilian content policy, with the participation of several ministries, ANP and BNDES. Meetings involving these institutions took place throughout 2016 in order to identify the main weaknesses in the current rules. One of the principal objectives was to prepare a proposal, which has been submitted to the CNPE, for new guidelines for the operation of the local content policy, to be adopted for new bidding rounds expected for 2017. We expect the final decision on the subject to occur by early 2017.

Royalties and Expenses with Research and Development

Once we begin commercial production in each field, we will be required to pay monthly royalties of 10% of the oil and natural gas production. We are also required to invest 0.5% of our yearly gross revenues from oil, natural gas and other fluid hydrocarbons production under the Assignment Agreement in research and development activities related to energy and environmental issues being conducted in universities and national research and technical development institutions, public or private, previously registered with the ANP for this purpose.

Miscellaneous Provisions

- We shall not assign our rights under the Assignment Agreement.
- The Assignment Agreement shall terminate upon (i) the production of the maximum volume of barrels of oil equivalent as specified in the Assignment Agreement, (ii) the expiration of the term, or (iii) upon the request of the ANP, if we fail to observe the cure period established by the ANP in connection with the breach of an obligation that proves relevant for the continuation of operations in each block. Such cure period may not be less than 90 days, except in cases of extreme emergency.
- We and the Brazilian federal government will only be excused from the performance of the activities set forth in the Assignment Agreement in cases of force majeure, which include, among others, delays in the obtaining an environmental license, provided that such delay is attributable only to the relevant environmental authority.
- The Assignment Agreement is governed by Brazilian law.
- We and the Brazilian federal government will use our best efforts to settle any disputes amicably. If we are unable to do so, we may submit such dispute for arbitral review by the Brazilian Federal Attorney's Office (Advocacia-Geral da União Federal), which may rely on independent experts to address technical matters, or initiate a legal proceeding at the Federal Court located in Brasília, Brazil.

Additional Production in the Assignment Agreement Areas

In June 2014, the CNPE enacted Resolution No. 1, which established that Petrobras could be directly engaged by the Brazilian federal government under a production sharing regime to produce the volume of oil, natural gas and fluid hydrocarbons from certain designated Assignment Agreement areas that exceeds the maximum production originally agreed for such designated areas under the Assignment Agreement. However, in November 2014, the TCU determined that the execution of these production sharing agreements can be negotiated only after all parameters for the negotiation of the revision process of the Assignment Agreement are agreed between the Brazilian federal government and us. We have not initiated any negotiations on this matter.



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Production Sharing Agreement (Contrato de Partilha de Produção)

On December 2, 2013, following a public auction held on October 21, 2013, a consortium formed by us (with a 40% interest), Shell (with a 20% interest), Total (with a 20% interest), CNODC (with a 10% interest) and CNOOC (with a 10% interest) (the “Libra Consortium”), entered into a production sharing agreement with the Brazilian federal government, ANP and PPSA (the “Production Sharing Agreement”). Under the 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. This was the first oil and gas production-sharing agreement signed in Brazil under Law 12,351/2010. For further information about Law 12,351/2010, see Item 4.”Information on the Company—Regulation of the Oil and Gas Industry in Brazil—Production-Sharing Contract Regime for Unlicensed Pre-Salt and Potentially Strategic Areas”. See also Exhibit 2.52 for an English translation of the Production Sharing Agreement.

Basic Terms

Purpose. The purpose of the Production Sharing Agreement is to execute and manage the exploration and production rights over oil and gas reserves in the Libra block. In accordance with Law No. 12,351/2010, recently modified by Law 13.365/2016, we have the option to exercise a preemptive right to be the operator of, or to hold a 30% interest in, the future areas to be offered for bidding under the sharing production regime. As such, it is no longer mandatory for us to be the exclusive operator of exploration and production activities under this regime.

The Libra Consortium paid R\$15 billion (US\$6.6 billion of which we paid US\$2.6 billion) to the Brazilian federal government as a signing bonus for the execution of the Production Sharing Agreement. Under the terms of the Production Sharing Agreement, upon the declaration of commerciality of the Libra block, the Libra Consortium will recover in oil any royalties expenses, as well as the investments made and recoverable as “cost oil,” and share with the Brazilian federal government “profit oil” produced in exchange for the right to explore and produce oil and gas in the Libra block. The government average share of profit oil will be 41.65%, varying with the price of the barrel of oil and the productivity of the wells. The Production Sharing Agreement established Brent crude oil prices ranging from US\$0.00/bbl to over US\$160.01/bbl and production rates from 0 mbbbl/d to over 24 mbbbl/d for purposes of determining the government average share of profit oil.

Area Covered. The Libra block encompasses a pre-salt area covering approximately 1,547.76 km² or 0.4 million acres.

Estimated Recoverable Volume. The Libra block has an estimated recoverable volume of between 8 and 12 bnboe.

Operating Committee. The Libra Consortium is managed by an Operating Committee in which Petrobras, Shell, Total, CNODC, CNOOC and PPSA all participate, where PPSA represents the interests of the Brazilian federal government. *The PPSA will not invest in the Libra block, but it holds 50% of the Operating Committee voting rights and also has a casting vote and veto powers, as defined in the Production Sharing Agreement.*

Risks, Costs and Compensation. All exploration, development and production activities under the Production Sharing Agreement will be conducted at the expense and risk of the members of the Libra Consortium. For commercial discoveries of crude oil and/or natural gas in the Libra block, the Libra Consortium will be entitled to recover, on a monthly basis, (i) a portion of the production of oil and gas in the Libra 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 Libra Consortium’s exploration and production activities), up to a limit of 50% of gross production in the first two years (which may be extended if any prior costs have not been fully recovered within two years of their actual incurrence) and 30% of gross production in the following years, subject to the conditions, proportions and terms set forth on the Production Sharing Agreement. In addition, for each commercial discovery, the Libra Consortium is entitled to receive, on a monthly basis, its share of “profit oil” as defined under the Production Sharing Agreement.



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Duration

The term of the Production Sharing Agreement is 35 years, which is not subject to renewal.

Phases

Our activities under the Production Sharing Agreement are divided into two phases:

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 began upon the execution of the Production Sharing Agreement and will end for each discovery upon the declaration of commerciality. We will have four years (which may be extended upon ANP's prior approval, according to the terms and conditions set forth in the Production Sharing Agreement) to comply with the minimum work program and other ANP-approved activities provided for in the Production Sharing Agreement.

Production Phase. The production phase for each particular discovery begins as of the date of the declaration of commerciality by the Libra Consortium to the ANP, and lasts until the termination of the Production Sharing Agreement. It comprises a development period, during which we will carry out activities pursuant to a development plan approved by the ANP. We will have a period of five years, counted from the date of the declaration of commerciality, to begin production from the Libra block.

Minimum Work Program

During the exploration phase, we are required to undertake a minimum work program, as specified in the Production Sharing Agreement, which includes 3D seismic acquisition for the whole block, two exploratory wells and one extended well test. We may perform other activities outside the scope of the minimum work program, provided that such activities are approved by the ANP.

If the Libra Consortium fails to fulfill the minimum work program, ANP will be able to enforce the financial guaranties provided by the Libra Consortium, but such enforcement would not preclude ANP's right to apply other reasonable remedies.

Unitization

A reservoir covered by a block assigned to us in the Production Sharing Agreement may extend to adjacent areas outside such 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 an 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 an 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 agency 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 Agreement and the return to the Brazilian federal government of the area subject to the unitization process.



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Environmental

We are required to preserve the environment and protect the ecosystem in the area subject to the Production Sharing Agreement 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 Agreement requires us to purchase a minimum proportion of goods and services from Brazilian providers and to extend equal treatment to such providers to compete with foreign companies. The minimum Brazilian content requirement is included in the Production Sharing Agreement and specifies certain equipment, goods and services, as well as different levels of required content, in accordance with the different phases and periods of activities under the Production Sharing Agreement. The minimum Brazilian content requirement is 37% for the exploration phase. For the development period, it is (i) 55% for modules beginning first oil through 2021 and (ii) 59% for modules beginning production from 2022. If we fail to comply with the Brazilian content obligations, we may be subject to fines imposed by the ANP. The Production Sharing Agreement allows the ANP to grant waivers from the local content requirements, in cases where any of the Libra Consortium's operational needs (in terms of technology, pricing and timing) cannot be met by local suppliers. In 2016, the Libra Consortium requested a waiver from the ANP of the local content commitment with respect to the stationary production unit, which is currently being analyzed by the ANP as part of a public proceeding.

In 2016, the rules governing the minimum Brazilian content requirement were discussed by us and different Brazilian government bodies in order to foster a more competitive market. A program to encourage the competitiveness of suppliers in the productive chain of the oil and gas sector was instituted as part of the Brazilian content policy, with the participation of several ministries, ANP and BNDES. Meetings involving these institutions took place throughout 2016 in order to identify the main weaknesses in the current rules. One of the principal objectives was to prepare a proposal, which has been submitted to the CNPE, for new guidelines for the operation of the local content policy, to be adopted for new bidding rounds expected for 2017. We expect the final decision on the subject to occur by early 2017.

Royalties and Expenses with Research and Development

Once we begin production in each field, members of the Libra Consortium (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 Libra block. All members of the Libra Consortium (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 Agreement in research and development activities related to the oil, gas and biofuel sectors.



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Miscellaneous Provisions

- We can assign our rights and obligations under the Production Sharing Agreement to the extent that such assigned rights and obligations correspond only to those in excess of our 30% minimum interest established by the CNPE. If any proposed assignment is requested, the ANP shall issue an opinion to the MME within 90 (ninety) days, and the MME shall take a decision within 60 (sixty) days after the ANP opinion is received.
- All members of the Libra Consortium (other than PPSA) have a right of first refusal with respect to an eventual assignment of rights and obligations to be made by any other member of the Libra Consortium (other than PPSA).
- The Production Sharing Agreement shall be terminated in the following circumstances: (i) the expiration of its term; (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 Libra Consortium members (other than PPSA) exercise their withdrawal rights during the Exploration Phase; (v) if the Libra Consortium refuses to execute a production individualization agreement after the ANP makes such determination (which termination may be complete or partial) and (vi) any other basis described in the Production Sharing Agreement.
- Any breach of the Production Sharing Agreement 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 Agreement.
- If any breach of the Production Sharing Agreement 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 Agreement, propose that ANP apply designated sanctions on the relevant parties.
- We and other consortium members will use our best efforts to settle any disputes amicably. 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 United Nations Commission on International Trade Law (UNCITRAL), or by the consent of the parties in interest, to the International Chamber of Commerce, or 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 Brazilian Federal Attorney-General's Office administration (*Advocacia Geral da União*), or AGU. In event of a dispute involving non-negotiable rights, the parties shall submit the dispute to the Federal Courts in Brasília, Brazil.
- The Production Sharing Agreement is governed by Brazilian law.

For information concerning our other material contracts, see Item 4. "Information on the Company" and Item 5. "Operating and Financial Review and Prospects."

Exchange Controls

There are no restrictions on ownership of the common or preferred shares by individuals or legal entities domiciled outside Brazil.

The right to convert dividend payments and proceeds from the sale of shares into foreign currency and to remit such amounts outside Brazil may be subject to restrictions under foreign investment legislation, which generally requires, among other things, that the relevant investments be registered with the Central Bank of Brazil.



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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 shares or preferred shares, from converting dividends, distributions or the proceeds from any sale of such common shares or preferred shares, as the case may be, into U.S. dollars and remitting the U.S. dollars abroad.

Foreign investors may generally register their investment under Law No. 4,131/1962 (foreign direct investment) or CMN Resolution No. 4,373 (portfolio investments in regulated market, such as stock exchanges). Registration under CMN Resolution No. 4,373 affords a more favorable tax treatment to foreign investors who are not residents of tax havens, as defined by Brazilian tax laws. See “—Taxation Relating to Our ADSs and Common and Preferred Shares—Brazilian Tax Considerations.”

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. 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.

Under CMN Resolution No. 4,373, a foreign investor must:

- (i) appoint at least one representative in Brazil, with powers to perform actions relating to its investment;
- (ii) register as a foreign investor with the CVM;
- (iii) appoint at least one authorized custodian in Brazil for its investments; and
- (iv) register all of its portfolio investments in Brazil, through its representative, with the Central Bank of Brazil.

Securities and other financial assets held by CMN Resolution No. 4,373 investors 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 ICVM No. 560/2015 must be carried out in the stock exchanges or through organized over-the-counter markets licensed by the CVM, except for transfers resulting from transactions involving merger, split, amalgamation, corporate reorganizations, stock swaps, or a transfer resulting from bequest or inheritance.

Annex II of CMN Resolution No. 4,373 provides for the issuance of depositary receipts in foreign markets with respect to shares of Brazilian issuers. The depositary of the ADSs 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 a holder of ADSs exchanges such 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 (Annex I), 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. In addition, if the foreign investor resides in a “tax haven” jurisdiction, the investor will be also subject to less favorable tax treatment. See Item 3. “Key Information—Risk Factors—Risks Relating to Our Equity and Debt Securities” and “—Taxation Relating to Our ADSs and Common and Preferred Shares—Brazilian Tax Considerations.”



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Taxation Relating to Our ADSs and 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.

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.



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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 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, the applicable withholding income tax rate over interest is 15% in the case of a non-Brazilian holder of ADSs or direct holder of common or preferred shares who is not 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). See “—Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction.”

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 “—Memorandum and Articles of Incorporation—Payment of Dividends and Interest on Capital.” 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 “—Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction.” 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 “—Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction.”

According to Law No. 10,833/2003, capital gains realized on the disposition of assets located in Brazil by non-Brazilian holders, whether or not to other non-residents and whether made outside or within Brazil, may be subject to taxation in Brazil. With respect to the disposition of common or preferred shares, as they are assets located in Brazil, the non-Brazilian holder may be subject to income tax on any gains realized, following the rules described below, regardless of whether the transactions are conducted in Brazil or with a Brazilian resident. We understand the ADSs do not fall within the definition of assets located in Brazil for the purposes of this law, but there is still neither pronouncement from tax authorities nor judicial court rulings in this respect. Therefore, we are unable to predict whether such understanding will prevail in the courts of Brazil.



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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: (i) the average price per preferred or common share on a Brazilian stock exchange on which the greatest number of such shares were sold on the day of deposit; or (ii) if no preferred or common shares were sold on that day, the average price on the Brazilian stock exchange on which the greatest number of preferred or common shares were sold in the 15 trading sessions immediately preceding such deposit. In such a case, the difference between the amount previously registered and the average price of the preferred or common shares calculated as above, will be considered a capital gain.

The difference between the acquisition cost and the average price of the preferred or common shares calculated as described above 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 a 15% rate. 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 at the rate of 15%, or 25% 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 income tax at the rate of 15% or 25%, as the case may be. See "—Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction."



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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 Measure 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\$5,000,000.00; (ii) 17.5% on gains that exceed R\$5,000,000.00 and do not exceed R\$10,000,000.00; (iii) 20% on gains that exceed R\$10,000,000.00 and do not exceed R\$30,000,000.00; and (iv) 22.5% on gains exceeding R\$30,000,000.00. 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 transactions not carried out on the Brazilian stock exchange or in organized over-the-counter markets, which continue to have differentiated taxations between Brazilian individuals and non-Brazilian residents, being the non-Brazilian residents exempted from the income tax in this case).

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 Non-Transparency 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—2016), issued by the Brazilian Revenue Service.



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Taxation of Foreign Exchange Transactions (IOF/Exchange)

Brazilian law imposes the IOF/Exchange on the conversion of reais into foreign currency and on the conversion of foreign currency into reais. Currently, for most foreign currency exchange transactions, the rate of IOF/Exchange is 0.38%. However, foreign exchange transactions related to inflows of funds to Brazil for investments made by foreign investors in the Brazilian financial and capital markets are generally subject to IOF/Exchange at a zero percent rate. Foreign exchange transactions related to outflows of proceeds from Brazil in connection with investments made by foreign investors in the Brazilian financial and capital markets are also subject to the IOF/Exchange tax at a zero percent rate. This zero percent rate applies to payments of dividends and interest on capital received by foreign investors with respect to investments in the Brazilian financial and capital markets, such as investments made by a non-Brazilian holder as provided for in CMN Resolution No. 4,373. The Brazilian Executive Branch may increase such rates at any time, up to 25% of the amount of the foreign exchange transaction, but not with retroactive effect.

Taxation on Bonds and Securities Transactions (IOF/Bonds)

Brazilian law imposes IOF/Bonds on transactions involving equity securities, bonds and other securities, including those carried out on a Brazilian stock exchange. The rate of IOF/Bonds applicable to transactions involving preferred or common shares is currently zero. However, the Brazilian federal government may increase such rate at any time up to 1.5% of the transaction amount per day, but the tax cannot be applied retroactively.

The IOF on transfer of shares, which are admitted to trading on a stock exchange located in Brazil, with the specific purpose of backing the issuance of depositary receipts traded abroad have been reduced from 1.5% to zero, as of December 24, 2013.

Other Brazilian Taxes

There are no Brazilian inheritance, gift or succession taxes applicable to the ownership, transfer or disposition of preferred or common shares or ADSs by a non-Brazilian holder, except for gift and inheritance taxes which are levied by certain states of Brazil on gifts made or inheritances bestowed by a non-Brazilian holder to individuals or entities resident or domiciled within such states in Brazil. There are no Brazilian stamp, issue, registration, or similar taxes or duties payable by holders of preferred or common shares or ADSs.

Registered Capital

The amount of an investment in preferred or common shares held by a non-Brazilian holder who obtains registration under CMN Resolution No. 4,373, or by the depositary representing such holder, is eligible for registration with the Central Bank of Brazil; and such registration allows the remittance outside Brazil of foreign currency, converted at the commercial market rate, acquired with the proceeds of distributions on, and amounts realized with respect to dispositions of, such preferred or common shares. The amount registered ("registered capital") for each preferred or common share purchased as part of the international offering or purchased in Brazil after the date hereof, and deposited with the depositary, will be equal to its purchase price (in U.S. dollars). The registered capital for a preferred or common share that is withdrawn upon surrender of an ADS will be the U.S. dollar equivalent of:

- (a) 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
- (b) 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 Item 3. “Key Information—Risk Factors—Risks Relating to Our Equity and Debt Securities.”

U.S. Federal Income Tax Considerations

This summary describes the principal U.S. federal income tax consequences of the ownership and disposition of common or preferred shares or ADSs, 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 (taking into account shares held directly or through depositary arrangements), tax-exempt organizations, partnerships or partners therein, financial institutions, 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, and persons holding common or preferred shares or ADSs in a hedging transaction or as part of a straddle or conversion transaction.

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, 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 shares 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 custodian, 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 custodian, or by a U.S. Holder in the case of a holder of common or preferred shares. If the custodian, 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) Petrobras was not, in the year prior to the year in which the dividend was paid, and is not, in the year in which the dividend is paid, a “passive foreign investment company” as defined for U.S. federal income tax purposes (a PFIC). The ADSs are listed on the NYSE, and will qualify as readily tradable on an established securities market in the United States so long as they are so listed. Based on our audited 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 2016 or 2015 taxable year. In addition, based on our audited 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 2017 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. In addition, the U.S. Treasury has announced its intention to promulgate rules pursuant to which holders of ADSs and intermediaries through whom such securities are held will be permitted to rely on certifications from issuers to treat dividends as qualified for tax reporting purposes. Because such procedures have not yet been issued, it is not clear whether we would be able to comply with these procedures. 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. 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.

Holders of shares and ADSs should consult their own tax advisers regarding the availability of the reduced dividend tax rate in the light of the considerations discussed above and their own particular circumstances.



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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, including the translation of reais into U.S. dollar for purposes of their investment in our shares or ADSs.

A non-U.S. Holder will not be subject to U.S. federal income tax or withholding tax on gain realized on the sale or other disposition of a share or an ADS, unless:

- such gain is effectively connected with the conduct by the holder of a trade or business in the United States; or
- such holder is an individual who is present in the United States for 183 days or more in the taxable year of the sale and certain other conditions are met.

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 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. 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.



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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. 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 generally outlines the Dutch tax consequences to holders of the notes in connection with the acquisition, ownership and disposal of notes in a Dutch company. These are subject to changes therein without prejudice to any amendment introduced at a later date and implemented with or without retroactive effect. PGF has not sought any ruling from the Dutch tax authorities (*belastingdienst*) with respect to the statements made and the conclusions reached in this discussion, and there can be no assurance that the Dutch tax authorities will agree with such statements and conclusions. This section does not purport to describe all possible Dutch tax consequences that may be relevant to a holder in general or a holder who receives or has received any benefits from the notes as employment income, deemed employment income or otherwise as compensation for work or services and should therefore be treated with appropriate caution.

For the purpose of this section, "Dutch Taxes" shall mean taxes of whatever nature levied by or on behalf of the Netherlands or any of its political subdivisions or taxing authorities. The Netherlands means the part of the Kingdom of the Netherlands located in Europe.

For Dutch tax purposes, a holder of notes may include, without limitation:

- an owner of one or more notes who, in addition to the title to such notes, has an economic interest in such notes,
- a person or an entity that holds the entire economic interest in one or more notes,
- a person 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 or an entity who 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.

For the purpose of this section "Dutch Taxation" it is assumed that no holder of notes has or will have (or is treated as having) a (deemed) substantial interest in the company.



Generally speaking, a holder of notes has a substantial interest in a company if one 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 per cent. or more of either the total issued and outstanding capital of the company or the issued and outstanding capital of any class of shares of the company, or (II) the ownership of, or certain rights over, profit participating certificates (winstbewijzen) that relate to 5 per cent. or more of either the annual profit or the liquidation proceeds of the company.

Holders of notes should consult their own tax advisers as to the consequences of purchasing, including, without limitation, the consequences of the receipt of interest and the sale or other disposition of notes or coupons.

Taxes on Income and Capital Gains

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 is, in whole or in part, effectively managed in the Netherlands or carried on through a (deemed) permanent establishment (vaste inrichting) or a permanent representative (vaste vertegenwoordiger) in the Netherlands or on Bonaire, Sint Eustatius or Saba and to which enterprise or part of an enterprise, as the case may be, 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 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 and/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.

Dutch Withholding Tax

All payments of interest and principal by PGF under the notes can be made free of withholding or deduction for any taxes of any nature imposed, levied, withheld or assessed by the Netherlands or any political subdivision or taxing authority thereof or therein, except where notes (i) actually function as equity of the PGF within the meaning of article 10, paragraph 1, letter d, of the Dutch Corporate Income Tax Act 1969 or (ii) that are redeemable in exchange for, convertible into or linked to shares or other equity instruments issued or to be issued by PGF or by any entity related to PGF. The notes do not actually function as equity of PGF for Dutch tax purposes if these notes have a maturity of less than 50 years, do not constitute obligations of PGF that are subordinated to the obligations of PGF vis-à-vis all its ordinary creditors or carry an interest that is not legally or factually dependent on the profits of PGF.



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Dutch 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, deemed to be resident for Dutch inheritance and gift tax purposes, 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 death and the condition of the gift is fulfilled after the date of his 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, among others, a person that holds 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 10 years preceding the date of the gift or his/her death. Additionally, for purposes of Dutch gift tax, among others, a person not holding 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. Applicable tax treaties may override deemed residency.

Turnover Tax

No Dutch turnover tax will arise 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 taxes, including taxes of a documentary nature, such as capital tax, stamp or registration tax or duty, are 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.

Common Reporting Standard

The common reporting standard framework was first released by the OECD in February 2014 as a result of the G20 members endorsing a global model of automatic exchange of information in order to increase international tax transparency. On 21 July 2014, the Standard for Automatic Exchange of Financial Account Information in Tax Matters was published by the OECD and this includes the Common Reporting Standard (the “CRS”).

As per 2 November 2016, 87 jurisdictions, including the Netherlands, have signed the multilateral competent authority agreement, which is a multilateral framework agreement to automatically exchange financial and personal information, with the subsequent bilateral exchanges coming into effect between those signatories that file the subsequent notifications. More than 40 jurisdictions, including the Netherlands, have committed to a specific and ambitious timetable leading to the first automatic exchanges in 2017 (early adopters). Under CRS, financial institutions resident in a CRS country would be required to report, according to a due diligence standard, account balance or value, income from certain insurance products, sales proceeds from financial assets and other income generated with respect to assets held in the account or payments made with respect to the account. Reportable accounts include accounts held by individuals and entities (which include trusts and foundations) with tax residency in another CRS country. CRS includes a requirement to look through passive entities to report on the relevant controlling persons.



As of 1 January 2016, CRS and EU Council Directive 2014/107/EU have been implemented in Dutch law. As a result, PGF will be required to comply with identification obligations (if any) starting in 2016, with reporting set to begin in 2017. Holders of notes may be required to provide additional information to PGF to enable it to satisfy any identification obligations under the (Dutch implementation of the) CRS. Prospective holders of notes are advised to seek their own professional advice in relation to the CRS and EU Council Directive 2014/107/EU.

FATCA

Pursuant to certain provisions of the U.S. Internal Revenue Code of 1986, commonly known as FATCA, a “foreign financial institution” may be required to withhold on certain payments it makes (“foreign passthru payments”) to persons that fail to meet certain certification, reporting, or related requirements.

Pursuant to FATCA, holders and beneficial owners of the notes may be required to provide to a financial institution in the chain of payments on the notes information and tax documentation regarding their identities, and in the case of a holder that is an entity, the identities of their direct and indirect owners, and this information may be reported to relevant tax authorities, including the IRS. Moreover, starting at the earliest on January 1, 2019, financial institutions through which payments are made, may be required to withhold U.S. tax at a 30% rate on “foreign passthru payments” (a term not yet defined) paid to an investor who does not provide information sufficient for the institution to determine whether the investor is a U.S. person or should otherwise be treated as holding a “United States account” of the institution, or to an investor that is, or holds the notes directly or indirectly through, a non-U.S. financial institution that is not in compliance with FATCA. Under a grandfathering rule, this withholding tax will not apply unless the notes are issued or materially modified after the date that is six months after the date on which final United States Treasury Regulations defining the term “foreign passthru payment” are filed with the United States Federal Register.

A number of jurisdictions, including the Netherlands, have entered into, or have agreed in substance to, intergovernmental agreements with the United States to implement FATCA (“IGAs”), which modify the way in which FATCA applies in their jurisdictions. Certain holders of the notes therefore may be required to provide information and tax documentation regarding their identities, as well as that of their direct and indirect owners, and this information may be reported to the Dutch tax authorities and ultimately to the IRS.

Holders should consult their own tax advisors regarding how these rules may apply to their investment in the notes.

The Proposed Financial Transactions Tax (FTT)

On February 14, 2013, the European Commission has published a proposal, or the Commission’s Proposal, for a Directive for a common financial transaction tax, or FTT, in Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovenia, Slovakia and Spain, or the participating Member States. However, Estonia has since stated that it will not participate.

The Commission’s Proposal has a very broad scope and could, if introduced in its current form, apply to certain dealings in notes in certain circumstances. This could, accordingly, affect the market value of notes and/or limit the ability to resell notes.

Under the Commission’s Proposal, the FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in the notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, “established” in a participating Member State in a broad range of circumstances, including (1) by transacting with a person established in a participating Member State or (2) where the financial instrument which is subject to the dealings is issued in a participating Member State.



However, the FTT remains subject to negotiation between the participating Member States and the legality of the proposal is uncertain. The FTT may therefore be altered prior to any implementation, the timing of which remains unclear. Additional European Union Member States may decide to participate and/or certain of the participating Member States may decide to withdraw.

Prospective holders of notes are advised to seek their own professional advice in relation to the FTT.

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 “Non-resident,” 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 Petrobras 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 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 Petrobras 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 Petrobras, as provided for in the guaranties, the Non-resident holders will be indemnified so that, after payment of all applicable Brazilian taxes collectable by withholding, deduction or otherwise, with respect to principal, interest and additional amounts payable with respect to the notes (plus any interest and penalties thereon), a Non-resident holder will receive an amount equal to the amount that such Non-resident holder would have received as if no such Brazilian taxes (plus interest and penalties thereon) were withheld. The Brazilian obligor will, subject to certain exceptions, pay additional amounts in respect of such withholding or deduction so that the Non-resident holder receives the net amount due.

Gains on the sale or other disposition of the notes made outside of Brazil by a Non-resident, other than a branch or a subsidiary of Brazilian resident, to another Non-resident are not subject to Brazilian income tax.



In addition, payments made from Brazil are subject to the tax on foreign exchange transactions (*IOF/Câmbio*), which is levied on the conversion of Brazilian currency into foreign currency and on the conversion of foreign currency into Brazilian currency at a general rate of 0.38%. Other IOF/Câmbio rates may apply to specific transactions. In any case, the Brazilian federal government may increase, at any time, such rate up to 25% but only with respect to future transactions.

Generally, there are no inheritance, gift, succession, stamp, or other similar taxes in Brazil with respect to the ownership, transfer, assignment or any other disposition of the notes by a Non-resident, except for gift and inheritance taxes imposed by some Brazilian states on gifts or bequests by individuals or entities not domiciled or residing in Brazil to individuals or entities domiciled or residing within such states.

U.S. Federal Income Taxation

The following summary sets forth certain 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 or U.S. Holder 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 does not discuss any foreign, state or local tax considerations. 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).

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, 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 received, in accordance with the U.S. holder’s applicable method of accounting for U.S. federal tax purposes. In general, if the “issue price” of a note is less than the “stated redemption price at maturity” by more than a *de minimis* amount, such note will be considered to have “original issue discount,” or OID. The “issue price” of a note is the first price at which a substantial amount of such notes are sold to investors. The stated redemption price at maturity of a note generally includes all payments other than payments of qualified stated interest.



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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.



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Specified Foreign Financial Assets

Certain U.S. Holders that own “specified foreign financial assets” with an aggregate value in excess of US\$ 50,000 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. 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.

Non-U.S. Holder

A holder or beneficial owner of a note that is not a U.S. Holder (a “non-U.S. Holder”) generally will not be subject to U.S. federal income or withholding tax on interest received on the notes. In addition, a non-U.S. Holder will not be subject to U.S. federal income or withholding tax on gain realized on the sale of notes unless such gain is effectively connected with the conduct by such holder of a trade or business in the United States or, in the case of gain realized by an individual non-U.S. Holder, the non-U.S. Holder is present in the United States for 183 days or more in the taxable year of the sale and certain other conditions are met.

Documents on Display

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended, and accordingly file reports and other information with the SEC. Reports and other information filed 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 NYSE, 11 Wall Street, New York, New York 10005, on which our ADSs are listed. Our SEC filings are also available to the public from the SEC’s Web site at <http://www.sec.gov>. For further information about obtaining copies of our public filings at the New York Stock Exchange, call (212) 656-5060.

We also file financial statements and other periodic reports with the CVM.

Item 11. Qualitative and Quantitative Disclosures about Market Risk***Risk Management***

We are exposed to a number of risks arising from our operations. Such risks include the possibility that changes in prices of oil and oil products, foreign currency exchange rates or interest rates will adversely affect the value of our financial assets, liabilities, future cash flows and earnings.

We adopt the practice of integrated risk management. Risks are considered in every decision making process and we manage them on an integrated manner. This way, we do not focus on the individual risks of operations or business units, but, rather, we take a broader view of our consolidated activities, capturing possible natural hedges where available. For the management of market and financial risks, structural actions are taken through the management of our equity and indebtedness levels, rather than through the use of financial instruments.



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In order to further improve our risk management governance practices, our board of directors has established an organizational structure for risk management composed by (i) an Executive Manager for Corporate Risks, who is under the supervision of our Chief Strategy, Organization and Management System Officer, and (ii) units for risk management within each Petrobras business area. Our Executive Manager for Corporate Risks is responsible for:

- identifying, monitoring and reporting periodically to our board of executive officers and board of directors the effects of major risks on our integrated results;
- encouraging integration and synergy of risk management actions taken in the organizational units, as well as in other business processes, support and management;
- establishing a corporate methodology for risk management guided by an integrated and systemic view, which allows for a continuous monitoring environment of risks in various hierarchical levels;
- disseminating knowledge in risk management; and
- supporting managers to develop and implement the necessary measures to ensure alignment of our exposure to acceptable risk levels.

In June 2015, our board of directors approved a revised Corporate Risks Management Policy, which specifies authorities, responsibilities, the five principles and 10 guidelines that should guide our initiatives related to risk management. Our current Corporate Risks Management Policy is fully adherent to worldwide recognized methodological references such as COSO-ERM (Committee of Sponsoring Organizations of the Treadway Commission—Enterprise Risk Management Integrated Framework) and ISO 31000. Also, they meet the guidelines provided by the Guide for Corporate Risks Management issued by the Brazilian Institute of Corporate Governance—IBGC.

This policy has a more 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 security) and combating fraud and corruption (legal compliance), among other corporate risks. Aimed at integrating these risk management actions, this policy allows any employee to have access to the terms and concepts common to the subject as well as to the measures taken and parties responsible for the management of each of the 21 corporate risks we are exposed to. These corporate risks are classified into five categories: strategic, financial, compliance, business and operational. For further information regarding our revised Corporate Risks Management Policy, please visit our website at <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/petrobras-business-risk-management-policy>.

Commodity Price Risk

We operate in an integrated manner throughout the various stages of the oil industry. A great part 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 related 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.

For the purposes of managing our exposure to price fluctuations, we avoid, whenever possible, the use of derivatives for hedging systemic operations (namely, buying and selling oil and oil products in order to provide for the operational needs of our system).

The existing derivatives transactions are intended to protect the expected results of the transactions carried out abroad. Our derivatives contracts provide economic hedges for anticipated crude oil and oil product purchases and sales in the international markets, generally expected to occur within a 30- to 360-day period. See Note 33 to our audited consolidated financial statements 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.



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Interest Rate and Exchange Rate Risk

The table below provides summary information regarding our exposure to interest rate and exchange rate risk in our total debt portfolio for 2016 and 2015, including short-term and long-term debt.

	Total Debt Portfolio(1)	
	2016 (%)	2015
Real-denominated:		
Fixed rate	3.5	2.8
Floating rate	17.0	13.5
Sub-total	20.5	16.3
U.S.dollar-denominated:		
Fixed rate	35.0	38.5
Floating rate	36.9	35.6
Sub-total	71.9	74.1
Other currencies:		
Fixed rate	7.3	9.2
Floating rate	0.3	0.4
Sub-total	7.6	9.6
Total	100.0	100.0
Floating rate debt:		
Real-denominated	17.0	13.5
Foreign currency-denominated	37.2	36.0
Fixed rate debt:		
Real-denominated	3.5	2.8
Foreign currency denominated	42.3	47.7
Total	100.0	100.0
U.S. dollars	72.0	74.1
Euro	5.6	6.9
GBP	1.8	2.1
Japanese Yen	0.1	0.6
Brazilian reais	20.5	16.3
Total	100.0	100.0

(1) Short term and long term.

In general, our foreign currency floating rate debt is principally subject to fluctuations in LIBOR. Our floating rate debt denominated in *reais* is principally subject to fluctuations in the *Depósito Interbancário* (Brazilian interbank offering rate, or DI) and *Taxa de Juros de Longo Prazo* (Brazilian long-term interest rate, or TJLP), as fixed by the CMN.

We generally do not utilize derivative instruments to manage our exposure to interest rate fluctuation. However, we continuously consider various forms of derivatives to reduce our exposure to interest rate fluctuations and may utilize these financial instruments in the future.



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The exchange rate risk to which we are exposed has greater impact on the balance sheet and derives principally from the incidence of non-*real* denominated obligations in our debt portfolio. With respect to the management of foreign exchange risks, we seek to identify them and treat them in an integrated analysis of natural protections (hedges), 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 may also involve the use of derivative financial instruments 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. We have designated cash flow hedging relationships to manage the exchange rate risk on our highly probable future exports. See Item 5. “Operating and Financial Review and Prospects—Inflation and Exchange Rate Variation” and Notes 4.3.6 and 33.2(a) to our audited consolidated financial statements for further information about our cash flow hedge.

See Note 33 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, 2016.

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 17 and 33.6 to our audited consolidated financial statements.

Item 12. Description of Securities other than Equity Securities

American Depositary Shares

The Bank of New York Mellon is the Depositary for both of our common and preferred ADSs. In its capacity as Depositary, The Bank of New York Mellon will register and deliver the ADSs, each of which represents (i) two shares (or a right to receive two shares) deposited with the principal São Paulo office of Itaú Unibanco S.A., as custodian for the Depositary, 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 101 Barclay Street, 22 West, New York, New York 10286.

Fees Payable by holders of our ADSs

ADS holders are required to pay various fees to the Depositary, and the Depositary may refuse to provide any service for which a fee is assessed until the applicable fee has been paid.

ADS holders are required to pay the Depositary: (i) an annual fee of US\$0.02 (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, by deducting the applicable amount from cash distributions or by charging the book-entry system accounts of ADS holders or their representatives. ADS holders may also be required to pay additional fees for certain services provided by the depositary, as set forth in the table below.

Depositary service	Fee 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 per 100 ADSs (or portion thereof)
Distribution of dividends	US\$0.02 (or less) per ADS per year
Cancellation of ADSs for the purpose of withdrawal . . .	US\$5.00 per 100 ADSs (or portion thereof)



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Fees Payable by the Depositary to Petrobras

The Depositary reimburses us for certain expenses we incur in connection with the administration and maintenance of the ADR program. These reimbursable expenses comprise investor relations expenses, listing fees, legal fees and other expenses related to the administration and maintenance of the ADR program. In addition, the Depositary has agreed to provide us with an additional reimbursement per annum equal to 80% of the dividend fee collected by the Depositary. For the year ended December 31, 2016, the gross aggregate amount of such reimbursements was approximately US\$15 million.

PART II**Item 13. Defaults, Dividend Arrearages and Delinquencies**

None.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

None.

Item 15. Controls and Procedures

We have identified material weaknesses in our internal control over financial reporting, which we describe in the “Management Report on Internal Control over Financial Reporting” below. In 2016, we took significant measures to remediate three of the material weaknesses reported in our annual report on Form 20-F for the fiscal year 2015, as described below in “Remediation.”

Our management has analyzed all the remaining material weaknesses, and performed additional analyses and procedures in preparing our consolidated financial statements. We concluded that our consolidated financial statements fairly present, in all material respects, our financial condition, results of operations and cash flows at and for the periods presented.

Disclosure Controls and Procedures

We have evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as of December 31, 2016. Based on our evaluation, our Chief Executive Officer and Chief Financial Officer concluded that as a result of the material weaknesses in our internal control over financial reporting described below, as of December 31, 2016, our disclosure controls and procedures were not effective to provide reasonable assurance that the information required to be disclosed by us 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, and that it was accumulated for and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding the required disclosure.

Management Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting and for assessing the effectiveness of internal control over financial reporting.

Our internal control over financial reporting is a process designed by, or under the supervision of, our Chief Executive Officer and our Chief Financial Officer, and effected by our board of directors, management and other employees, and 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.



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Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness of internal control over financial reporting 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 our policies or procedures may deteriorate.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2016, based upon the criteria established in *Internal Controls—Integrated Framework* (2013), issued by the Committee of Sponsoring Organizations of Treadway Commission (COSO). Based on this assessment and criteria, our management has concluded that our internal control over financial reporting was not effective as of December 31, 2016 due to the material weaknesses described below.

Material Weaknesses in Internal Control over Financial Reporting

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement in our annual or interim consolidated financial statements will not be prevented or detected on timely basis.

During our management's assessment of internal control over financial reporting as of December 31, 2016, our management identified the material weaknesses described below.

Property, plant and equipment

As reported in our annual report on Form 20-F for the fiscal year 2015, our management identified design deficiencies of controls, which in the aggregate constituted a material weakness, regarding property, plant and equipment, related to deficiencies in identifying possible risks arising from the economic and financial condition of contractors and suppliers. Such deficiencies resulted in failures to: (i) identify the need to write down payments advanced to contractors and suppliers that would not result in future economic benefits and (ii) identify the need to recognize expenses related to the dissolution of contracts with these suppliers.

These deficiencies resulted in a failure of our internal control over financial reporting to detect an overstatement of property, plant and equipment and an understatement of our expenses in 2014, 2015 and 2016.

System Access Management and Segregation of Duties in Business and Information Technology Processes

As reported in our annual report on Form 20-F for the fiscal year 2015, we identified deficiencies in the operation of controls related to procedures for granting access and segregation of duties analysis in certain operations that, when evaluated together, constituted a material weakness.

Our management identified control deficiencies related to the management, review and monitoring of access, including critical functions and segregation of duties in business processes in Enterprise Resource Planning (ERP).

This deficiency did not have an impact on our financial reporting in 2015 or 2016.

Calculation of Net Actuarial Liabilities

As reported in our annual report on Form 20-F for the fiscal year 2015, our management identified deficiencies in the data generation process used to calculate the actuarial liabilities related to our healthcare plan (AMS) and pension plan (Petros). These deficiencies referred to the verification of participants, and to the accuracy of their individual information in the database used for the actuarial calculation.



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Such deficiencies resulted from a failure of our internal control over financial reporting to detect an overvaluation of liabilities and an understatement of comprehensive income in fiscal years 2015 and 2016.

We also identified deficiencies in the control over the monitoring of certain pension plans assets managed by Petros. Such deficiencies resulted from a failure of our internal control over financial reporting to detect an overvaluation of pension assets as of December 31, 2016.

Potential Impact of Material Weaknesses

These material weaknesses could result in a misstatement of account balances or disclosures representing material misstatements or omissions in our annual or interim consolidated financial statements that would not be prevented or detected.

Audit of the Effectiveness of Internal Control over Financial Reporting

Our independent registered public accounting firm, PricewaterhouseCoopers Auditores Independentes, or PwC, has audited the effectiveness of our internal control over financial reporting, as stated in their report as of December 31, 2016, which is included herein.

Remediation

Our management is actively engaged in the development and implementation of remediation efforts to address the material weaknesses identified, as well as to identify risks in other areas. The remediation efforts described below have been implemented or are in the process of implementation and are the responsibility of our management.

Remediation Actions Addressing Material Weaknesses Reported as of December 31, 2016

On-Going Remediation Activities related to Property, Plant and Equipment

In an effort to remediate the material weakness related to property, plant and equipment, we took the following measures in 2016:

- Developed improvements to mitigate the risks of failure to transfer projects from assets under construction to operating assets. These improvements consisted of: (i) evaluation of risks and identification of improvements in the process of incorporation and write-off of assets under construction; (ii) revision of the internal control process; and (iii) implementation of new monitoring controls of assets under construction at the corporate level. Based upon the measures adopted and the results of our tests of their effectiveness, we concluded that this deficiency was remedied as of December 31, 2016.
- Developed improvements in the process of revision of changes in cash generating units (CGUs), which consisted of: (i) implementation of new activities and controls over the process and redefining roles and responsibilities to mitigate the risk of changes in the composition of the CGUs; (ii) improvement of procedures and controls applied to the process of revision of the recoverable amount of assets; and (iii) expansion of the scope of management assessment to review of the entire process, not only limited to the risk of failures in the review of changes in the CGUs. Based upon the measures adopted and the results of our tests of their effectiveness, we concluded that this deficiency was remedied as of December 31, 2016.



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- Enhanced procedures and strengthened controls related to the advances granted to suppliers and to the dissolution of contracts in service with suppliers. New actions were implemented, namely: (i) a new process of providing advances to suppliers; (ii) a new routine for project managers to strengthen communication between the parties involved; (iii) enhancement of the procedures of monitoring and analyzing the processes of contracting and the performance of contracts with suppliers. Our management recognizes that the actions taken represent an improvement in the mitigation of risks and in the control environment over this process; however, these deficiencies remained unremediated as of December 31, 2016.

In the aggregate, the unremediated deficiencies constituted a material weakness as of December 31, 2016. In response to the remaining deficiencies, we are reviewing the matrix of internal control and procedures related to property, plant and equipment, with the intention of assuring that we regularly evaluate and record provisions for losses and obligations in a timely manner in our consolidated financial statements for (i) advances (coming due and overdue) and (ii) potential costs associated with contract dissolutions granted to suppliers facing difficulties in performing and meeting their obligations.

On-Going Remediation Activities related to System Access Management and Segregation of Duties in Business and Information Technology Processes

In 2016, we performed actions to remedy control deficiencies, including improvement of procedures and automation in the management of access to users in the ERP environment.

Our management believes that there has been significant progress in improving the design of controls related to the deficiencies identified in 2014, although these are at different stages. The remediation actions include the following:

- Continuous improvement over the quality of guidance, training and assistance to those responsible for monitoring and reviewing risks associated with the segregation of duties and restriction of critical access;
- Expansion and improvement of analytical requirements for the design of controls which address risk management, critical access and the segregation of assignments;
- Reinforcement of the procedures, guidance and automation of continuous monitoring of controls provided in the ERP environment, with a view to implement quarterly monitoring by managers before the filing of consolidated financial statements each quarter, and the segregation of duty conflicts, which could present relevant risks;
- Implementation of improvements in the ERP profile management systems, related to the concessions, revocations, transfers and maintenance of access by users to ERP transactions, including those related to the approval of the request of mass access and to the automation of access revocations;
- Implementation of control for annual access review, in an automated manner, preventing the granting or revalidation of access in the ERP system by users themselves;
- Reduction of the period allowed for employees, who transfer from one department to another within Petrobras, to access the ERP system used by the department that such employees are leaving from 90 to 15 days; and
- Improvement of the internal rule for the management of access defining responsibilities, guidelines, terms and actions that must be observed by all ERP managers and non—ERP systems throughout the Petrobras system.

Our management recognizes that the actions taken to remedy the material weakness of access restriction and segregation of duties represent an improvement in the mitigation of risks and in the control environment over this process. However, according to the aggregate result of the tests of internal control, the changed environment has not yet reached the maturity required to conclude that the material weakness was remedied as of December 31, 2016.



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Our management remains committed to developing and strengthening the control environment to remedy the material weakness identified through the implementation of the following actions in 2017:

- Integration of the Access Profiles Management roll of the ERP environment to the Access Control Module of the other Petrobras systems;
- Implementation of a monitoring panel of execution of accesses restriction controls and segregation of duties for the Petrobras ERP environment;
- Improvement of the qualification of the management body and administrators of our systems, with respect to responsibility and timeliness in the execution of the controls associated with the Management of Accesses and Segregation of Duties, with a view of the improvements planned for the process; and
- Improvement of the structure of governance of access risks to the information systems.

On-Going Remediation Activities related to Calculation of Net Actuarial Liabilities

In 2016, in response to the material weakness related to actuarial liabilities, our management created a new set of controls, which cover processes of inclusion, alteration or exclusion of employees, dependents or retirees on the AMS and Petros databases.

Although we believe that the actions taken represented an improvement, our management recognizes that the changes implemented have not yet demonstrated adequate maturity to conclude that the material weakness of actuarial liabilities was remedied as of December 31, 2016.

In response to deficiencies remaining as of December 31, 2016, our management is taking measures with relation to internal control of the database, as described below:

- Improvement of internal control and procedures reinforcing the analyses and revision of information pertaining to the database;
- Improvement of control of the interface of different systems, including third parties involved in the actuarial liability process;
- Implementation of a procedure for improvement of reliability of information arising from the AMS and Petros systems; and
- Re-registering participants under AMS. This re-registration shall be performed in waves, starting with the participants whose information is collected through the issue of bank collection documents.

In response to the deficiencies remaining as of December 31, 2016, with respect to the pension plans' assets managed by Fundação Petros, we, in our supervisory role, shall have access to information of the internal control area of Petros and shall assess, periodically, through Petros Supervision Commission and Assistance to its Directors, the improvement actions of the Petros controls environment, with a view to preserving our interests as sponsor.

Our management remains committed to the strengthening and maturation of the control environment, to remedy the material weakness identified.

Remediation Actions Addressing Material Weaknesses Reported in 2015

We took significant measures to successfully remediate some of the material weaknesses reported in our annual report on Form 20-F for the fiscal years 2014 and 2015, as described below.



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Remediation Activities related to Management Override of Controls

In response to the material weaknesses reported in our Annual Report on Form 20-F for fiscal year 2015, our management has adopted corrective measures and continued working on the full implementation of actions and initiatives to improve our internal control. The primary initiatives already implemented to strengthen our internal control environment include:

- Strengthening corporate governance by, among other measures, approval and disclosure of an Appointment Policy aimed at establishing minimum requirements for the appointment of representatives of our board of directors, executive board and fiscal council, and definition of criteria for technical and integrity assessment to assist in the process of appointment of employees to hold management and strategic positions;
- Communicating the ethical values expressed in our Code of Ethics and in our Conduct Guide in a standardized manner, through internal communication to our future and existing employees;
- Strengthening our Program for Corruption Prevention, with emphasis on initiatives as the creation of the Correction Committee, and continuity in the implementation of an Integrity Due Diligence procedure, based on which suppliers of goods and services must provide detailed information about their structure, financing and compliance mechanisms in order to be included in our suppliers list.;
- Improving the whistleblowing channel, mainly by strengthening protections for the confidentiality of the whistleblower, the secrecy and integrity of any information provided and the traceability of reported and confirmed information;
- Pursuing investigative actions in relation to allegations of wrongful acts committed by employees and former employees of Petrobras, using Internal Investigation Commissions (Comissões Internas de Apuração – CIA); investigations conducted by the compliance area; and investigations conducted by independent law firms reporting to a committee of our board of directors. The results have been shared with the Prosecutor's Office and authorities from countries where the facts related to the investigations occurred; and
- Creating the Corporate Risk Management Policy, which sets out guidelines for corporate risk management at Petrobras. We identified 21 categories of corporate risks, and we appointed managers responsible for the implementation of this policy through rules and procedures for each specific risk.

To complement the measures mentioned above, our management implemented new controls aimed at eliminating the possibility of actions that could annul or infringe upon existing controls. All the controls result from a set of new procedures and measures to improve our governance. These procedures and actions are the fruit of assessments, which rely on several areas and were submitted for approval by our senior management, which demonstrates the commitment of the entire organization in the mitigation of these risks. The main controls implemented were:

- Compliance with the Appointment Policy of our board of directors and our executive officers, to ensure that the appointment of our management is based on technical criteria and integrity;
- Integrity background check (BCI) and analysis of technical capacity before assigning employees to management tasks and positions;
- Analysis of counterparty due diligence integrity (DDI) and classification of the degree of integrity risk (GRI) of suppliers of goods and providers of services, which increases security in our contracting;
- Training in compliance issues for the members of our senior management, with the goal of promoting its update and awareness;
- Prior opinion by statutory technical committees, with the goal to ensure that when our executive officers take individual decision based on their respective responsibilities the topics are discussed by different parties and undergo multidisciplinary treatment;



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- Follow-up on the application of sanctions suggested by the Correction Committee (Comitê de Correição), to confirm whether disciplinary sanctions are uniformly applied in cases related to fraud or corruption; and
- Review of processes for the treatment of reports on fraud and corruption forwarded for investigation by an outsourced whistleblowing channel, without the intermediation of employees who receive the accusations.

As a result of these actions and following the evaluation of effectiveness of these new internal controls, our management concluded that the management override of controls material weakness was remedied as of December 31, 2016.

Remediation Activities related to Review and Approval of Manual Journal Entries

In order to remedy the material weaknesses identified in 2014 and 2015, we made improvements in our controls, with an emphasis on changing the process of capturing entries in our ledger accounts in order to facilitate the review and approval of manual journal entries. Since the implementation of this change, our system captures all of the transactions that permit entries in ledger accounts and automatically segregates entries processed automatically from entries processed manually. The latter are subject to the monthly review and approval by our managers.

Additionally, in response to the deficiency related to the case of managers not adequately reviewing manual journal entries or not observing segregation of duties and reviewing their own manual journals, we improved guidance for managers responsible for the review of manual journal entries, through the following actions:

- Training applied to areas of greater volume of entries – the training introduced concepts of internal control, as well as operating aspects of control of manual journal entries, involving definitions, risks, criteria, history, flows and best practices;
- Issuance of guidance on the operation of the control, with step-by-step tutorials covering the vision of the systems and procedures that support these controls; and
- Reviewing manual journal by an area other than that which initially approved the manual journal entries.

As a result of these actions, and following the evaluation of effectiveness of these new internal controls, our management concluded that the material weakness related to review and approval of journal entries was remedied as of December 31, 2016.

Remediation Activities related to Provisions and Contingent Liabilities for Legal Proceedings

In response to the material weakness identified in 2015, our management adopted measures to remedy deficiencies and conform the operation of controls, which resulted in improvements to the design of processes, controls and internal procedures for provisions and contingent liabilities. One of these measures emphasizes the following:

- Reinforcement in the standardization of technical and regulatory guidance adopted in the Petrobras System for litigation, by a common corporate rule;
- Review and improvement of the design of internal processes, contemplating more analytical flows of activities in which the revised and expanded matrix of risks and controls was incorporated;
- Improvement of controls for analysis of legal contingencies by our management, in order to accurately determine (i) amount of damages in legal proceedings and (ii) loss expectation, defined as remote, possible or probable;
- Reinforcement of independent controls of the database records of litigation with official external records or information of the applicable government spheres;



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- Improvement of the process of revision of official publications, establishment of competence limits in the legal area, as well as creation of specific controls for a multidisciplinary committee, which analyzes the relevant causes before preparation of the financial statements;
- Incorporation in the internal control system of monitoring of external data (i) by a specialized company recognized in the market, to capture new legal proceedings from the database of Brazilian courts, even before Petrobras is summoned, and (ii) by us in areas where the specialized company does not cover Brazilian local courts, through the issuance of certificates directly obtained from such courts; and
- Creation of a monthly reconciliation control between our tax and governmental interests contingencies system and our consolidated liability system.

As a result of these actions, and following the evaluation of effectiveness of these new internal controls, our management concluded that the material weakness related to provisions and contingent liabilities for legal proceedings was remedied as of December 31, 2016.

Changes in Internal Control Over Financial Reporting

In order to address the material weakness related to management override of controls disclosed in 2015, we have implemented internal controls related to (i) compliance with the Appointment Policy of our board of directors and our executive officers, (ii) Integrity background check (BCI) before assigning employees to management tasks and positions, (iii) analysis of counterparty due diligence integrity (DDI) and classification of the degree of integrity risk (GRI) and (iv) analysis of prior opinion by statutory technical committees, with the goal to ensure multidisciplinary treatment of the topics discussed. Additionally, we have implemented controls and re-defined roles and responsibilities to mitigate the risk related to the composition of the CGUs.

Except as described above, there were no changes in our internal control over financial reporting during the fiscal year 2016, which have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 16A. Audit Committee Financial Expert

We have an Audit Committee that complies with the requirements of the Sarbanes-Oxley Act of 2002. Mr. Jerônimo Antunes is our Audit Committee financial expert and is independent, as defined in 17 CFR 240.10A-3.

Item 16B. Code of Ethics

Our business and our relations with third parties are guided by ethical principles. In 1998, our board of executive officers approved the Petrobras Code of Ethics, which was extended to all Petrobras subsidiaries, and which in 2002 was renamed to Code of Ethics for the Petrobras Group.

In 2006, after undergoing a revision process with wide participation from our business segments, employees and subsidiaries, the current version of the Code of Ethics was approved by the board of executive officers and the board of directors. The Code of Ethics is applicable to our workforce, executive officers and board of directors. It is available on our website at <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/code-ethics>.

Our executive officers further developed our ethics management through the creation of the Petrobras Ethics Commission in 2008 which has since become responsible for promoting corporate compliance with ethical principles, as well as acting as a forum for discussion of subjects related to ethics.



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In connection with our compliance programs, in July 2013, our board of executive officers approved our Corruption Prevention Program (Programa Petrobras de Prevenção da Corrupção—PPPC), which is focused on the prevention, detection and penalization of acts of fraud and corruption committed against Petrobras. The program is managed across areas of Petrobras, and is designed to improve our governance structure and operational accountability and to foster our commitment to good governance. This program is currently managed by our Governance and Compliance Department. A copy of our Corruption Prevention Program Manual is available on our website at <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/petrobras-corruption-prevention-program>.

In November 2014, our board of executive officers also approved our Conduct Guide, which contains the guidelines to implement the Code of Ethics for the Petrobras Group (Code of Ethics) and other internal regulations. Our Conduct Guide establishes the basic rules for ethical behavior and professional conduct to be adopted within our company. A copy of our Conduct Guide is available on our website at <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/petrobrasu-guide-ethical-conduct>. In February 2015, our procurement guidelines were amended to subject all of our suppliers and service providers to our Conduct Guide.

In December 2016, after undergoing a revision process, it was renamed as the “Conduct Guide for the Petrobras Group,” and our board of executive officers and our board of directors approved the current version of the Conduct Guide.

Item 16C. Principal Accountant Fees and Services

Audit and Non-Audit Fees

The following table sets forth the fees billed to us by our independent auditors, PwC during the fiscal years ended December 31, 2016 and December 31, 2015:

	Year Ended December 31,	
	2016	2015
	(US\$ million)	
Audit fees	15.4	17.4
Audit-related fees	2.4	2.6
Tax fees	0.6	0.3
All other fees	—	—
Total fees	18.4	20.3

Audit fees in the above table are the fees billed by PwC in connection with the audit of our annual financial statements (IFRS and Brazilian GAAP), interim reviews (IFRS and Brazilian GAAP), audits of our subsidiaries (IFRS and Brazilian GAAP, among others) and review of periodic documents filed with the SEC. In 2016 and 2015, audit fees included fees billed by PwC, in the amount of US\$1.4 million and US\$2.8 million respectively, related to the audit of internal controls. “Audit-related fees” in the above table are the fees billed by PwC for assurance and related services that are reasonably related to the performance of the audit or reviews of our financial statements and are not reported under “audit fees.”

Tax fees in the table above are fees billed by PwC for services related to tax compliance reviews conducted in connection with the audit procedures on the financial statements for the years 2016 and 2015.

**Audit Committee Approval Policies and Procedures**

Our Audit Committee has the authority to recommend pre-approval policies and procedures to our board of directors for the engagement of our independent auditor's services. At present, our board of directors has decided not to establish such pre-approval policies and procedures. Our board of directors expressly approves on a case-by-case basis any engagement of our independent auditors for all services provided to our subsidiaries or to us. Our bylaws prohibit our independent auditor from providing consulting services to us during the term of such auditor's contract.

Item 16D. Exemptions from the Listing Standards for Audit Committees

Under the listed company audit committee rules of the NYSE and the SEC, we must comply with Exchange Act Rule 10A-3, which requires that we establish an audit committee, composed of members of the board of directors, that meets specified requirements. In reliance on the exemption in Rule 10A-3(b)(iv)(E), we have designated one member to our Audit Committee, Jerônimo Antunes, who is a designee of the Brazilian federal government, which is our controlling shareholder and therefore one of our affiliates. In our assessment, Mr. Antunes acts independently in performing the responsibilities of an audit committee member under the Sarbanes-Oxley Act and satisfies the other requirements of Exchange Act Rule 10A-3.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

During the fiscal year ended December 31, 2016, neither any "affiliated purchaser," as defined in Rule 10b-18(a)(3) under the Securities Exchange Act, nor we have purchased any of our equity securities.

Item 16F. Change in Registrant's Certifying Accountant

On December 21, 2016, our board of directors approved the dismissal of PwC as our independent registered public accounting firm, effective upon the issuance of PwC's audit report to be included in this Annual Report on Form 20-F for the year ended December 31, 2016. PwC's reports on our consolidated financial statements for the years ended December 31 2015 and 2014 did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope or accounting principle.

During the years ended December 31, 2015 and 2014, and the subsequent interim period through December 21, 2016, there were no disagreements with PwC, whether or not resolved, on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which, if not resolved to PwC's satisfaction, would have caused it to make reference to the subject matter of the disagreement in connection with any reports it would have issued.

During the years ended December 31, 2015 and 2014, and the subsequent interim period through December 21, 2016, there were no "reportable events" as that term is defined in Item 16F(a)(1)(v) of Form 20-F other than the identification of material weaknesses in our internal control over financial reporting as described in our Annual Report on Form 20-F for the year ended December 31, 2015 (the "2015 20-F") and Annual Report on Form 20-F for the year ended December 31, 2014 (the "2014 20-F").

As more fully disclosed in the 2015 20-F, our management concluded that our internal control over financial reporting was not effective as of December 31, 2015 due to material weaknesses related to:

- inadequate "tone at the top" regarding internal controls, failure to communicate the ethical values prescribed in the our Code of Conduct, and lack of an effective whistleblower program;
- deficiencies related to monitoring the need to reclassify certain property, plant and equipment from assets under construction to completed property, plant and equipment;



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- failure to identify the need to write down payments advanced to contractors and suppliers that will not result in future economic benefits and failure to identify the need to recognize expenses related to the termination of these contracts;
- deficiencies related to the review of changes in certain groupings of exploration and production assets as cash generating units (CGUs), their compliance with International Financial Reporting Standards, and changes in circumstances that affected the way certain CGUs generate cash;
- failure to timely monitor possible changes in the control parameters of the ERP environment, which are used to support the internal controls related to the review and approval of manual journal entries, and deficiencies in the design of the internal control over review and approval of manual journal entries;
- deficiencies in control operations related to granting access procedures and segregation of duties analysis at the business process level;
- deficiencies related to controls for capturing and registering in our internal monitoring systems the legal proceedings to which we are party, the completeness of legal contingencies and accuracy of the classification of the possibility of an outflow of resources for each contingency as probable, possible or remote; and
- deficiencies related to the completeness of participants and accuracy of their individual information in the data generated for the actuarial calculation.

Further, as disclosed in the 2014 20-F, our management identified the following material weaknesses in our internal control over financial reporting for the year ended December 31, 2014:

- inadequate “tone at the top” regarding internal controls, failure to communicate the ethical values prescribed in our Code of Conduct, and lack of an effective whistleblower program;
- failure to identify the need to write down payments advanced to contractors and suppliers that will not result in future economic benefits and failure to identify the need to recognize expenses related to the termination of these contracts;
- deficiencies related to monitoring the need to reclassify certain property, plant and equipment from assets under construction to completed property, plant and equipment;
- failure to recognize impairment losses in five Exploration and Production projects that were in their initial planning phase, for which there were no estimated future cash flows;
- failure to timely monitor possible changes in the control parameters of the ERP environment, which are used to support the internal controls related to the review and approval of manual journal entries, and deficiencies in the design of the internal control over review and approval of manual journal entries; and
- deficiencies in control operations related to granting access procedures and segregation of duties analysis at the business process level.

Our board of directors has discussed these material weaknesses with PwC and the we have authorized PwC to respond fully to the inquiries of the successor independent registered public accounting firm concerning these matters.

We have provided PwC with a copy of the foregoing disclosure, and have requested that PwC furnish to us a letter addressed to the Securities and Exchange Commission stating whether or not PwC agrees with such disclosure. We have included as Exhibit 16.1 to this Form 20-F a copy of the letter from PwC as required by Item 16F(a)(3) of Form 20-F.



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On December 21, 2016, the board of directors approved the appointment of KPMG Auditores Independentes (KPMG) as our independent registered public accounting firm. The change in auditors was made by means of a bidding process, following the expiration of our contract with PwC and PwC also participated in the bidding process. On February 17, 2017, we entered into a contract with KPMG under which KPMG was hired to provide audit services for the fiscal years ended 2017, 2018 and 2019. As a result of this contract, KPMG will replace PwC as our independent public accountants and will audit our financial statements starting January 1, 2017.

During the fiscal years ended December 31, 2015 and December 31, 2014 and subsequent interim period through December 21, 2016, we did not consult with KPMG regarding the application of accounting principles to a specific completed or contemplated transaction or regarding the type of audit opinion that might be rendered by KPMG on our financial statements. Further, KPMG did not provide any written or oral advice that was an important factor considered by us in reaching a decision as to any such accounting, auditing or financial reporting matter or any matter being the subject of disagreement or defined as a “reportable event” or any other matter as defined in Item 16F(a)(1)(v) of Form 20-F.

Item 16G. Corporate Governance

Comparison of Petrobras’ 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 Exchange Act Rule 10A-3; (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	Petrobras’ Practices
Director Independence		
303A.01	Listed companies must have a majority of independent directors. “Controlled companies” are not required to comply with this requirement.	Petrobras is a controlled company because more than a majority of its voting power is controlled by the Brazilian federal government. As a controlled company, Petrobras would not be required to comply with the majority of independent directors requirement if it were a U.S. domestic issuer. There is no legal provision or policy that requires us to have independent directors.
303A.03	The non-management directors of each listed company must meet at regularly scheduled executive sessions without management.	With the exception of the CEO of the company (who is also a director), all of Petrobras’ directors are non-management directors. The internal regulation of Petrobras’ board of directors provides for the occurrence of an executive session without the presence of the CEO if a particular matter may represent a conflict of interests.



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Section	New York Stock Exchange Corporate Governance Rules for U.S. Domestic Issuers	Petrobras' Practices
Nominating/Corporate Governance Committee		
303A.04	<p>Listed companies must have a nominating/corporate governance committee composed entirely of independent directors, with a written charter that covers certain minimum specified duties.</p> <p>"Controlled companies" are not required to comply with this requirement.</p>	<p>Petrobras has a statutory committee that verifies the compliance of the appointment of members of the Fiscal Council, the Executive Board, and the Board of Directors of Petrobras. There is no legal provision or policy that requires the members of this committee to be independent.</p> <p>Petrobras' board of directors develops, evaluates and approves corporate governance principles. As a controlled company, Petrobras would not be required to comply with the nominating/corporate governance committee requirement if it were a U.S. domestic issuer.</p>
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.</p> <p>"Controlled companies" are not required to comply with this requirement.</p>	<p>Petrobras has a committee that advises the board of directors with respect to compensation and management succession. The Compensation Committee has a written charter that requires the majority of its members to be independent.</p> <p>As a controlled company, Petrobras would not be required to comply with the compensation committee requirement if it were a U.S. domestic issuer.</p>
Audit Committee		
303A.06	<p>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.</p>	<p>Petrobras' Audit Committee is a statutory advisory committee to the board of directors and is composed of members that satisfy the independence requirements set forth in Rule 10A-3 under the Exchange Act. The Audit Committee has a written charter that sets forth its responsibilities that include, among other things: (i) strengthening ties with the external auditors, permitting closer supervision of their work and of issues regarding their competency and independence, (ii) assuring legal and regulatory compliance, including with respect to internal controls, compliance procedures and ethics, and (iii) monitoring the financial position of the company, especially as to risks, internal auditing work and financial disclosure.</p>
303A.07		



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Section	New York Stock Exchange Corporate Governance Rules for U.S. Domestic Issuers	Petrobras' Practices
Equity Compensation Plans		
303A.08	Shareholders must have the opportunity to vote for compensation plans through shares and material reviews, with limited exceptions as set forth by the NYSE's rules.	Under the Brazilian Corporate Law, shareholder approval is required for the adoption and revision of any equity compensation plans. Petrobras does not currently have any equity compensation plans.
Corporate Governance Guidelines		
303A.09	Listed companies must adopt and disclose corporate governance guidelines.	Petrobras has a set of Corporate Governance Guidelines (<i>Diretrizes de Governança Corporativa</i>) that address director qualification standards, responsibilities, compensation, orientation, 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 Petrobras' website.
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.	Petrobras has a Code of Ethics (<i>Código de Ética</i>) and a Conduct Guide (<i>Guia de Conduta</i>), applicable to its directors, executive officers, senior management, employees, interns and service providers within the Petrobras group, and a Code of Good Practices (<i>Código de Boas Práticas</i>) applicable to its directors, executive officers, senior management, employees and collaborators. No waivers of the provisions of the Code of Ethics, Conduct Guide or Code of Good Practices are permitted. These documents are available on Petrobras' website.
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.

Item 16H. Mine Safety Disclosure

Not applicable.

PART III

Item 17. Financial Statements

Not applicable.

Item 18. Financial Statements

See pages F-2 through F-139, incorporated herein by reference.

Item 19. Exhibits

No.	Description
1.1	Amended Bylaws of Petr�leo Brasileiro S.A.-Petrobras, dated as of July 1, 2015
2.1	Indenture, dated as of July 19, 2002, between Petrobras International Finance Company and JPMorgan Chase Bank, as Trustee (incorporated by reference to Exhibit 4.5 of the Registration Statement of Petrobras International Finance Company and Petrobras on Form F-3, filed with the Securities and Exchange Commission on July 5, 2002, and amendments to which were filed on July 19, 2002 and August 14, 2002 (File Nos. 333-92044 and 333-92044-01)).
2.2	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)).
2.3	Amended and Restated Fifth Supplemental Indenture, initially dated as of October 6, 2006, as amended and restated as of February 7, 2007, as amended and restated as of March 31, 2010, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon (as successor to JPMorgan Chase Bank), as Trustee, relating to the 6.125% Global Notes due 2016 (incorporated by reference to Exhibit 2.14 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.4	Amended and Restated Second Supplemental Indenture, initially dated as of February 11, 2009, as amended and restated as of July 9, 2009, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 7.875% Global Notes due 2019 (incorporated by reference to Exhibit 2.33 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.5	Amended and Restated Guaranty for the 7.875% Global Notes due 2019, initially dated as of February 11, 2009, as amended and restated as of July 9, 2009, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.34 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.6	Third 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 5.75% Global Notes due 2020 (incorporated by reference to Exhibit 2.35 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).



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No.	Description
2.7.	Fourth Supplemental Indenture, dated as of October 30, 2009, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.875% Global Notes due 2040 (incorporated by reference to Exhibit 2.36 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.8.	Guaranty for the 5.75% Global Notes due 2020, dated as of October 30, 2009, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.37 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.9.	Guaranty for the 6.875% Global Notes due 2040, dated as of October 30, 2009, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.38 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.10	Amended and Restated First Supplemental Indenture, initially dated as of November 1, 2007, as amended and restated as of January 11, 2008, as amended and restated as of March 31, 2010, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 5.875% Global Notes due 2018 (incorporated by reference to Exhibit 2.15 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)).
2.11	Assignment Agreement, dated as of September 3, 2010, among Petrobras, the Brazilian federal government and the National Petroleum, Natural Gas and Biofuels Agency (incorporated by reference to Exhibit 2.47 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 26, 2011 (File Nos. 001-15106 and 001-33121)).
2.12	Eighth Supplemental Indenture, dated as of December 9, 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 4.875% Global Notes due 2018 (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 9, 2011 (File Nos. 001-15106 and 001-33121)).
2.13	Ninth Supplemental Indenture, dated as of December 9, 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 5.875% Global Notes due 2022 (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 December 9, 2011 (File Nos. 001-15106 and 001-33121)).
2.14	Guaranty for the 4.875% Global Notes due 2018, dated as of December 9, 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 9, 2011 (File Nos. 001-15106 and 001-33121)).
2.15	Guaranty for the 5.875% Global Notes due 2022, dated as of December 9, 2011, 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 December 9, 2011 (File Nos. 001-15106 and 001-33121)).



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No.	Description
2.16	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)).
2.17	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)).
2.18	Amended and Restated Deposit Agreement, dated as of January 3, 2012, among Petrobras, The Bank of New York Mellon, 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 (incorporated by reference to Exhibit 2.1 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.19	Amended and Restated Deposit Agreement, dated as of January 3, 2012, among Petrobras, The Bank of New York Mellon, 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 (incorporated by reference to Exhibit 2.2 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.20	Amended and Restated Sixth 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 5.375% Global Notes due 2021 (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 February 6, 2012 (File Nos. 001-15106 and 001-33121)).
2.21	Amended and Restated Seventh Supplemental Indenture, dated as of February 6, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.750% Global Notes due 2041 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)).
2.22	Twelfth 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 3.500% Global Notes due 2017 (incorporated by reference to Exhibit 4.11 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)).
2.23	Amended and Restated Guaranty for the 5.375% Global Notes due 2021, dated as of February 6, 2012, 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 February 6, 2012 (File Nos. 001-15106 and 001-33121)).
2.24	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)).



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No.	Description
2.25	Guaranty for the 3.500% Global Notes due 2017, dated as of February 6, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 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)).
2.26	Sixth 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 2.11 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.27	Thirteenth Supplemental Indenture, dated as of February 10, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.60 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.28	Amended and Restated Guaranty for the 6.125% Global Notes due 2016, dated as of February 10, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.31 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.29	Amended and Restated Guaranty for the 8.375% Global Notes due 2018, dated as of February 10, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.16 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.30	Amended and Restated Guaranty for the 5.875% Global Notes due 2018, dated as of February 10, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.33 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)).
2.31	Indenture, dated as of August 29, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.3 to the Registration Statement of Petrobras, Petrobras International Finance Company and Petrobras Global Finance B.V. on Form F-3, filed with the Securities and Exchange Commission on August 29, 2012 (File Nos. 333-183618, 333-183618-01 and 333-183618-02))
2.32	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))
2.33	First 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 3.25% Global Notes due 2019 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)).
2.34	Second Supplemental Indenture, dated as of October 1, 2012, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 4.25% Global Notes due 2023 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)).



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No.	Description
2.35	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)).
2.36	Guaranty for the 3.25% Global Notes due 2019, dated as of October 1, 2012, 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 1, 2012 (File No. 001-15106)).
2.37	Guaranty for the 4.25% Global Notes due 2023, dated as of October 1, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)).
2.38	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)).
2.39	Amended and Restated Third Supplemental Indenture, initially dated as of December 10, 2003, as amended and restated as of March 31, 2010, and as further amended and restated as of March 25, 2013, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon (as successor to JPMorgan Chase Bank), as Trustee, relating to the 8.375% Global Notes due 2018 (incorporated by reference to Exhibit 2.41 to the Annual Report on Form 20-F of Petrobras, filed with the Securities and Exchange Commission on April 29, 2013 (File No. 001-15106)).
2.40	Fourth 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 2.000% Global Notes due 2016 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.41	Fifth 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 3.000% Global Notes due 2019 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.42	Sixth Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 4.375% Global Notes due 2023 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.43	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)).
2.44	Eighth 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 Floating Rate Global Notes due 2016 (incorporated by reference to Exhibit 4.14 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.45	Ninth 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 Floating Rate Global Notes due 2019 (incorporated by reference to Exhibit 4.17 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).



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No.	Description
2.46	Guaranty for the 2.000% Global Notes due 2016, dated as of May 20, 2013, 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 May 20, 2013 (File No. 001-15106)).
2.47	Guaranty for the 3.000% Global Notes due 2019, dated as of May 20, 2013, 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 20, 2013 (File No. 001-15106)).
2.48	Guaranty for the 4.375% Global Notes due 2023, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.49	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)).
2.50	Guaranty for the Floating Rate Global Notes due 2016, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.13 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.51	Guaranty for the Floating Rate Global Notes due 2019, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.16 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)).
2.52	<p>Production Sharing Agreement, dated as of December 2, 2013, among Petrobras, Shell Brasil Petróleo Ltda., Total E&P do Brasil Ltda., CNODC Brasil Petróleo e Gás Ltda. and CNOOC Petroleum Brasil Ltda., the Brazilian federal government, Pré-Sal Petróleo S.A.—PPSA and the National Petroleum, Natural Gas and Biofuels Agency (incorporated by reference to the Annual Report on Form 20-F of Petrobras, filed with the Securities and Exchange Commission on April 30, 2014 (File No. 001-15106)).</p> <p>The amount of long-term debt securities of Petrobras authorized under any given instrument does not exceed 10% of its total assets on a consolidated basis. Petrobras hereby agrees to furnish to the SEC, upon its request, a copy of any instrument defining the rights of holders of its long-term debt or of its subsidiaries for which consolidated or unconsolidated financial statements are required to be filed.</p>
2.53	Tenth 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 2.750% Global Notes due 2018 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)).
2.54	Eleventh 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 3.750% Global Notes due 2021 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)).
2.55	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)).



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No.	Description
2.56	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)).
2.57	Guaranty for the 2.750% Global Notes due 2018, dated as of January 14, 2014, 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 January 14, 2014 (File No. 001-15106)).
2.58	Guaranty for the 3.750% Global Notes due 2021, dated as of January 14, 2014, 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 January 14, 2014 (File No. 001-15106)).
2.59	Guaranty for the 4.750% Global Notes due 2025, dated as of January 14, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)).
2.60	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)).
2.61	Fourteenth 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 3.250% Global Notes due 2017 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.62	Fifteenth 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 4.875% Global Notes due 2020 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.63	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)).
2.64	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)).
2.65	Eighteenth 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 Floating Rate Global Notes due 2017 (incorporated by reference to Exhibit 4.14 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.66	Nineteenth 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 Floating Rate Global Notes due 2020 (incorporated by reference to Exhibit 4.17 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.67	Guaranty for the 3.250% Global Notes due 2017, dated as of March 17, 2014, 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 17, 2014 (File No. 001-15106)).



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No.	Description
2.68	Guaranty for the 4.875% Global Notes due 2020, dated as of March 17, 2014, 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 March 17, 2014 (File No. 001-15106)).
2.69	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)).
2.70	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)).
2.71	Guaranty for the Floating Rate Global Notes due 2017, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.13 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.72	Guaranty for the Floating Rate Global Notes due 2020, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.16 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)).
2.73	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)).
2.74	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)).
2.75	First Amendment to the Guaranties, dated as of December 28, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.3 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 15, 2015 (File No. 001-15106)).
2.76	Twentieth Supplemental Indenture, dated as of June 5, 2015, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.850% Global Notes due 2115 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 5, 2015 (File No. 001-15106)).
2.77	Guaranty for the 6.850% Global Notes due 2115, dated as of June 5, 2015, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 5, 2015 (File No. 001-15106)).
2.78	Twenty-First 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 8.375% Global Notes due 2021 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 23, 2016 (File No. 01-15106)).
2.78	Amended and Restated Twenty-First 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 8.375% Global Notes due 2021 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 13, 2016 (File No. 01-15106)).
2.80	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 2027 (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)).



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No.	Description
2.81	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 2027 (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)).
2.82	Twenty-Third 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 6.125% Global Notes due 2022 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 17, 2017 (File No. 01-15106)).
2.83	Twenty-Fourth Supplemental Indenture, dated as of January 17, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 7.375% Global Notes due 2027 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 17, 2017 (File No. 01-15106)).
2.84	Guaranty for the 8.375% Global Notes due 2021, dated as of May 23, 2016, 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 May 23, 2016 (File No. 01-15106)).
2.85	Amended and Restated Guaranty for the 8.375% Global Notes due 2021, dated as of July 13, 2016, 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 July 13, 2016 (File No. 01-15106)).
2.86	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)).
2.87	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)).
2.88	Guaranty for the 6.125% Global Notes due 2022, dated as of January 17, 2017, 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 January 17, 2017 (File No. 01-15106)).
2.89	Guaranty for the 7.375% Global Notes due 2027, dated as of January 17, 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 January 17, 2017 (File No. 01-15106)).



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No.	Description
2.90	Eighth Supplemental Indenture, dated as of July 13, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 8.375% Global Notes due 2018.
2.91	Second Amendment to the Guaranty, dated as of July 13, 2016, between Petrobras and The Bank of New York Mellon, as Trustee, relating to the 8.375% Global Notes due 2018.
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's Registration Statement on Form F-1 filed with the Securities and Exchange Commission on July 14, 2000 (File No. 333-12298)).
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's Registration Statement on Form F-1 filed with the Securities and Exchange Commission on July 14, 2000 (File No. 333-12298)).
8.1 .	List of subsidiaries.
12.1	Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
13.1	Certifications Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
15.1	Consent letter of PwC.
15.2	Consent letter of DeGolyer and MacNaughton.
16.1	Letter from PwC.
99.1	Third Party Reports of DeGolyer and MacNaughton.



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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 April 26, 2017.

Petróleo Brasileiro S.A.—PETROBRAS

By: /s/ Pedro Pullen Parente

Name: Pedro Pullen Parente

Title: Chief Executive Officer

By: /s/ Ivan de Souza Monteiro

Name: Ivan de Souza Monteiro

Title: Chief Financial Officer and Chief Investor
Relations Officer



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FORM 20-F

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FINANCIAL STATEMENTS

*December 31, 2016, 2015 and 2014
with report of independent registered
public accounting firm*



Petróleo Brasileiro S.A. – Petrobras



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Petróleo Brasileiro S.A. – Petrobras

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Petróleo Brasileiro S.A. - Petrobras

In our opinion, the accompanying consolidated statement of financial position and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows present fairly, in all material respects, the financial position of Petróleo Brasileiro S.A. - Petrobras and its subsidiaries (the "Company") at December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company did not maintain, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013), issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) because the following material weaknesses in internal control over financial reporting existed as of that date:

- failure to identify the need to write down payments advanced to contractors and suppliers that will not result in future economic benefits and failure to identify the need to recognize expenses related to the termination of these contracts;
- deficiencies in control operations related to granting access procedures and segregation of duties analysis at the business process level;
- deficiencies related to the completeness of participants and accuracy of their individual information in the data generated for the actuarial calculation; and
- deficiencies related to monitoring the valuation and existence of certain pension plans assets managed by Petros.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses referred to above are described in Management Report on Internal Control over Financial Reporting appearing under Item 15 in the Company's 2016 Form 20-F. We considered these material weaknesses in determining the nature, timing, and extent of audit tests applied in our audit of the 2016 consolidated financial statements, and our opinion regarding the effectiveness of the Company's internal control over financial reporting does not affect our opinion on those consolidated financial statements. The Company's management is responsible for these 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 management's report referred to above. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. 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.



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Petróleo Brasileiro S.A. – Petrobras

Report of Independent Registered Public Accounting Firm

As discussed in Note 3 to the financial statements, the Company, in 2014, wrote off US\$ 2,527 million of overpayments on the acquisition of property plant and equipment incorrectly capitalized according to testimony obtained from Brazilian criminal investigations.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Rio de Janeiro, April 26, 2017.

/s/ PricewaterhouseCoopers Auditores Independentes
PricewaterhouseCoopers Auditores Independentes

Petróleo Brasileiro S.A. – Petrobras

Consolidated Statement of Financial Position

December 31, 2016 and 2015

(Expressed in millions of US Dollars, unless otherwise indicated)



Assets	Note	12.31.2016	12.31.2015	Liabilities	Note	12.31.2016	12.31.2015
Current assets				Current liabilities			
Cash and cash equivalents	7	21,205	25,058	Trade payables	16	5,762	6,373
Marketable securities	7	784	780	Finance debt	17	9,755	14,683
Trade and other receivables, net	8	4,769	5,554	Finance lease obligations	18.1	18	19
Inventories, net	9	8,475	7,441	Income taxes payable	21.1	127	105
Recoverable income taxes	21.1	602	983	Other taxes payable	21.1	3,628	3,365
Other recoverable taxes	21.1	1,900	1,765	Payroll and related charges	21.1	2,197	1,302
Advances to suppliers		166	108	Pension and medical benefits	22	820	655
Other current assets		1,140	1,338	Others		2,104	1,946
		39,041	43,027			24,411	28,448
Assets classified as held for sale	10.3	5,728	152	Liabilities on assets classified as held for sale	10.3	492	125
		44,769	43,179			24,903	28,573
Non-current assets				Non-current liabilities			
Long-term receivables				Finance debt	17	108,371	111,482
Trade and other receivables, net	8	4,551	3,918	Finance lease obligations	18.1	226	78
Marketable securities	7	90	88	Deferred income taxes	21.6	263	232
Judicial deposits	30.2	3,999	2,499	Pension and medical benefits	22	21,477	12,195
Deferred income taxes	21.6	4,307	6,016	Provisions for legal proceedings	30.1	3,391	2,247
Other tax assets	21.1	3,141	2,821	Provision for decommissioning costs	20	10,252	9,150
Advances to suppliers		1,148	1,638	Others		550	509
Others		3,184	2,446			144,530	135,893
		20,420	19,426			169,433	164,466
				Shareholders' equity			
Investments	11	3,052	3,527	Share capital (net of share issuance costs)	23.1	107,101	107,101
Property, plant and equipment	12	175,470	161,297	Capital transactions	23.2	628	321
Intangible assets	13	3,272	3,092	Profit reserves	23.3	53,143	57,977
		202,214	187,342	Accumulated other comprehensive (deficit)	23.4	(84,093)	(100,163)
				Attributable to the shareholders of Petrobras		76,779	65,236
				Non-controlling interests	11.4	771	819
				Total equity		77,550	66,055
Total assets		246,983	230,521	Total liabilities and shareholder's equity		246,983	230,521

The notes form an integral part of these financial statements.



Petróleo Brasileiro S.A. – Petrobras

Consolidated Statement of Income

December 31, 2016, 2015 and 2014

(Expressed in millions of US Dollars, unless otherwise indicated)



	Note	2016	2015	2014
Sales revenues	24	81,405	97,314	143,657
Cost of sales		(55,417)	(67,485)	(109,477)
Gross profit		25,988	29,829	34,180
Income (expenses)				
Selling expenses		(3,963)	(4,627)	(6,827)
General and administrative expenses		(3,319)	(3,351)	(4,756)
Exploration costs	15	(1,761)	(1,911)	(3,058)
Research and development expenses		(523)	(630)	(1,099)
Other taxes		(714)	(2,796)	(760)
Impairment of assets	14	(6,193)	(12,299)	(16,823)
Write-off—overpayments incorrectly capitalized	3	—	—	(2,527)
Other expenses, net	25	(5,207)	(5,345)	(5,737)
		(21,680)	(30,959)	(41,587)
Income (loss) before finance income (expense), results in equity- accounted investments and income taxes		4,308	(1,130)	(7,407)
Finance income		1,053	1,412	1,949
Finance expenses		(6,958)	(6,437)	(3,923)
Foreign exchange gains (losses) and inflation indexation charges		(1,850)	(3,416)	339
Net finance income (expense)	27	(7,755)	(8,441)	(1,635)
Results in equity-accounted investments	11.2	(218)	(177)	218
Loss before income taxes		(3,665)	(9,748)	(8,824)
Income taxes	21.7	(684)	1,137	1,321
Loss		(4,349)	(8,611)	(7,503)
Net income (loss) attributable to:				
Shareholders of Petrobras		(4,838)	(8,450)	(7,367)
Non-controlling interests		489	(161)	(136)
Loss		(4,349)	(8,611)	(7,503)
Basic and diluted loss per weighted-average of common and preferred share—in U.S. dollars	23.6	(0.37)	(0.65)	(0.56)

The notes form an integral part of these financial statements.



Petróleo Brasileiro S.A. – Petrobras

Consolidated Statement of Comprehensive Income

December 31, 2016, 2015 and 2014

(Expressed in millions of US Dollars, unless otherwise indicated)



	2016	2015	2014
Loss	(4,349)	(8,611)	(7,503)
Items that will not be reclassified to the statement of income:			
Actuarial gains (losses) on defined benefit pension plans	(5,296)	(53)	(5,947)
Deferred income tax	1,058	(14)	1,157
	(4,238)	(67)	(4,790)
Share of other comprehensive income (losses) in equity-accounted investments ...	(3)	(1)	—
Items that may be reclassified subsequently to the statement of income:			
Unrealized gains / (losses) on cash flow hedge—highly probable future exports			
Recognized in shareholders' equity	10,779	(21,132)	(6,443)
Reclassified to the statement of income	2,841	2,057	702
Deferred income tax	(4,629)	6,486	1,953
	8,991	(12,589)	(3,788)
Unrealized gains / (losses) on cash flow hedge—others			
Recognized in shareholders' equity	8	10	6
Reclassified to the statement of income	—	—	1
	8	10	7
Cumulative translation adjustments (*)			
Recognized in shareholders' equity	9,529	(29,248)	(15,606)
Reclassified to the statement of income	1,457	—	—
	10,986	(29,248)	(15,606)
Share of other comprehensive income (losses) in equity-accounted investments ...	344	(860)	(263)
Total other comprehensive income (loss):	16,088	(42,755)	(24,440)
Total comprehensive income (loss)	11,739	(51,366)	(31,943)
Comprehensive income (loss) attributable to:			
Shareholders of Petrobras	11,236	(51,209)	(31,729)
Non-controlling interests	503	(157)	(214)
Total comprehensive income (loss)	11,739	(51,366)	(31,943)

(*) Includes a loss of US\$ 413 (a gain of US\$ 1,002 in 2015) of cumulative translation adjustments in associates and joint ventures.

The notes form an integral part of these financial statements.



Petróleo Brasileiro S.A. – Petrobras

Consolidated Statement of Cash Flows

December 31, 2016, 2015 and 2014

(Expressed in millions of US Dollars, unless otherwise indicated)



Cash flows from Operating activities	2016	2015	2014
Loss	(4,349)	(8,611)	(7,503)
Adjustments for:			
Pension and medical benefits (actuarial expense)	2,304	1,960	2,022
Results in equity-accounted investments	218	177	(218)
Depreciation, depletion and amortization	13,965	11,591	13,023
Impairment of assets	6,193	12,299	16,823
Exploratory expenditures written-off	1,281	1,441	2,178
Gains and losses on disposal/written-offs of assets	(293)	758	481
Foreign exchange, indexation and finance charges	7,962	9,172	3,571
Write-off—overpayments incorrectly capitalized	—	—	2,527
Deferred income taxes, net	(913)	(2,043)	(3,045)
Allowance (reversals) for impairment of trade and others receivables	1,131	941	2,378
Inventory write-down to net realizable value	343	431	1,015
Reclassification of cumulative translation adjustment—CTA	1,457	—	—
Revision and unwinding of discount on the provision for decommissioning costs	(836)	382	448
Decrease (Increase) in assets			
Trade and other receivables, net	(39)	(396)	(2,507)
Inventories	(518)	291	570
Judicial deposits	(986)	(789)	(506)
Other assets	(319)	(819)	(2,297)
Increase (Decrease) in liabilities			
Trade payables	(1,060)	(1,226)	(1,211)
Other taxes payable	1,047	1,628	(392)
Pension and medical benefits	(766)	(709)	(834)
Income taxes paid	(372)	(567)	(853)
Other liabilities	664	76	1,079
Net cash provided by operating activities	<u>26,114</u>	<u>25,987</u>	<u>26,749</u>
Cash flows from Investing activities			
Capital expenditures	(14,085)	(21,653)	(34,808)
Increase (Decrease) in investments in investees	(125)	(108)	(329)
Proceeds from disposal of assets—Divestment	2,205	224	3,744
Divestment (Investment) in marketable securities	229	7,982	(5,469)
Dividends received	473	259	387
Net cash used in investing activities	<u>(11,303)</u>	<u>(13,296)</u>	<u>(36,475)</u>
Cash flows from Financing activities			
Investments by non-controlling interest	29	100	(98)
Financing and loans, net:			
Proceeds from financing	18,897	17,420	31,050
Repayment of principal	(30,660)	(14,809)	(10,031)
Repayment of interest	(7,308)	(6,305)	(5,995)
Dividends paid to Shareholders of Petrobras	—	—	(3,918)
Dividends paid to Non-controlling interests	(72)	(74)	(117)
Proceeds from sale of interest without loss of control (*)	—	503	—
Net cash used in financing activities	<u>(19,114)</u>	<u>(3,165)</u>	<u>10,891</u>
Effect of exchange rate changes on cash and cash equivalents	450	(1,123)	(378)
Net increase / (decrease) in cash and cash equivalents	<u>(3,853)</u>	<u>8,403</u>	<u>787</u>
Cash and cash equivalents at the beginning of the year	<u>25,058</u>	<u>16,655</u>	<u>15,868</u>
Cash and cash equivalents at the end of the year	<u>21,205</u>	<u>25,058</u>	<u>16,655</u>

(*) Reclassified from Investing activities as set out in note 2.3.

The notes form an integral part of these financial statements.

Petróleo Brasileiro S.A. – Petrobras

Consolidated Statement of Changes in Shareholders' Equity

December 31, 2016, 2015 and 2014

(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			Shareholders' equity attributable to shareholders of Petrobras		Non-controlling interests		Total consolidated shareholders' equity	
	Share Capital	Share issuance costs	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	Retained earnings	Shareholders' equity attributable to shareholders of Petrobras	Non-controlling interests	Total consolidated shareholders' equity		
Balance at January 1, 2014	107,371	(279)	674	(26,440)	(3,911)	(2,505)	(178)	7,919	2,182	729	62,965	148,527	596	149,123		
Capital increase with reserves	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Realization of deemed cost	—	—	—	—	—	(33,034)	—	—	—	73,795	—	148,527	596	149,123		
Capital transactions	—	—	—	—	—	—	—	—	(9)	—	—	—	—	—		
Loss	—	—	(526)	—	—	(4)	—	—	—	—	—	(526)	—	—		
Other comprehensive income (loss)	—	—	—	—	—	—	—	—	—	—	(7,367)	(7,367)	393	(133)		
Appropriations:	—	—	—	(15,528)	(3,788)	(4,790)	(256)	—	—	—	—	(24,362)	(78)	(24,440)		
Transfer to reserves	—	—	—	—	—	—	—	—	—	—	7,363	—	(69)	—		
Dividends	107,380	(279)	148	(41,968)	(7,699)	(7,295)	(438)	7,919	2,182	55,602	—	116,272	706	116,978		
Balance at December 31, 2014	107,101	—	148	—	—	(57,400)	—	—	—	66,423	—	116,272	706	116,978		
Realization of deemed cost	—	—	—	—	—	(4)	—	—	—	—	4	—	—	—		
Capital transactions	—	—	173	—	—	—	—	—	—	—	(8,450)	(8,450)	338	511		
Loss	—	—	—	—	—	—	—	—	—	—	—	—	(161)	(8,611)		
Other comprehensive income (loss)	—	—	—	(29,252)	(12,589)	(67)	(851)	—	—	—	—	(42,759)	4	(42,755)		
Appropriations:	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Transfer to reserves	—	—	—	—	—	—	—	—	—	(8,446)	8,446	—	(68)	—		
Dividends	107,380	(279)	321	(71,220)	(20,288)	(7,362)	(1,293)	7,919	2,182	47,156	—	65,236	819	66,055		
Balance at December 31, 2015	107,101	—	321	—	—	(100,163)	—	—	—	57,977	—	65,236	819	66,055		
Realization of deemed cost	—	—	—	—	—	(4)	—	—	—	—	4	—	—	—		
Capital transactions	—	—	307	—	—	—	—	—	—	—	(4,838)	(4,838)	(427)	(120)		
Net income (loss)	—	—	—	—	—	—	—	—	—	—	—	—	489	(4,349)		
Other comprehensive income (loss)	—	—	—	10,972	8,991	349	—	—	—	—	—	16,074	14	16,088		
Appropriations:	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Transfer to reserves	—	—	—	—	—	—	—	—	—	(4,834)	4,834	—	(124)	—		
Dividends	107,380	(279)	628	(60,248)	(11,297)	(948)	—	7,919	2,182	42,322	—	76,779	771	77,550		
Balance at December 31, 2016	107,101	—	628	—	—	(84,093)	—	—	—	53,143	—	76,779	771	77,550		

The notes form an integral part of these financial statements.



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Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)**1. The Company and its operations**

Petróleo Brasileiro S.A.—Petrobras is a company controlled by the Brazilian government dedicated, directly or through its subsidiaries (referred to jointly as “Petrobras”, “the Company”, or “Petrobras Group”), either independently or through joint ventures or similar arrangements with third parties, 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. The Company’s head office is located in Rio de Janeiro – RJ, Brazil.

2. Basis of preparation**2.1. Statement of compliance and authorization of 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), and presents all relevant information related to the financial statements.

These financial statements have been prepared under the historical cost convention, except for available-for-sale financial assets, financial assets and financial liabilities measured at fair value and certain current and non-current assets and liabilities, as set out in the summary of significant accounting policies.

The annual consolidated financial statements were approved and authorized for issue by the Company’s Board of Directors in a meeting held on April 26, 2017.

2.2. Functional and presentation currency

The functional currency of Petrobras and all of its Brazilian subsidiaries is the Brazilian Real. The functional currency of most of the Petrobras entities that operate outside Brazil is the U.S. dollar.

Petrobras has selected the U.S. Dollar as its presentation currency. The financial statements have been translated from the functional currency (Brazilian Real) into the presentation currency (U.S. Dollar) in accordance with IAS 21 – “The effects of changes in foreign exchange rates”. 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 year. Equity items are translated using the exchange rates prevailing at the dates of the transactions. 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 (loss) in the consolidated shareholders’ equity.

Brazilian Real x U.S. Dollar	Mar 2016	Jun 2016	Sep 2016	Dec 2016	Mar 2015	Jun 2015	Sep 2015	Dec 2015
Quarterly average exchange rate	3.91	3.51	3.25	3.29	2.86	3.07	3.55	3.84
Period-end exchange rate	3.56	3.21	3.25	3.26	3.21	3.10	3.97	3.90

Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



2.3. Corrections

For the preparation of the financial statements for the year ended December 31, 2016, the Company has corrected certain amounts from prior periods to conform to current period presentations. The Company concluded that these corrections are not material and they did not affect the income statement and the shareholders' equity, as described below:

- Receivables from the electricity sector in the amount of US\$ 249, previously accounted for as current assets, were reclassified to trade and other receivables, net within non-current assets;
- Finance lease installments amounting to US\$ 7 were reclassified from trade payables to finance lease obligations within current liabilities, as well as finance lease installments amounting to US\$ 38 were reclassified from other non-current liabilities to finance lease obligations within non-current liabilities;
- Proceeds from disposal of interests in subsidiaries without loss of control in the amount of US\$ 503, previously presented in the Statement of Cash Flows as investing activities, were reclassified to financing activities.
- Fair value of finance debt changed from US\$ 98,600 to US\$ 109,168 due to changes in the finance debts fair value approach based on inputs other than quoted prices (level 2), as set out in note 17.1.

3. The “Lava Jato (Car Wash) Operation” and its effects on the Company

In 2009, the Brazilian Federal Police (*Polícia Federal*) began an investigation called “Lava Jato” (Car Wash) aimed at criminal organizations engaged in money laundering in several Brazilian states. The Lava Jato investigation is extremely broad and involves numerous investigations into several criminal practices focusing on crimes committed by individuals in different parts of the country and sectors of the Brazilian economy.

Beginning in 2014, the Brazilian Federal Prosecutor's Office focused part of its investigation on irregularities involving Petrobras's contractors and suppliers and uncovered a broad payment scheme that involved a wide range of participants, including former Petrobras personnel. Based on the information available to Petrobras, the payment scheme involved a group of companies that, between 2004 and April 2012, colluded to obtain contracts with Petrobras, overcharge the Company under those contracts and use the overpayment received under the contracts to fund improper payments to political parties, elected officials or other public officials, individual contractors and suppliers personnel, former Petrobras personnel and other individuals involved in the scheme. Petrobras refers to this scheme as the “payment scheme” and to the companies involved in the scheme as “cartel members”. The Company did not make any improper payment.

In addition to the payment scheme, the investigations identified specific instances of other contractors and suppliers that overcharged Petrobras and allegedly used the overpayment received from their contracts with the Company to fund improper payments, unrelated to the payment scheme, to certain former Petrobras personnel. Those contractors and suppliers are not cartel members and acted individually. Petrobras refers to these specific cases as the “unrelated payments.”

Certain former executives of Petrobras were arrested and/or charged for certain crimes such as money-laundering and passive corruption. Other former executives of the Company as well as executives of Petrobras contractors and suppliers were or may be charged as a result of the investigation.



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Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)

The amounts paid by Petrobras related to contracts with contractors and suppliers involved in the payment scheme were included in historical costs of its property, plant and equipment. However, the Company believes that, under International Accounting Standard IAS 16 – Property, Plant and Equipment, the portion of the payments made to these companies and used by them to make improper payments, which represents additional charges incurred as a result of the payments scheme, should not have been capitalized. Thus, in the third quarter of 2014, the Company wrote off US\$2,527 of capitalized costs representing amounts that Petrobras overpaid for the acquisition of property, plant and equipment in prior years.

The Company has continuously monitored the investigations for additional information and to assess any potential impact on the adjustments made. No additional information has been identified that impacted the adopted calculation methodology and the recorded adjustment in 2014 for the preparation of the financial statements for the year ended December 31, 2016.

Petrobras will continue to monitor the results of the investigations and the availability of other information concerning the payment scheme. If information becomes available that indicates with sufficient precision that the estimate described above should be adjusted, Petrobras will evaluate whether the adjustment is material and, if so, recognize it.

3.1. The Company's response to the facts uncovered in the investigation

The Company has been closely monitoring the investigations and cooperating fully with the Brazilian Federal Police (*Policia Federal*), the Brazilian Public Prosecutor's Office (*Ministério Público Federal*), Federal Auditor's Office (*Tribunal de Contas da União – TCU*), and the Ministry of Transparency, Supervision and Control (*Ministério da Transparência, Fiscalização e Controle*) in the investigation of all crimes and irregularities. We have responded to numerous requests for documents and information from these authorities.

The Company has also cooperated with the U.S. Securities and Exchange Commission (SEC) and the United States Department of Justice (DOJ), which, since November 2014, have been investigating potential violations of U.S. law based on information disclosed as a result of the Lava Jato investigation.

We have been formally recognized as a victim of the crimes identified under the Lava Jato investigation by the Brazilian Federal Prosecutor's Office, the lower court hearing the case and also by the Brazilian Supreme Court. As a result, we have entered into 29 criminal proceedings as an assistant to the prosecutor. In addition, we have entered into five criminal proceedings as an interested party. We have also renewed our commitment to continue cooperating with authorities to clarify the issues and report them regularly to our investors and to the public in general.

We do not tolerate corrupt practices and illegal acts perpetuated by any of our employees. Accordingly, in 2016, the Company continued to implement several measures as a response to the facts uncovered in the "Lava Jato" investigation and to improve its corporate governance and compliance systems as described below.

As part of the process of strengthening the internal control structure, among the measures taken in 2016, the Company approved its new Corporate Compliance Policy, performed training programs with personnel and executives focused on the prevention of corruption, reviewed the "Compliance Agents" initiative and adapted its findings to the new organization structure, conducted nearly 12,000 integrity due diligence procedures, and performed background checks as part of the decision making for appointing personnel to key positions.



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Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)

Internal investigations are still in progress and are being carried out by two independent firms hired in October 2014, which report directly to a Special Committee that serves as a reporting line to the Board of Directors. The Special Committee is composed of our Governance and Compliance Officer, João Adalberto Elek Junior and two other independent and recognized experts: Ellen Gracie Northfleet, former Chief Justice of the Brazilian Supreme Court, who is recognized internationally as a jurist with great experience in analyzing complex legal issues; and Andreas Pohlmann from Germany, former Chief Compliance Officer of Siemens AG (2007-2010), who has broad experience in compliance and corporate governance matters.

We established Internal Investigative Committees (Comissões Internas de Apuração) to investigate instances of non-compliance with corporate rules, procedures or regulations. The Committees' investigation results are shared with the Brazilian authorities as they progress.

In addition, the Company has been taking the necessary procedural steps to seek compensation for damages suffered from the improper payments scheme, including those related to its reputation.

Accordingly, the Company joined 12 public civil suits addressing acts of administrative misconduct filed by the Brazilian Public Prosecutor's Office and the Federal Government, including demands for compensation for reputation damages.

In order to secure future compensation to Petrobras for each civil action related to misconduct, the courts granted cautionary orders in certain actions to impound defendants' property.

To the extent that any of the proceedings resulting from the Lava Jato investigation involve leniency agreements with cartel members or plea agreements with individuals pursuant to which they agree to return funds, the Company may be entitled to receive a portion of such funds. Nevertheless, the Company is unable to reliably estimate further recoverable amounts at this moment. Any recoverable amount will be recognized as income when received or when their economic benefits become virtually certain.

In 2016, the Company recognized the amount of US\$ 131 as compensations for damages relating to the "Lava Jato" Operation (US\$ 72 up to 2015) pursuant to leniency and cooperation agreements.

3.2. Approach adopted by the Company to adjust its property, plant and equipment for overpayments

As it is not possible to specifically identify the amounts of each overpayment to contractors and suppliers, or periods over which such payments occurred, Petrobras developed a methodology to estimate the aggregate amount that it overpaid under the payment scheme, in order to determine the amount of the write-off representing the overstatement of its assets resulting from overpayments used to fund improper payments.

As it is impracticable to identify the periods and amounts of overpayments incurred, the Company developed a methodology to estimate the adjustment incurred in property, plant and equipment in the third quarter of 2014 using the five steps described below:

(1) Identify contractual counterparties: the Company listed all the companies identified as cartel members, and using that information the Company identified all of the contractors and suppliers that were either so identified or were part of consortia including entities so identified.



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Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)

(2) Identify the period: the Company concluded from testimony that the payment scheme was operating from 2004 through April 2012.

(3) Identify contracts: the Company identified all contracts entered into with the counterparties identified in step 1 during the period identified in step 2, which included supplemental contracts when the original contract was entered into between 2004 and April 2012. It has identified all of the property, plant and equipment related to those contracts.

(4) Identify payments: the Company calculated the total contract values under the contracts mentioned in step 3.

(5) Apply a fixed percentage to the amount determined in Step 4: the Company estimated the aggregate overpayment by applying a percentage indicated in the depositions (3%) to the total amounts for identified contracts.

For overpayments attributable to non-cartel members, unrelated to the payment scheme, the Company included in the write-off for incorrectly capitalized overpayments the specific amounts of improper payments or percentages of contract values, as described in the testimony, which were used by those suppliers and contractors to fund improper payments.

For more information on the approach adopted by the Company to estimate the write-off for overpayments incorrectly capitalized, see note 3 to the Company's audited consolidated financial statements for 2014.

The Company considered all available information for purposes of the preparation of the financial statements for the year ended December 31, 2016 and did not identify any additional information that would impact the adopted calculation methodology and consequently require additional write-offs.

Petrobras has closely monitored the progress of both the investigation by Brazilian authorities and the independent law firms and no new facts that could impact the Company's previously recorded adjustments or change the methodology adopted were discovered. The Company will continuously monitor these investigations for additional information and will review their potential impact on the adjustment made.

3.3. Investigations involving the Company

Petrobras is not a target of the Lava Jato investigation and is formally recognized as a victim of the improper payments scheme by the Brazilian Authorities.

On November 21, 2014, Petrobras received a subpoena from the U.S. Securities and Exchange Commission (SEC) requesting certain documents and information about the Company. The Company has been complying with the subpoena and intends to continue to do so, working with the independent Brazilian and U.S. law firms that were hired to conduct an independent internal investigation.

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 stock market. The Company has provided all relevant information required by the authorities.

Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



3.4. Legal proceedings involving the Company

Note 30 provides information about class actions and other material legal proceedings.

4. Summary of significant accounting policies

The accounting policies set out below have been consistently applied to all periods.

4.1. Basis of consolidation

The consolidated financial statements include the financial information of Petrobras and the entities it controls (subsidiaries), joint operations 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.

Petrobras has no equity interest in its consolidated structured entities, but control is determined by the power the Company has over the relevant activities of such entities. Consolidated structured entities are set out below:

Consolidated structured entities	Country	Main segment
Charter Development LLC – CDC	U.S.A	E&P
Companhia de Desenvolvimento e Modernização de Plantas Industriais – CDMPI	Brazil	RT&M
PDET Offshore S.A.	Brazil	E&P
Fundo de Investimento em Direitos Creditórios Não-padronizados do Sistema Petrobras	Brazil	Corporate
Fundo de Investimento em Direitos Creditórios Padronizados do Sistema Petrobras	Brazil	Corporate

The consolidation procedures involve combining assets, liabilities, income and expenses, according to their function and eliminating all intragroup balances and transactions, including unrealized profits arising from intragroup transactions.

Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



4.2. Business segment reporting

The information related to the Company's operating segments (business areas) is prepared based on items directly attributable to each segment, as well as items that can be allocated to each segment on a reasonable basis. This information reflects the views of the Company's Board of Executive Officers (Chief Operating Decision Maker – CODM).

The measurement of segment results includes transactions carried out with third parties and transactions between business areas, which are charged at internal transfer prices defined by the relevant areas using methods based on market parameters.

The Company's operating segments comprises the following business areas:

- a) 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 and the sale of surplus crude oil and oil products produced in the natural gas processing plants to the domestic and foreign markets. The E&P segment also operates through partnerships with other companies;
- b) 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, exports of ethanol, extraction and processing of shale, as well as holding interests in petrochemical companies in Brazil;
- c) Gas and Power: this segment covers the activities of transportation and trading of natural gas produced in Brazil and abroad, imported natural gas, transportation and trading of LNG (liquid natural gas), generation and trading of electricity, as well as holding interests in transporters and distributors of natural gas and in thermoelectric power plants in Brazil, in addition to being responsible for the fertilizer business;
- d) Biofuels: this segment covers the activities of production of biodiesel and its co-products, as well as the ethanol-related activities: equity investments, production and trading of ethanol, sugar and the surplus electric power generated from sugarcane bagasse; and
- e) Distribution: this segment covers the activities of Petrobras Distribuidora S.A, which sells oil products, ethanol and vehicle natural gas in Brazil. This segment also includes distribution of oil products operations abroad (South America).

The corporate segment comprises the items that cannot be attributed to the other segments, notably 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.

Assets and the statement of income by business area are presented in note 29.



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Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)**4.3. Financial instruments****4.3.1. Cash and cash equivalents**

Cash and cash equivalents comprise cash in 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.

4.3.2. Marketable securities

Marketable securities comprise investments in debt or equity securities. These instruments are initially measured at fair value, classified and subsequently measured as set out below:

- Fair value through profit or loss – includes financial instruments purchased and held for trading in the short term. These instruments are measured at fair value with changes recognized in the statement of income in finance income (expenses).
- Held-to-maturity – includes non-derivative financial instruments with fixed or determinable payments and fixed maturity, for which management has the clear intention and ability to hold to maturity. These instruments are measured at amortized cost using the effective interest rate method.
- Available-for-sale – includes non-derivative financial instruments that are designated as available for sale or are not classified as financial assets at fair value through profit or loss or held-to-maturity investments. These instruments are measured at fair value and changes are recognized in other comprehensive income, in the shareholders' equity and recycled to the statement of income when the instruments are derecognized or realized.

Subsequent changes attributable to interest income or changes in foreign exchange rates or inflation indexation (price indexes) are recognized in the statement of income for all categories, when applicable.

4.3.3. Trade receivables

Trade receivables are initially measured at the fair value of the consideration to be received and, subsequently, at amortized cost using the effective interest rate method and adjusted for allowances for impairment or uncollectible receivables.

The Company recognizes an allowance for impairment of trade receivables when there is objective evidence that a loss event occurred after the initial recognition of the receivable and has an impact on the estimated future cash flows, which can be reliably estimated. Impairment losses on trade receivables are recognized in the statement of income in selling expenses.

4.3.4. Loans and financing (Debt)

Loans and financing are initially recognized at fair value less transaction costs incurred and subsequently measured at amortized cost using the effective interest rate method.

4.3.5. Derivative financial instruments

Derivative financial instruments are recognized in the statement of financial position as assets or liabilities and are initially and subsequently measured at fair value.



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Petróleo Brasileiro S.A. – Petrobras

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Gains or losses arising from changes in fair value are recognized in the statement of income in finance income (finance expense), unless the derivative is qualified and designated for hedge accounting.

4.3.6. Cash flow hedge accounting

The Company qualifies certain transactions for cash flow hedge accounting.

Hedging relationships qualify for cash flow hedges when they involve the hedging of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that may impact the statement of income.

Gains or losses relating to the effective portion of the hedge are recognized in other comprehensive income, in the shareholders' equity and recycled to the statement of income in finance income (expense) in the periods when the hedged item affects the statement of income. The gains or losses relating to the ineffective portion are immediately recognized in the statement of income.

When the hedging instrument expires or settled in advance, no longer meets the criteria for hedge accounting or the Company revokes the designation, the cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income from the period when the hedge was effective is recorded separately in equity until the forecast transaction occurs. When the forecast transaction is no longer expected to occur, the cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is immediately reclassified from shareholders' equity to the statement of income.

4.4. Inventories

Inventories are determined by the weighted average cost method and mainly comprise crude oil, intermediate products and oil products, as well as natural gas, LNG, fertilizers and biofuels, stated at the lower of the average cost, and their net realizable value.

Crude oil and LNG inventories can be traded or used for production of oil products and/or electricity generation, respectively.

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.

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.

The amounts presented in the categories above include imports in transit, which are stated at their cost of purchase.



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4.5. 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.

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.

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.

4.6. Business combinations and goodwill

Acquisitions of businesses are accounted for using the acquisition method when control is obtained. Combinations of entities under common control are not accounted for as business combinations.

The acquisition method requires that the identifiable assets acquired and the liabilities assumed be measured at the acquisition-date fair value. Amounts paid in excess of the fair value are recognized as goodwill. In the case of a bargain purchase, a gain is recognized in the statement of income when the acquisition cost is lower than the acquisition-date fair value of the net assets acquired.

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 over the carrying value of the ownership interest acquired/dispensed is recognized in shareholders' equity as changes in interest in subsidiaries.

4.7. Oil and Gas exploration and development expenditures

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:

- Costs related to geological and geophysical activities are expensed when incurred.
- 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 upon the declaration of commerciality.

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- Costs directly attributable to exploratory wells pending determination of proved reserves are capitalized within property, plant and equipment. Exploratory wells that have discovered oil and gas reserves, which cannot be classified as proved when drilling is completed, 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. An internal commission of technical executives of Petrobras reviews these conditions monthly for each well, by analysis of geoscience and engineering data, existing economic conditions, operating methods and government regulations.
- Costs related to exploratory wells drilled in areas of unproved reserves are charged to expense when determined to be dry or uneconomic by an expert commission of the Company.
- 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.

4.8. 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 of 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. Borrowing costs are amortized during the useful lives of the assets or by applying the unit-of-production method to the related assets. 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.

Whenever an asset is directly associated to oil and gas production and its estimated lifecycle is equal or greater than the estimated length of reserves depletion, the depreciation of this asset will be accounted for pursuant to the unit-of-production method.

Assets depreciated based on the straight line method include: (i) assets related to oil and gas production with useful lives shorter than the life of the field; (ii) floating platforms; and (iii) assets that are unrelated to oil and gas production.

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The unit-of-production method of depreciation (amortization) is computed based on a unit-of-production basis (monthly production) over the proved developed oil and gas reserves, applied on a field-by-field basis.

Amortization of amounts paid for obtaining concessions for exploration of oil and natural gas of producing properties, such as signature bonuses (capitalized acquisition costs) is recognized using the unit-of-production method, computed based on the units of monthly production over the total proved oil and gas reserves, applied on a field-by-field basis.

Except for land, which is not depreciated, other property, plant and equipment are depreciated on a straight-line basis over its useful life. Note 12.2 provides further information on the estimated useful life by class of assets.

4.9. Intangible assets

Intangible assets are measured at the acquisition cost, less accumulated amortization and impairment losses and comprise rights and concessions, including the signature bonus paid for obtaining concessions for exploration of oil and natural gas (capitalized acquisition costs), public service concessions, trademarks, patents, software and goodwill.

Signature bonuses paid for obtaining concessions for exploration of oil and natural gas are initially capitalized within intangible assets and are transferred to property, plant and equipment upon the declaration of commerciality. They are not amortized before their transference to property, plant and equipment. Intangible assets with a finite useful life, other than amounts paid for obtaining concessions for exploration of oil and natural gas of producing properties, are amortized over the useful life of the asset on a straight-line basis.

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.

Intangible assets with an indefinite useful life are not amortized but are tested annually for impairment. Their useful lives are reviewed annually.

4.10. 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 (the cash-generating unit – CGU).

Assets related to development and production of oil and gas and (fields or group of fields) assets that have indefinite useful lives, such as goodwill acquired in business combinations, are tested for impairment annually, irrespective of whether there is any indication of impairment, or when any indication of impairment occurs.

The impairment test is performed through the comparison of the carrying amount of an individual asset or a cash-generating unit (CGU) with its recoverable amount. Whenever the recoverable amount is less than the carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use. 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, except when specifically indicated.



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Value in use is estimated based on the present value of the risk-adjusted (for specific risks) future cash flows expected to arise from the continuing use of an asset or cash-generating unit, discounted at a pre-tax discount rate. This rate is obtained from the Company's post-tax weighted average cost of capital (WACC). Cash flow projections are mainly based on the following assumptions: prices based on the Company's most recent business and management plan and strategic plan; production curves associated with existing projects in the Company's portfolio, operating costs reflecting current market conditions, and investments required for carrying out the projects.

Reversal of previously recognized impairment losses is permitted for assets other than goodwill.

4.11. Impairment of associates and joint ventures (equity-accounted investments)

The Company assesses its investments in associates and joint ventures (equity-accounted investments) for impairment whenever there is an indication that their carrying amounts may not be recoverable.

By 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 the proportion to the Company's interests in the present value of future cash flow projections via dividends and other distributions.

Reversals of previously recognized impairment losses are permitted.

4.12. Leases

Leases that transfer substantially all the risks and rewards incidental to ownership of the leased item are recognized as finance leases.

For finance leases, when the Company is the lessee, assets and liabilities are recognized at the lower of the fair value of the leased property or the present value of the minimum lease payments, both determined at the inception of the lease.

Capitalized lease assets are depreciated on a systematic basis consistent with the depreciation policy the Company adopts for property, plant and equipment that are owned. Where there is no reasonable certainty that the Company will obtain ownership by the end of the lease term, capitalized lease assets are depreciated over the shorter of the lease term or the estimated useful life of the asset.

When the Company is the lessor, a receivable is recognized at the amount of the net investment in the lease.

If a lease does not transfer substantially all the risks and rewards incidental to ownership of the leased item, it is classified as an operating lease. Operating leases are recognized as expenses over the period of the lease.

Contingent rents are recognized as expenses when incurred.

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4.13. Assets classified as 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 Company has an effective divestment program and is considering opportunities for divestments in several areas where it operates. The divestment portfolio is dynamic because changes in market conditions and/or in the Company's evaluation of its different businesses may affect any ongoing negotiation or potential transaction.

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. In addition, the sale should be expected to qualify for recognition as a completed sale within one year from the date of 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.

4.14. Decommissioning costs

Decommissioning costs are future obligations to perform environmental restoration, dismantle and remove a facility when the Company terminates its operations due to the exhaustion of the area or economic feasibility.

Costs related to the abandonment and dismantling of areas are recognized as part of the cost of an asset (with a corresponding liability) based on the present value of the expected future cash outflows, discounted at a risk-adjusted rate when a future legal obligation exists and can be reliably measured.

Decommissioning costs estimates for oil and natural gas producing properties are initially recognized after a field is declared to be commercially viable.

The part of the cost of an asset relating to decommissioning costs estimates is depreciated on the same basis of its corresponding property, plant and equipment. Unwinding of the discount on the corresponding liability is recognized as a finance expense, when incurred. Decommissioning costs estimates are revised annually, at least.

4.15. Provisions, contingent assets and contingent liabilities

Provisions are recognized when there is a present obligation that arises from past events and for which it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, which must be reasonably estimable.

Contingent assets and liabilities are not recognized, but contingent liabilities are disclosed whenever the likelihood of loss is considered possible, including those for which the amount outflow of resources are not reasonably estimable.



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Income tax expense for the period includes current and deferred taxes.

a) Current income taxes

Since 2015, the Company has adopted the provisions of law 12.973/14 in order to determine its taxable profit for the year. This law superseded the Transition Tax Regime (*Regime Tributário de Transição-RTT*).

Current tax expense is computed based on taxable profit for the year, calculated 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 a legal right and intention to set off current tax assets and current tax liabilities exists.

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. Deferred income tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences and carryforward of unused tax losses or credits to the extent that it is probable that taxable profit will be available against which those deductible temporary differences can be utilized. When there are insufficient taxable temporary differences relating to the same taxation authority and the same taxable entity, a deferred tax is recognized to the extent that it is probable that the entity will have sufficient taxable profit in future periods, based on projections approved by management and supported by the Company's Business and Management Plan.

Deferred tax assets and deferred tax liabilities are measured at the tax rates that have been enacted or substantively enacted by the end of the reporting period, and they 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.

4.17. Employee benefits (Post-Employment)

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.

Actuarial assumptions include demographic assumptions, financial assumptions, medical costs estimates, historical data related to benefits paid and employee contributions.

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.

Changes in the net defined benefit liability (asset) are recognized when they occur, as follows: i) service cost and net interest cost in the statement of income; and ii) remeasurements in other comprehensive income.



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Service cost 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.

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, less interest income earned on these assets.

The Company also contributes amounts to defined contribution plans, that are expensed when incurred and are computed based on a percentage of salaries.

4.18. Share capital and distributions to shareholders

Share capital comprises common shares and preferred shares. Incremental costs directly attributable to the issue of new shares (share issuance costs) are presented (net of tax) in shareholders' equity as a deduction from the proceeds.

To the extent the Company proposes distributions to shareholders, such dividends and interest on capital are determined in accordance with the limits defined in the Brazilian Corporation Law and in the Company's bylaws.

Interest on capital is a form of dividend distribution, which is deductible for tax purposes in Brazil to the entity distributing interest on capital. Tax benefits from the deduction of interest on capital are recognized in the statement of income.

4.19. Other comprehensive income

Other comprehensive income includes: i) changes in fair value of available-for-sale financial instruments; ii) effective portion of cash flow hedge; iii) remeasurement of defined benefit plans; and iv) cumulative translation adjustment.

4.20. Government grants

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.

4.21. Recognition of revenue, costs and expenses

Revenue is recognized when it is probable that the economic benefits associated with the transaction will flow to the Company and the amount of revenue and the costs incurred or to be incurred in the transaction can be measured reliably. Revenue is measured at the fair value of the consideration received or receivable for products sold and services provided in the normal course of business, net of returns, discounts and sales taxes.



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Revenues from the sale of crude oil and oil products, petrochemical products, natural gas, biofuels and other related products are recognized when the Company retains neither continuing managerial involvement nor effective control over the products sold and the significant risks and rewards of ownership have been transferred to the customer, which is usually when legal title passes to the customer, pursuant to the terms of the sales contract. Sales revenues from freight and other services provided are recognized based on the stage of completion of the transaction.

Finance income and expense mainly comprise interest income on financial investments and government bonds, interest expense on debt, gains or losses on marketable securities measured at fair value, as well as net foreign exchange and inflation indexation charges. Finance expense does not include borrowing costs which are capitalized as part of the costs of these assets.

Revenue, costs and expenses are recognized on the accrual basis.

5. 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 those areas that require the most judgment or involve a higher degree of complexity in the application of the accounting practices and that could materially affect the Company's financial condition and results of operations is set out as follows:

5.1. Oil and gas reserves

Oil and gas reserves are estimated based on economic, geological and engineering information, such as well logs, pressure data and drilling fluid sample data and are used as the basis for calculating unit-of-production depreciation, depletion and amortization rates, impairment testing, decommissioning costs estimates and for projections of high probable future exports subject to cash flow hedge.

These estimates require the application of judgment and are reviewed at least annually based on a re-evaluation of already available geological, reservoir or production data and new geological, reservoir or production data, as well as changes in prices and costs that are used in the estimation of reserves. 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 the two criteria are: selling price of crude oil (ANP/SPE establishes the use of the Company's forecasted price, while SEC determines the use of an average price considering each first day of the last 12 months); concession period (ANP permission for the use of reserve quantities after the concession period). Additionally, pursuant to the SEC criteria, only proved reserves are determined, while proved and unproved reserves are determined pursuant to the ANP/SPE criteria.



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According to the definitions prescribed by the SEC, proved oil and gas reserves are the estimated quantities which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions (i.e., prices and costs as of the date the estimate is made). Proved reserves are subdivided into developed and undeveloped reserves.

Proved developed oil and gas reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods.

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 supplementary information.

a) Impacts of oil and gas reserves on depreciation, depletion and amortization

Depreciation, depletion and amortization are measured based on estimates of reserves prepared by the Company's technicians in a manner consistent with SEC definitions. Reviews 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.

Notes 4.8 and 12 provide more detailed information on depreciation, amortization and depletion.

b) Impacts of oil and gas reserves on impairment testing

The Company assesses the recoverability of the carrying amounts of oil and gas exploration and development assets based on their value in use, as defined in note 4.10. In general, analyses are based on proved reserves and probable reserves pursuant to the ANP/SPE definitions.

c) Impacts of oil and gas reserves on decommissioning costs estimates

The timing of abandonment and dismantling of on shore and offshore 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.

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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 scope of its Business and Management Plan—BMP and its Strategic Plan projections, which are driven by proved and probable reserves estimates. Reviews in such reserves may impact future exports forecasts and, consequently, hedge relationship designations may also be impacted. For example, whenever future exports for which a hedging relationship has been designated are no longer considered as highly probable, the Company revokes this designation and the cumulative foreign exchange gains or losses recognized in other comprehensive income remain in shareholders' equity until the forecast exports occur. Additionally, if the future exports are also no longer expected to occur, the cumulative foreign exchange recognized in other comprehensive income is immediately recycled from shareholders' equity to the statement of income.

5.2. Main assumptions for impairment testing

Impairment testing involves uncertainties mainly related to its key assumptions: average Brent prices and Real/U.S. dollar average exchange rate. These assumptions are relevant to virtually all of the Company's business segments and a significant number of interdependent variables are derived from these key assumptions and there is a high degree of complexity in their application in determining value in use for impairment tests.

The markets for crude oil and natural gas have a history of significant price volatility and although prices can drop precipitously, industry prices over the long term tends to continue being driven by market supply and demand fundamentals.

Projections relating to the key assumptions are derived from the Business and Management Plan for the first five years and consistent with the Strategic Plan for the following years. These assumptions are consistent with market evidence, such as independent macro-economic forecasts, industry commentators 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 historical idle capacity, industry costs, oil and gas production forecasted by specialized firms, the relationship between the oil price and the U.S. dollar exchange rate, as well as the impact of OPEC on the oil market.

Changes in the economic environment may result in changing assumptions and, consequently, the recognition of impairment charges on certain assets or CGUs. For example, the Brent price directly impacts the Company's sales revenue and refining margins, while the Real/U.S. dollar exchange rate mainly impacts our capital and operating expenditures.

Changes in the economic and political environment may also result in higher country risk projections that would increase discount rates for impairment testing.

In addition, changes in reserve volumes, production curve expectations and lifting costs could trigger the need for impairment assessment, as well as capital expenditure decisions, which are also affected by the Company's plan to reduce its leverage, may result in postponement or termination of projects, reducing their economic feasibility.

The recoverable amount of certain assets was not substantially in excess of 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 14.1.1.

Further information on impairment testing is set out in notes 4.10, 5.3 and 14.



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5.3. 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 Cash-Generating units (CGUs) could result in additional impairment charges or reversals. Such changes may occur when investment, strategic or operational factors result in changes in the interdependencies between those assets and, consequently, alter the aggregation of assets into CGUs.

The assumptions set out below have been consistently applied by the Company:

Exploration and Production CGUs:

i) Crude oil and natural gas producing properties CGU: comprises exploration and development assets related to crude oil and natural gas fields and groups of fields in Brazil and abroad. In September 2016, the aggregations of assets for the Fazenda Cedro and Lagoa Suruaca groups, both located in Espírito Santo, were reviewed and impairment tests were run separately for those individual fields due to the discontinuation of a relevant shared infrastructure in the production process, as approved in the 2017-2021 BMP; and

The drilling rigs are not part of any grouping of assets and are assessed for impairment separately.

Refining, transportation and marketing CGUs:

i) Downstream CGU: comprises refineries and associated assets, terminals and pipelines, as well as logistics assets operated by Transpetro, with a combined and centralized operation of logistical and refining assets in Brazil. These assets are managed with a common goal of achieving efficiency, profitability and strategic value long term on a nationwide basis. They are not operated for the generation of profit by asset/location. The operational planning is made in a centralized manner and these assets are not managed, measured or evaluated by their individual results. The refineries do not have autonomy to choose the oil to be processed, the mix of oil products to produce, the markets in which these products will be traded, which amounts will be exported, which intermediaries will be received and to decide the sales 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 of Petrobras and not 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 the Petrobras Group. The model in which the entire planning is based, used in the studies of technical and economic feasibility of new investments in refining, may, in its indications, allocate a lower economic kind of oil to a certain refinery or define a lower economic mix of products to it, or even force it to supply more distant markets (area of influence), leading it to operate with reduced margins if seen individually, in case this is the best for the integrated system as a whole. Pipelines and terminals are an integral part and interdependent portion of the refining assets, required to supply the market.

ii) CGU Comperj – comprises assets under construction of the first refining unit of Petrochemical Complex of Rio de Janeiro. In 2014, the Company decided to postpone this project for an extended period of time;



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iii) CGU Second Refining Unit of RNEST – comprises assets under construction of second refining unit of Abreu e Lima refinery. In 2014, the Company decided to postpone this project for an extended period of time;

iv) Petrochemical CGU: This CGU was composed of the *Petroquímica Suape* and *Citepe* petrochemical plants until November 2016. In December 2016, the Company's Board of Directors approved the sale of these plants and, consequently, these assets were not aggregated as a CGU as of December 31, 2016, pursuant to their reclassification to assets held for sale.

v) Transportation CGU: comprises assets relating to Transpetro's fleet of vessels. Recurrent delays in the construction of support vessels for transporting ethanol over the Tietê River led the management of the wholly-owned subsidiary Transpetro, in September 2016, to terminate the construction contracts for a new group of support vessels in the scope of Hidrovias project. As a result, this project was postponed and its completed assets were reviewed and tested for impairment separately;

vi) SIX CGU: shale processing plant; and

vii) Other operations abroad defined as the smallest group of assets that generates independent cash flows.

Gas & Power CGUs:

i) Natural gas CGU: comprises natural gas pipelines, natural gas processing plants and fertilizers and nitrogen products plants other than the Fertilizer Plant UFN III, which is assessed for impairment separately. In September 2016, the Board of Directors approved the disposal of interest in the subsidiary NTS and, as a consequence, its pipelines were removed from this CGU.

ii) CGU UFN III: comprises assets under construction of the fertilizer plant Unidade de Fertilizantes e Nitrogenados III (UFN III). The Company decided to postpone this project for an extended period of time;

iii) Power CGU: comprises the thermoelectric power generation plants. In December 2016, the Company's Board of Directors approved the strategic alliance with Total that, among other matters, outlines the share of 50% interests in the power plants Celso Furtado and Rômulo Almeida. Accordingly, these assets were removed from this CGU; and

iv) Other CGUs: operations abroad defined as the smallest group of assets that generates largely independent cash flows.

Distribution CGU:

Mainly comprises the distribution assets related to the operations of Petrobras Distribuidora S.A.

Biofuels CGUs:

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. Due to the decision to discontinue operations of Quixadá Biofuel Plant, as approved by the Board of Directors of the subsidiary Petrobras Biocombustível in September 2016, impairment test for this Biofuel Plant was run separately.

Investments in associates and joint ventures, including goodwill, are assessed for impairment separately.

Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



5.4. 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 real interest rate that matches the duration of the pension and health care obligations with the future yield curve of long-term Brazilian Government Bonds; and

Medical costs: comprise the projected growth rates based on per capita health care benefits paid over the last five years, which are used as a basis for projections, converged to the general price inflation index within 30 years.

These and other estimates are reviewed at least annually and may differ materially from actual results due to changing market and financial conditions, as well as actual results of actuarial assumptions.

The sensitivity analysis of discount rates and changes in medical costs as well as additional information about actuarial assumptions are set out in note 22.

5.5. Estimates related to contingencies and legal proceedings

The Company is a defendant in numerous legal proceedings involving tax, civil, labor, corporate and environmental issues arising from the normal course of its business for which it estimates the amounts of the obligations and the probability that an outflow of resources will be required. Those estimates are based on legal counsel and management's best estimates.

Note 30 provides further detailed information about contingencies and legal proceedings.

5.6. Decommissioning costs estimates

The Company has legal and constructive obligations to remove equipment and restore onshore and offshore areas at the end of operations at production sites. Its most significant asset removal obligations involve removal and disposal of offshore oil and gas production facilities in Brazil and abroad. Estimates of costs for future environmental cleanup and remediation activities are based on current information about costs and expected plans for remediation.

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 is constantly conducting studies to incorporate technologies and procedures to optimize the operations of abandonment, considering industry best practices. However, the timing and amounts of future cash flows are subject to significant uncertainty.

Notes 4.14 and 20 provide further detailed information about the decommissioning provisions.

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5.7. Deferred income taxes

The recognition of deferred tax liabilities and deferred tax assets 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 Business and Management Plan (BMP), which is approved by the Board of Directors annually. Future taxable profits projections are mainly based on the following assumptions: i) Brent crude oil prices; ii) foreign exchange rates; and iii) the Company's projected net finance expenses (income).

Changes in deferred tax assets and liabilities are presented in note 21.6.

5.8. Cash flow hedge accounting involving the Company's future exports

The Company determines its future exports as "highly probable future exports" based on its Business and Management Plan—BMP and its Strategic Plan. The highly probable future exports are determined by a percentage of projected exports revenue over the mid and long term, taking into account the Company's operational and capital expenditure optimization model which considers future uncertainties, such as oil price and production, as well as products demand. Future exports forecasts are reviewed whenever the Company reviews its BMP and Strategic Plan assumptions. The approach for determining exports as highly probable future exports is reviewed annually, at least.

See note 33.2 for more detailed information about cash flow hedge accounting and a sensitivity analysis of the cash flow hedge involving future exports.

5.9. Write-off – overpayments incorrectly capitalized

As described in note 3, in the third quarter of 2014, the Company wrote off US\$2,527 of capitalized costs representing the estimated amounts that Petrobras had overpaid for the acquisition of property, plant and equipment.

To account for these overpayments, the Company developed an estimation methodology, as set out in note 3. Petrobras acknowledges the degree of uncertainty involved in the estimation methodology and continues to monitor the ongoing investigations and the availability of other information concerning the amounts it may have overpaid in the context of the payment scheme. If reliable information becomes available that indicates with sufficient precision that the Company's estimate should be modified, it will evaluate materiality and, if so, adjust.

However, as previously discussed, the Company believes it has used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized and there is no evidence that would indicate the possibility of a material change in the amounts written-off.

5.10. Allowance for impairment of trade receivables

Management continuously assesses whether there is objective evidence that trade receivables are impaired and recognizes allowances for impairment of trade receivables to cover losses. Such evidence includes insolvency, defaults, judicial recovery claims, a significant probability of a debtor filing for bankruptcy and others.

See note 8 for more detailed information about allowance for impairment of trade receivables.



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Notes to the financial statements

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6. New standards and interpretations

a) IASB—International Accounting Standards Board

The main standards issued by the IASB and not effective as of December 31, 2016 are set out below. The Company did not adopt those standards early.

Standards	Brief Description	Effective Date
IFRS 15 – “Revenue from Contracts with Customers”	Sets out requirements for recognition, measurement and disclosure of revenue from contracts with customers According to IFRS 15, revenue is recognized when a customer obtains control of a good or service sold. It changes the current model, based on which revenue is recognized when significant risks and rewards of ownership are transferred. In addition IFRS 15 provides guidance for revenue recognition in more complex cases. Upon adoption of the standard, certain freight services may be identified as a distinct performance obligation from the related products which may change its timing of revenue recognition. The company continues to evaluate the effect of the standard on its financial statements.	January 1, 2018
IFRS 9 – “Financial Instruments”	Establishes a new model of financial assets classification, based on their cash flow characteristics and entity’s business model objective for them. This standard also changes the assumptions of financial assets impairment recognition based on expected losses and adds new requirements regarding hedge accounting. The Company continues to evaluate the effect of the standard on its financial statements, such as possible changes when classifying and measuring its financial assets based on their contractual cash flows and the business model in which they are held. The Company is also assessing effects on the recoverable amount of its financial assets that may arise from the expected losses approach. The Company also qualifies certain transaction for cash flow hedge accounting and the evaluation of effects on this accounting policy is ongoing.	January 1, 2018
IFRIC 22 – “Foreign Currency Transactions and Advance Consideration”	Establishes that the date of the transaction, for the purpose of determining the exchange rate in foreign currency transactions, is the date of initial recognition of the non-monetary prepayment asset or deferred income liability. The company continues to evaluate the effect of the standard on its financial statements.	January 1, 2018

IFRS 16 – “Leases”

On January 13, 2016, the IASB issued IFRS 16 “Leases”, which will become effective for the financial report period beginning on or after January 1, 2019, superseding IAS 17 “Leases” and related interpretations.

IFRS 16 provides requirements for leases identification, recognition, measurement, presentation and disclosure according to the lessee and lessor perspectives.

Among the changes for lessees, IFRS 16 eliminates classification between financial and operating leases, required by IAS 17. Therefore, it will be a single model in which all leases will result in the recognition of assets related to the use of rights of assets leased. If the payments provided for in the commercial lease are due over time, financial liabilities should be recognized as well.

For lessors, IFRS 16 will maintain the classification as either financial or operating leases as required by IAS 17. IFRS 16 will not substantially change the way leases will be accounted for lessors when compared to IAS 17.



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The Company is assessing the impacts of this new standard and believes that the adoption of IFRS 16 may cause a significant increase in assets and liabilities presented in its consolidated statement of financial position. Accordingly, the Company may also need to negotiate some covenants in its loan agreements with BNDES – (Brazilian Development Bank) when a reliable estimate of these impacts can be made.

7. Cash and cash equivalents and Marketable securities

Cash and cash equivalents

	12.31.2016	12.31.2015
Cash at bank and in hand	591	808
Short-term financial investments		
- In Brazil		
Single-member funds (Interbank Deposit) and other short-term deposits	1,180	922
Other investment funds	131	11
	1,311	933
- Abroad		
Time deposits	3,085	13,276
Automatic investing accounts and interest checking accounts	9,780	8,828
U.S. Treasury bills	5,217	—
Other financial investments	1,221	1,213
	19,303	23,317
Total short-term financial investments	20,614	24,250
Total cash and cash equivalents	21,205	25,058

Short-term financial investments in Brazil comprise investment in funds, with maturities of three months or less, holding Brazilian Federal Government Bonds. Short-term financial investments abroad comprise time deposits with maturities of three months or less, highly-liquid automatic investing accounts, interest checking accounts and other short-term fixed income instruments, including U.S. Treasury bills.

Marketable securities

	12.31.2016			12.31.2015		
	In Brazil	Abroad	Total	In Brazil	Abroad	Total
Trading securities	784	—	784	779	—	779
Available-for-sale securities	—	—	—	5	1	6
Held-to-maturity securities	90	—	90	69	14	83
Total	874	—	874	853	15	868
Current	784	—	784	779	1	780
Non-current	90	—	90	74	14	88

Trading securities refer mainly to investments in Brazilian Federal Government Bonds. These financial investments have maturities of more than three months and are mostly classified as current assets due to their maturity or the expectation of their realization in the short term.

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8. Trade and other receivables

8.1. Trade and other receivables, net

	12.31.2016	12.31.2015
Trade receivables		
Third parties	6,499	7,262
Related parties		
Investees (note 19.1)	555	533
Receivables from the electricity sector (note 8.4)	4,922	3,415
Petroleum and alcohol accounts -receivables from Brazilian Government (note 19.2)	268	219
Other receivables	2,502	1,699
	14,746	13,128
Allowance for impairment of trade and other receivables	(5,426)	(3,656)
Total	9,320	9,472
Current	4,769	5,554
Non-current	4,551	3,918

8.2. Trade receivables overdue—Third parties

	12.31.2016	12.31.2015
Up to 3 months	403	315
From 3 to 6 months	67	180
From 6 to 12 months	411	803
More than 12 months	2,650	1,735
Total	3,531	3,033

8.3. Changes in the allowance for impairment of trade and other receivables

	12.31.2016	12.31.2015
Opening balance	3,656	3,372
Additions (*)	1,325	2,060
Write-offs	(9)	(17)
Reversals	(171)	(788)
Cumulative translation adjustment	625	(971)
Closing balance	5,426	3,656
Current	2,010	1,690
Non-current	3,416	1,966

(*) In 2016, includes additions mainly related to: US\$ 345 from electricity sector and US\$ 621 from losses on advances to suppliers, debts assumptions and termination costs relating to agreement with Ecovix shipyard. In 2015, includes additions mainly related to electricity sector, US\$ 1,218 and losses on fines executed amounting to US\$ 374.



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Notes to the financial statements

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8.4. Trade receivables – electricity sector (isolated electricity system in the northern region of Brazil)

	As of 12.31.2015	Sales	Amounts received	Transfers (*)	Recognition, net of reversals	Transfers (*)	Inflation indexation	CTA	As of 31.12.2016
Related parties									
(Eletrobras Group)									
AME (**)	1,996	490	(736)	708	(304)	(358)	277	402	2,475
Ceron (***)	285	48	(65)	—	—	—	44	57	369
Others	76	90	(99)	—	(3)	—	13	18	95
Subtotal	2,357	628	(900)	708	(307)	(358)	334	477	2,939
Third parties									
Cigás	143	669	(307)	(708)	(39)	358	—	27	143
Others	43	323	(363)	—	1	—	—	—	4
Subtotal	186	992	(670)	(708)	(38)	358	—	27	147
Trade receivables, net	2,543	1,620	(1,570)	—	(345)	—	334	504	3,086
Trade receivables—									
Eletrobras Group									
(-) Allowance for impairment	(1,058)	—	—	—	(307)	(358)	—	(260)	(1,983)
Subtotal	2,357	628	(900)	708	(307)	(358)	334	477	2,939
Trade receivables—									
Third parties									
(-) Allowance for impairment	(587)	—	—	—	(38)	358	—	(101)	(368)
Subtotal	186	992	(670)	(708)	(38)	358	—	27	147
Trade receivables—									
Total									
(-) Allowance for impairment	(1,645)	—	—	—	(345)	—	—	(361)	(2,351)
Trade receivables, net	2,543	1,620	(1,570)	—	(345)	—	334	504	3,086

(*) Transfer of overdue receivables from Cigás to AME, pursuant to the purchase and sale agreement of natural gas (upstream and downstream) entered into by Petrobras, Cigás and AME.

(**) Amazonas Distribuidora de Energia

(***) Centrais Elétricas do Norte

The Company supplies fuel oil, natural gas, and other products to entities that operate in the isolated electricity system in the northern region of Brazil, such as thermoelectric power plants controlled by Eletrobras, state-owned natural gas distribution companies and independent electricity producers (*Produtores Independentes de Energia – PIE*). The isolated electricity system provides the public service of electricity distribution in the northern region of Brazil, as the Brazilian National Interconnected Power Grid (*Sistema Interligado Nacional*) has not yet met the demand for electricity due to technical or economic reasons.



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A significant portion of the funds used by those companies to pay for products supplied by the Company came from the Fuel Consumption Account (*Conta de Consumo de Combustível – CCC*), which provides funds to cover a portion of the costs related to the supply of fuel to thermoelectric power plants located in the northern region of Brazil (operating in the isolated electricity system). However, as a result of changes in the CCC regulations over time, principally relating to the Provisional Measure 579/2012 which significantly changed the sources of funds that were used to cover the cost of electricity generated in the Isolated Electricity System, funds transferred from the CCC to these electricity companies have not been sufficient for them to meet their financial obligations and, as a result, some have not been able to pay the total amount for the products supplied by the Company, increasing the default rate of those customers to the Company.

The Company intensified negotiations with the state-owned natural gas distribution companies, the independent electricity producers (PIEs), other private companies and entities controlled by Eletrobras. As a result, on December 31, 2014, the Company entered into a debt acknowledgement agreement with subsidiaries of Eletrobras with respect to the balance of its receivables as of November 30, 2014. Eletrobras acknowledged it owed US\$ 2,202 to the Company, of which US\$ 1,889 were collateralized by payables from the Brazilian Energy Development Account (*Conta de Desenvolvimento Energético—CDE*) to the CCC. This amount has been adjusted by the Selic interest rate (Brazilian short-term interest rate) on a monthly basis. Under this agreement, the first of 120 monthly installments was paid in February 2015 and these payments have continued.

In order to mitigate an increase in default rates, on September 1, 2015 the Brazilian National Electricity Agency (*Agência Nacional de Energia Elétrica—ANEEL*) enacted the Normative Instruction 679 enabling the Company to receive funds directly from the CCC, as these funds would be paid directly from the CCC for products supplied in the prior month with a limit of 75% of the average payments made by the CCC in the previous three months.

The Company had expected that the abovementioned rule would have strengthened the financial situation of the companies in the electricity sector. However, this has not occurred and the level of these defaults increased. Accordingly, in 2015 the Company recognized US\$ 564 as allowance for impairment of trade receivables (net of reversals) with respect to uncollateralized receivables outstanding as of December 31, 2015.

In 2016, the Company recognized an allowance for impairment of trade receivables (net of reversals) in the amount of US\$ 345 mainly relating to new supplies of: (i) fuel oil by legal enforcement (injunction) in the first quarter of 2016; and (ii) natural gas. Accordingly, the Company has adopted the following measures:

- judicial collection of overdue receivables with respect to natural gas supplied to Amazonas Distribuidora de Energia (AME), Eletrobras and Cigás;
- judicial collection of overdue receivables with respect to fuel oil supplied by the wholly-owned subsidiary BR Distribuidora to companies of Eletrobras Group (Amazonas, Acre, Rondônia and Roraima);
- partial suspension of gas supply;
- suspension of fuel oil supply on credit, except when legally enforced; and
- registration of entities controlled by Eletrobras as delinquent companies in the Brazilian Central Bank files and registration of AME as a delinquent company in ANEEL files.



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Excluding the effects of foreign exchange translation, the amount of trade receivables from the electricity sector remained relatively flat mainly due to contractual clauses of amortization established in the debt acknowledgement agreement, which determine the payment of 15% of the amount of renegotiated debt within 36 months and the remaining 85% to be paid in 84 installments beginning in January 2018. Therefore, the Company expects the balance of trade receivables from the electricity sector will decrease from 2018 onwards as the amounts to be received will be higher than sales and inflation indexation on debt acknowledgement agreements.

9. Inventories

	12.31.2016	12.31.2015
Crude oil	3,524	2,895
Oil products	2,649	2,206
Intermediate products	700	612
Natural gas and LNG (*)	134	253
Biofuels	211	158
Fertilizers	26	61
Total products	7,244	6,185
Materials, supplies and others	1,243	1,272
Total	8,487	7,457
Current	8,475	7,441
Non-current	12	16

(*) Liquid Natural Gas

Inventories are presented net of a US\$ 28 allowance reducing inventories to net realizable value (US\$ 155 as of December 31, 2015), mainly due to changes in international prices of crude oil and oil products. In 2016, the Company recognized as cost of sales a US\$ 343 allowance charge (net of reversals) reducing inventories to net realizable value (US\$ 430 in 2015).

A portion of the crude oil and/or oil products inventories have been pledged as security for the Terms of Financial Commitment (TFC) signed by Petrobras and Petros in the amount of US\$ 1,979 (US\$ 1,719 as of December 31, 2015), as set out in note 22.1.

10. Disposal of Assets and other changes in organizational structure**10.1. Disposal of Assets****Termination of the contract for the sale of Bijupirá and Salema fields (BJS)**

On February 26, 2016, Petro Rio S.A. terminated the contracts signed with the Company on July 1, 2015, for the sale of 20% interest in Bijupirá and Salema concessions (BJS) and in the Dutch joint operation BJS Oil Operations B.V. (BJSOO BV). Accordingly, the amounts relating to these fields were reclassified from assets and liabilities held for sale back to property, plant and equipment (US\$ 148) and to provision for decommissioning costs (US\$ 126), respectively.

Due to the aforementioned reclassification, the respective assets were depreciated based on their historical data and their recoverable amounts were reassessed. As a result, the Company recognized, in the first quarter of 2016, an impairment loss as set out in note 14.1.



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Petróleo Brasileiro S.A. – Petrobras

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(Expressed in millions of US Dollars, unless otherwise indicated)**Sale of Petrobras Argentina**

On May 12, 2016, the Board of Directors approved the disposal of the Company's entire 67.19% interest in Petrobras Argentina—PESA, owned through the subsidiary Petrobras Participaciones S.L. ("PPSL"), to Pampa Energía.

On July 27, 2016, the amount of US\$ 897 was disbursed by Pampa Energia and, on December 14, 2016, additional US\$ 3 was paid due to contractual clauses. Accordingly, the Company recognized a gain of US\$ 207 on this sale, as other expenses, net. In addition, the amount of US\$ 1,428 was reclassified from shareholders' equity to other expenses within the income statement, reflecting the reclassification of cumulative translation adjustment resulting from the depreciation of Argentinian Peso against the U.S Dollar from the acquisition of this investment to its disposal (see note 23.4).

On October 28, 2016, as expected, the Company concluded this transaction with the acquisition of 33.6% of the concession of Rio Neuquén in Argentina and 100% of Colpa Caranda asset in Bolivia for the amount of US\$ 56, after adjustments relating to Colpa Caranda asset.

Disposal of distribution assets in Chile

On July 22, 2016, the Company signed a sale and purchase agreement with the Southern Cross Group for the sale of 100% of Petrobras Chile Distribución Ltda (PCD), held through Petrobras Caribe Ltda.

Pursuant to this disposal approved by the Board of Directors, the respective assets were classified as held for sale and measured at their estimated exit price and, as a result, the Company recognized impairment charges as set out in note 14.2.

This transaction was concluded on January 4, 2017 and the net proceeds from this deal were US\$ 470, of which US\$ 90 were received via distribution of dividends after taxes on December 9, 2016 and the remaining US\$ 380 were paid by Southern Cross in the transaction closing.

Disposal of interest in exploratory block BM-S-8

On July 28, 2016 the Board of Directors of Petrobras approved the disposal of the Company's 66% interest in the exploratory block BM – S-8 to Statoil Brasil Óleo e Gás Ltda, which includes the Carcará area located in the pre-salt layer of Santos Basin, for the amount of US\$ 2.5 billion.

The Brazilian Antitrust Regulator (*Conselho Administrativo de Defesa Econômica – CADE*) and the Brazilian Agency of Petroleum, Natural Gas and Biofuels (*Agência Nacional de Petróleo, Gás Natural e Biocombustíveis*) – ANP approved this transaction on September 8, 2016 and November 10, 2016, respectively.

After performing all conditions precedent established in the agreement, on November 22, 2016 the Company received the first installment in the amount of US\$ 1.25 billion, corresponding to 50% of the transaction and, as a result of the transaction closing, the Company recognized a gain in the amount of US\$ 881 as other expenses, net. The remaining amount will be recognized based on two contingent payments relating to future events: the bid for an extended adjacent area of the Carcará reservoir (US\$ 300) and the signing of the unitization agreement (US\$ 950).



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(Expressed in millions of US Dollars, unless otherwise indicated)**Disposal of interest in Nova Transportadora do Sudeste (NTS) and related changes in organizational structure**

After a corporate restructuring intended to concentrate the transportation assets of the southeastern region in NTS (Rio de Janeiro, Minas Gerais and São Paulo), the Company's Board of Directors approved on September 22, 2016 the sale of 90% interest in Nova Transportadora do Sudeste (NTS) to Brookfield Infrastructure Partners (BIP) and its affiliates, through a Private Equity Investment Fund (FIP) whose other shareholders are British Columbia Investment Management Corporation (BCIMC), CIC Capital Corporation (wholly-owned subsidiary of China Investment Corporation—CIC) and GIC Private Limited (GIC).

The following changes in organizational structure occurred as part of this process:

- The Extraordinary General Meeting of NTS, held on October 21, 2016, approved an increase to its share capital in the amount of US\$ 711, based on an independent expert report dated on October 14, 2016, through net assets of the Company's subsidiary TAG. This capital increase approval depended on ANP permission through the issuance of Permissions of Provisional Operation (Autorizações de Operação Provisórias);
- The Extraordinary General Meeting of the TAG, held on October 21, 2016, approved a reduction to its share capital, via capital surplus, in the amount of its investment in NTS (US\$ 800) and transfer of all its interest in NTS to Petrobras, as occurred on October 24, 2016 pursuant to the Permissions of Provisional Operation (Autorizações de Operação Provisórias), as occurred on October 24, 2016.

The Shareholder's General Meeting held on November 30, 2016 approved this transaction in the amount of US\$ 5.19 billion, of which US\$ 3.55 billion correspond to 90% interest in NTS and US\$ 1.64 billion correspond to the NTS debt settlement with the Company's wholly-owned subsidiary PGT. FIP will subscribe convertible debentures issued by NTS for the replacement of this debt. The first installment, in the amount of US\$ 4.34 billion will be paid at the closing of the transaction, and the remaining amount (US\$ 850) will be paid in the fifth year, bearing annual interests at a fixed rate, as established in the purchase and sale agreement.

This transaction prescribes the maintenance of charge capacity and also the same terms of five Firm Gas Transportation Agreements including 100% ship-or-pay clauses. These agreements have terms of 20 years from 2016 and their rates are indexed to the Brazilian General Market Price Index (IGP-M) and regulated by Brazilian Petroleum, Natural Gas and Biofuels Agency (ANP).

The completion of the transaction is subject to certain customary conditions precedent, including approval by relevant regulators. Thus, the related assets and liabilities were classified as held for sale as of December 31, 2016.

On February 10, 2017, the federal court in the state of Sergipe determined the interruption of this disposal by ordering an injunction based on a civil action. However, on March 9, 2017, this injunction was dismissed, enabling the progress of this transaction.

Disposal of Nansei Sekiyu (NSS)

On October 17, 2016 the Company's Board of Directors approved the disposal of the Company's interests in Nansei Sekiyu Kabushiki Kaisha (NSS) to Taiyo Oil Company ("Taiyo").



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On December 28, 2016, this disposal was closed after the fulfillment of all conditions precedent in the sales and purchase agreement. Accordingly, Taiyo disbursed US\$ 165 to the Company and, as a result, the Company recognized as other expenses, net a gain on this transaction amounting to US\$ 132. This transaction is still subject to price adjustments.

In addition, a loss of US\$ 29 was reclassified from shareholders equity to other expenses within the income statement reflecting the reclassification of cumulative translation adjustment resulting from the depreciation of Japanese Yen against the U.S Dollar from the time of the acquisition of this investment to its disposal (see note 23.4).

Disposal of Liquigás

On November 17, 2016 the Company's Board of Directors approved the disposal of its wholly-owned subsidiary Liquigás Distribuidora S.A. to Companhia Ultragaz S.A., a subsidiary of Ultrapar Participações S.A.

At December 31, 2016, the related assets and liabilities were classified as held for sale as conditions precedent were not yet performed, such as the transaction approval at Shareholders' Meetings of Ultrapar and Petrobras, as well as the approval of the Brazilian Antitrust Regulator (CADE).

On January 31, 2017, the sale of Petrobras's entire interests in Liquigás in the amount of US\$ 828 was approved at Petrobras' Shareholders' Meeting.

Disposal of Guarani

On December 28, 2016, the Company's wholly-owned subsidiary Petrobras Biocombustível S.A. (PBIO) disposed of its interests in the associate Guarani S.A. (45,97% of share capital) to Tereos Participations SAS, an entity of the French group Tereos.

As of December 31, 2016, this investment was classified as held for sale as this transaction was still subject to certain conditions precedent. As a result, the Company recognized an impairment charge in the amount of US\$ 67 accounted for within results in equity-accounted investments.

On February 3, 2017 this transaction was concluded pursuant to the payment of US\$ 203, after all conditions precedent were performed by Tereos Participations SAS.

Disposal of Suape and Citepe petrochemical plants

On December 28, 2016, the Company's Board of Directors approved the disposal of its interests in the wholly-owned subsidiaries Companhia Petroquímica de Pernambuco (PetroquímicaSuape) and Companhia Integrada Têxtil de Pernambuco (Citepe) to Grupo PetroteMex S.A. de C.V. and Dak Americas Exterior, S.L., both subsidiaries of Alpek, S.A.B. de C.V., which is a company from Grupo Alfa S.A.B. de C.V. (a Mexican public company), in the amount of US\$ 385, which will be totally disbursed pursuant to the transaction closing. This amount is still subject to adjustments relating to working capital, net debt and recoverable taxes.

This transaction closing is subject to the approval at Petrobras Shareholder's General Meeting, Grupo Alfa's Board of Directors and Brazilian Antitrust Regulator (CADE), as well as to the fulfillment of certain other customary conditions precedent.



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As the conditions precedent to this transaction were not performed at December 31, 2016, the respective assets were reclassified as held for sale and measured at their estimated exit price. As a result, the Company recognized impairment losses as described in notes 14.1 and 14.2.

On January 31, 2017, the federal court in the state of Sergipe determined the interruption of this disposal by ordering an injunction based on a civil action. However, on February 22, 2017, this injunction was dismissed, enabling the progress of this transaction.

Strategic alliance with Total

On December 21, 2016, the Company entered into a master agreement with Total, in connection with the Strategic Alliance established in the Memorandum of Understanding signed on October 24, 2016. Accordingly, certain assets were classified as held for sale at December 31, 2016 due to the share of interests established in this agreement, as described below:

- Transfer of the Company's 22.5% stake in the concession area named as Iara, comprising Sururu, Berbigão and West of Atapu fields, which are subject to unitization agreements with Entorno de Iara (an area under the Assignment Agreement in which the Company holds 100% interests and is located in the Block BM-S-11);
- Transfer of the Company's 35% stake in the concession area of Lapa field, located in the Block BM-S-9. Total will also become the operator and the Company will remain holding 10% interests in this area; and
- Transfer of the Company's 50% interests in the power plants Celso Furtado and Rômulo Almeida. The Company recognized an impairment loss on this transaction as described in note 14.2.

On February 28, 2017, the Company and Total signed the purchase and sale agreements with respect to the aforementioned assets. Total will pay to the Company the total amount of US\$ 2,225 with respect to these transactions, comprising US\$ 1,675 in cash for assets and services, a line of credit in the amount of US\$ 400 that can be used by the Company for investments in the Iara fields, as well as US\$ 150 relating to contingent payments.

These transactions are still subject to the relevant authorities' approvals, to the potential exercise of preemptive rights by current Iara partners, as well as other customary conditions precedent.

The aforementioned agreements adds up to the ones already executed on December 21, 2016, such as: (i) option for Petrobras to purchase a 20% interest in block 2 of the Perdido Foldbelt area, in the Mexican sector of the Gulf of Mexico, (ii) joint exploration studies in the exploratory areas of Equatorial Margin and in Santos Basin; and (iii) Technological partnership agreement in the areas of digital petrophysics, geological processing and subsea production systems.

10.2. Other changes in organizational structure

Merger of Nova Fronteira Bioenergia

On December 15, 2016, the Company's wholly-owned subsidiary Petrobras Biocombustível S.A. (PBIO) entered into an agreement with São Martinho group which establishes the merger of PBIO interests in Nova Fronteira Bioenergia S.A. (49%) into São Martinho.



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As of December 31, 2016, the related assets were classified as held for sale due to certain conditions precedent and the Company recognized a loss on this transaction in the amount of US\$ 30 within results in equity-accounted investments.

On February 23, 2017, this transaction was concluded as São Martinho granted to PBIO an additional 24 million of its common shares, corresponding to 6.593% of its voting and total paid in capital, in exchange and in proportion to the shares that PBIOs held in Nova Fronteira. These shares will not be subject to any kind of lock-up and their sale will occur in 4 years through a structured process.

10.3. Assets classified as held for sale

						12.31.2016	12.31.2015
	E&P	Distribution	RT&M	Gas & Power	Biofuel	Total	Total
Assets classified as held for sale (*)							
Cash and Cash Equivalents	—	101	8	—	—	109	3
Trade receivables	—	76	129	—	—	205	11
Inventories	—	52	120	—	—	172	—
Investments	—	27	6	—	345	378	—
Property, plant and equipment . .	1,037	196	283	2,904	—	4,420	138
Others	—	35	307	102	—	444	—
Total	1,037	487	853	3,006	345	5,728	152
Liabilities on assets classified as held for sale(*)							
Trade Payables	—	75	51	9	—	135	—
Finance debt	—	—	14	—	—	14	125
Provision for decommissioning costs	52	—	—	—	—	52	—
Others	10	29	79	173	—	291	—
Total	62	104	144	182	—	492	125

(*) As of December 31, 2016, the amounts mainly refer to assets and liabilities transferred by the disposal of Petrobras Chile Distribución LTDA (PCD), Nova Transportadora do Sudeste, Liquegás, Petroquímica Suape and Citepe, Guarani S.A, Nova Fronteira, transfer of interest in the concession areas named as Iara and Lapa, as well as the share of interest in the thermoelectric power generation plants Rômulo Almeida and Celso Furtado.

10.4. Civil action filed by the Brazilian Federal Audit Court (TCU)

On December 7, 2016, the Brazilian Federal Audit Court (*Tribunal de Contas da União – TCU*) filed a civil action prohibiting Petrobras from commencing additional divestment projects and entering into sales agreements relating to the ongoing disposal projects while it assesses the Company's divestments decision-making methodology. This action does not impact five deals which were under their final stages of negotiation when this civil action was filed, including the sale of Guarani, sale of Suape and Citepe petrochemical plants, as well as the merger of Nova Fronteira Bioenergia, as described in note 10.1.

The Company reviewed its divestments decision-making methodology and, on March 15, 2017, this civil action was dismissed, which enabled the Company to progress with two ongoing deals (sale of interests in *Baúna* and *Tartaruga Verde* fields and Saint Malo field located in U.S. Gulf of Mexico) and also to commence new divestment projects based on the reviewed methodology.



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11. Investments
11.1. Information on direct subsidiaries, joint arrangements and associates

	Main business segment	% Petrobras' ownership	% Petrobras' voting rights	Shareholders' equity (deficit)	Net income (loss) for the year	Country
Subsidiaries						
Petrobras Netherlands B.V.—PNBV (i)	E&P	100.00	100.00	21,672	137	Netherlands
Petrobras International Braspetro—PIB BV (i) (ii)	Several segments (iii)	99.99	99.99	6,689	-1365	Netherlands
Transportadora Associada de Gás S.A.—TAG	Gas & Power	100.00	100.00	2,727	2119	Brazil
Petrobras Distribuidora S.A.—BR	Distribution	100.00	100.00	2,274	-90	Brazil
Petrobras Logística de Exploração e Produção S.A.—PB-LOG	E&P	100.00	100.00	1,290	351	Brazil
Nova Transportadora do Sudeste S.A.—NTS	Gas & Power	100.00	100.00	1,258	136	Brazil
Petrobras Transporte S.A.—Transpetro	RT&M	100.00	100.00	1,230	82	Brazil
Petrobras Gás S.A.—Gaspetro	Gas & Power	51.00	51.00	574	90	Brazil
Petrobras Biocombustível S.A.	Biofuels	100.00	100.00	413	-254	Brazil
Petrobras Logística de Gás—Logigás	Gas & Power	100.00	100.00	365	130	Brazil
Liquigás Distribuidora S.A.	RT&M	100.00	100.00	297	57	Brazil
Termomacacê Ltda.	Gas & Power	99.99	99.99	216	8	Brazil
Breitener Energética S.A.	Gas & Power	93.66	93.66	207	5	Brazil
Termobahia S.A.	Gas & Power	98.85	98.85	176	26	Brazil
Braspetro Oil Services Company—Brasoil (i)	Corporate	100.00	100.00	167	6	Cayman Islands
Baixada Santista Energia S.A.	Gas & Power	100.00	100.00	70	-18	Brazil
Araucária Nitrogenados S.A.	Gas & Power	100.00	100.00	60	-178	Brazil
Fundo de Investimento Imobiliário RB Logística—FII	E&P	99.20	99.20	34	13	Brazil
Petrobras Comercializadora de Energia Ltda.—PBEN	Gas & Power	99.91	99.91	29	4	Brazil
Petrobras Negócios Eletrônicos S.A.—E-Petro	Corporate	99.95	99.95	10	0	Brazil
Termomacacê Comercializadora de Energia Ltda	Gas & Power	99.99	99.99	5	2	Brazil
Downstream Participações Ltda.	Corporate	99.99	99.99	1	0	Brazil
5283 Participações Ltda.	Corporate	100.00	100.00	—	—	Brazil
Companhia Integrada Têxtil de Pernambuco S.A.—CITEPE	RT&M	100.00	100.00	(38)	(356)	Brazil
Companhia Petroquímica de Pernambuco S.A.—PetroquímicaSuape	RT&M	100.00	100.00	(147)	-377	Brazil
Joint operations						
Ibiritermo S.A.	Gas & Power	50.00	50.00	72	14	Brazil
Fábrica Carioca de Catalizadores S.A.—FCC	RT&M	50.00	50.00	70	20	Brazil
Non-consolidated entities						
Joint ventures						
Logum Logística S.A.	RT&M	15.10	15.10	189	-52	Brazil
Cia Energética Manauara S.A.	Gas & Power	40.00	40.00	49	13	Brazil
Refinaria de Petróleo Riograndense S.A.	RT&M	33.20	33.33	46	25	Brazil
Petrocoque S.A. Indústria e Comércio	RT&M	50.00	50.00	44	12	Brazil
Brentech Energia S.A.	Gas & Power	30.00	30.00	26	1	Brazil
Brasympe Energia S.A.	Gas & Power	20.00	20.00	24	1	Brazil
Eólica Mangue Seco 4—Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	14	1	Brazil
Eólica Mangue Seco 3—Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	13	1	Brazil
Metanol do Nordeste S.A.—Metanor	RT&M	34.54	34.54	12	-3	Brazil
Eólica Mangue Seco 1—Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	12	1	Brazil
Eólica Mangue Seco 2—Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	51.00	51.00	12	1	Brazil
Companhia de Coque Calcinado de Petróleo S.A.—Coquepar	RT&M	45.00	45.00	1	-1	Brazil
Participações em Complexos Bioenergéticos S.A.—PCBIOS	Biofuels	50.00	50.00	—	—	Brazil
Associates						
Braskem S.A.	RT&M	36.20	47.03	837	-130	Brazil
UEG Araucária Ltda.	Gas & Power	20.00	20.00	175	-49	Brazil
Deten Química S.A.	RT&M	27.88	27.88	106	31	Brazil
Energética SUAPE II	Gas & Power	20.00	20.00	82	25	Brazil
Termoelétrica Potiguar S.A.—TEP	Gas & Power	20.00	20.00	30	3	Brazil
Fundo de Investimento em Participações de Sondas—FIP Sondas	E&P	4.59	4.59	—	-971	Brazil
Nitroclor Ltda.	RT&M	38.80	38.80	—	0	Brazil
Bioenergética Britarumã S.A.	Gas & Power	30.00	30.00	—	—	Brazil
Sete Brasil Participações S.A.	E&P	5.00	5.00	(6,682)	(113)	Brazil

(i) Companies abroad with financial statements prepared in foreign currencies.

(ii) 5283 Participações Ltda holds 0.0050% interest.

(iii) Cover activities abroad in E&P, RTM, Gas & Power and Distribution segments.



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11.2. Investments in associates and joint ventures

	Balance at 12.31.2015	Investments	Restructuring, capital decrease and others	Results in equity- accounted investments (*)	CTA	OCI	Dividends	Transfer to assets as held for sale	Balance at 12.31.2016
Joint Ventures									
Petrobras Oil & Gas B.V.—PO&G	1,545	—	—	33	(1)	—	(149)	—	1,428
State-controlled natural gas distributors	251	—	—	70	50	—	(41)	—	330
Nova Fronteira Bionergia	119	—	—	30	23	—	—	(172)	—
Compañía Mega S.A.—MEGA	45	—	—	26	(4)	—	(31)	—	36
Compañía de Inversiones de Energía S.A.— CIESA	44	—	3	3	(4)	—	(1)	(45)	—
Other petrochemical investees	21	—	—	5	4	—	(5)	—	25
Other joint ventures	97	26	—	(29)	19	1	(11)	—	103
Associates									
Braskem S.A.	805	—	—	(120)	223	261	(135)	—	1,034
Investees in Venezuela	218	—	14	(2)	2	—	—	(232)	—
Guarani S.A.	194	68	(23)	(150)	98	79	—	(266)	—
Other petrochemical associates	24	—	—	10	5	—	(9)	—	30
UEG Araucária	43	—	—	(45)	8	—	(6)	—	—
Other associates	109	—	1	39	(16)	—	(27)	(56)	50
Other investees	12	—	(2)	—	6	—	—	—	16
Total	3,527	94	(7)	(130)	413	341	(415)	(771)	3,052

(*) Does not include results in investees transferred to assets held for sale, in the amount US\$ 88.

11.3. Investments in listed companies

Company	Thousand-share lot			Quoted stock exchange prices (US\$ per share)		Market value	
	12.31.2016	12.31.2015	Type	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Indirect subsidiary							
Petrobras Argentina S.A. (*)	—	1,356,792	Common	—	0.61	—	827
							827
Associate							
Braskem S.A.	212,427	212,427	Common	9.20	4.07	1,955	866
Braskem S.A.	75,762	75,762	Preferred A	10.51	7.07	796	536
						2,751	1,402

(*) Investment disposed of as set out in note 10.1.



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The market value of these shares does not necessarily reflect the realizable value upon sale of a large block of shares.

11.4. Non-controlling interest

The total amount of non-controlling interest at December 31, 2016 is US\$ 771 (US\$ 819 in 2015), of which US\$ 281 and US\$ 99 relate to non-controlling interest of the subsidiaries Gaspetro and Transportadora Brasileira Gasoduto Brasil-Bolívia (TBG), respectively (US\$ 234, US\$ 55 and US\$ 367 related to Gaspetro, TBG and Petrobras Argentina, respectively, at December 31, 2015) and US\$ 175 refer to Consolidated Structured Entities (US\$ 39 at December 31, 2015).

Condensed financial information is set out as follows:

	Gaspetro		Consolidated Structured entities (*)		TBG		Petrobras Argentina
	2016	2015	2016	2015	2016	2015	2015
Current assets	83	81	745	543	329	190	795
Long-term receivables	84	59	1,673	1,914	1	1	72
Investments	392	303	—	—	—	—	276
Property, plant and equipment	1	1	85	73	640	565	1,084
Other non-current assets	93	80	—	—	3	2	3
	<u>653</u>	<u>524</u>	<u>2,503</u>	<u>2,530</u>	<u>973</u>	<u>758</u>	<u>2,230</u>
Current liabilities	46	18	508	455	394	141	541
Non-current liabilities	33	27	1,820	2,114	377	505	571
Shareholders' equity	<u>574</u>	<u>479</u>	<u>175</u>	<u>(39)</u>	<u>202</u>	<u>112</u>	<u>1,118</u>
	<u>653</u>	<u>524</u>	<u>2,503</u>	<u>2,530</u>	<u>973</u>	<u>758</u>	<u>2,230</u>
Sales revenues	96	208	—	—	423	442	243
Net income	72	147	287	(213)	243	80	119
Increase (decrease) in cash and cash equivalents	<u>1</u>	<u>(165)</u>	<u>11</u>	<u>(94)</u>	<u>187</u>	<u>—</u>	<u>71</u>

(*) Comprises Charter Development LLC—CDC, Companhia de Desenvolvimento e Modernização de Plantas Industriais—CDMPI and PDET Offshore.

Gaspetro, a Petrobras' subsidiary, holds interests in several state distributors of natural gas in Brazil. Petrobras concluded the sale of 49% of its interest in Gaspetro on December 28, 2015.

TBG is an indirect subsidiary which operates in natural gas transmission activities mainly through Bolivia-Brazil Gas Pipeline. The Company holds 51% of interests in this indirect subsidiary.

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11.5. 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 companies, gas distributors, biofuels, thermoelectric power plants, refineries and other activities. Condensed financial information is set out below:

	2016				2015				
	Joint ventures			Associates	Joint ventures			Associates	
	In Brazil	PO&G (*)	Other companies abroad	In Brazil	In Brazil	PO&G (*)	Other companies abroad	In Brazil	Abroad
Current assets	1,016	835	152	5,214	1,106	934	327	5,358	2,240
Non-current assets . .	558	35	21	1,647	343	50	21	2,697	199
Property, plant and equipment	867	3,304	19	9,344	1,206	2,790	488	9,599	1,815
Other non-current assets	720	1	—	958	554	4	4	2,831	78
	3,161	4,175	192	17,163	3,209	3,778	840	20,485	4,332
Current liabilities . . .	1,226	391	84	4,296	1,331	228	213	4,880	3,607
Non-current liabilities	499	1,819	1	18,613	640	1,327	303	12,522	1,057
Shareholders' equity	1,436	1,965	107	(4,788)	1,108	2,223	178	3,268	(332)
Non-controlling interest	—	—	—	(958)	130	—	146	(185)	—
	3,161	4,175	192	17,163	3,209	3,778	840	20,485	4,332
Sales revenues	2,696	770	331	14,156	3,825	2,259	284	15,805	196
Net Income (loss) for the year	185	63	68	(1,292)	155	245	47	1,036	(1,639)
Ownership interest—%	20 to 83%	50%	34 to 50%	5 to 49%	20 to 83%	50%	34 to 50%	5 to 49%	11 to 49%

(*) Petrobras Oil & Gas (PO&G) is a joint venture located in the Netherlands, with 50% share of Petrobras International BV (PIBBV), for exploration and production of oil and gas in Africa.



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12. Property, plant and equipment

12.1. By class of assets

	Land, buildings and improvement	Equipment and other assets	Assets under construction (*)	Exploration and development costs (oil and gas producing properties)	Total
Balance at January 1, 2015	8,035	97,996	52,943	59,756	218,730
Additions	210	1,296	18,349	512	20,367
Additions to / review of estimates of decommissioning costs	—	—	—	4,147	4,147
Capitalized borrowing costs	—	—	1,768	—	1,768
Write-offs	(8)	(56)	(1,797)	(407)	(2,268)
Transfers	1,153	8,726	(16,477)	8,468	1,870
Depreciation, amortization and depletion	(468)	(6,374)	—	(4,596)	(11,438)
Impairment recognition	(238)	(3,837)	(3,008)	(5,220)	(12,303)
Impairment reversal	—	11	5	23	39
Cumulative translation adjustment	(2,584)	(23,869)	(14,173)	(18,989)	(59,615)
Balance at December 31, 2015	6,100	73,893	37,610	43,694	161,297
Cost	8,595	112,307	37,610	67,220	225,732
Accumulated depreciation, amortization and depletion	(2,495)	(38,414)	—	(23,526)	(64,435)
Balance at December 31, 2015	6,100	73,893	37,610	43,694	161,297
Additions	110	917	11,846	203	13,076
Additions to / review of estimates of decommissioning costs	—	—	—	937	937
Capitalized borrowing costs	—	—	1,724	—	1,724
Write-offs	(64)	(140)	(1,371)	(43)	(1,618)
Transfers (***)	387	4,519	(15,863)	5,912	(5,045)
Depreciation, amortization and depletion	(428)	(7,520)	—	(5,862)	(13,810)
Impairment recognition	(319)	(3,891)	(439)	(1,932)	(6,581)
Impairment reversal	—	768	—	179	947
Cumulative translation adjustment	1,196	10,178	5,062	8,107	24,543
Balance at December 31, 2016	6,982	78,724	38,569	51,195	175,470
Cost	9,999	127,539	38,569	80,662	256,769
Accumulated depreciation, amortization and depletion	(3,017)	(48,815)	—	(29,467)	(81,299)
Balance at December 31, 2016	6,982	78,724	38,569	51,195	175,470
Weighted average of useful life in years	40 (25 to 50) (except land)	20 (3 to 31) (**)		Units of production method	

(*) See note 29 for assets under construction by business area.

(**) Includes exploration and production assets depreciated based on the units of production method.

(***) Includes amounts transferred to assets held for sale.



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At December 31, 2016, property, plant and equipment include assets under finance leases of US\$ 125 (US\$ 48 as of December 31, 2015).

12.2. Estimated useful life

Estimated useful life	Buildings and improvements, equipment and other assets		
	Cost	Accumulated depreciation	Balance at 2016
5 years or less	4,064	(3,017)	1,047
6—10 years	15,791	(9,656)	6,135
11—15 years	2,061	(1,114)	947
16—20 years	39,701	(13,241)	26,460
21—25 years	20,315	(6,565)	13,750
25—30 years	14,661	(3,684)	10,977
30 years or more	24,188	(6,266)	17,922
Units of production method	16,406	(8,289)	8,117
Total	137,187	(51,832)	85,355
Buildings and improvements	9,648	(3,017)	6,631
Equipment and other assets	127,539	(48,815)	78,724

12.3. Concession for exploration of oil and natural gas—Assignment Agreement (“Cessão Onerosa”)

Petrobras and the Brazilian Federal Government entered into the Assignment Agreement in 2010, which grants the Company the right to carry out prospection and drilling activities for oil, natural gas and other liquid hydrocarbons located in the pre-salt area limited to the production of five billion barrels of oil equivalent in up to 40 years and renewable for a further five years subject to certain conditions. As of December 31, 2016, the Company’s property, plant and equipment include the amount of US\$ 22,954 related to the Assignment Agreement (US\$ 19,158 as of December 31, 2015).

Petrobras has already declared commerciality in fields of all six blocks in the scope of this agreement: Franco (Búzios), Florim (Itapu), Nordeste de Tupi (Sépia), Entorno de Iara (Norte de Berbigão, Sul de Berbigão, Norte de Sururu, Sul de Sururu, Atapu), Sul de Guará (Sul de Sapinhoá) and Sul de Tupi (Sul de Lula).

The agreement establishes that the review procedures of the agreement will commence immediately after the declaration of commerciality for each area and must be based on reports by independent experts engaged by Petrobras and ANP. The review of the Assignment Agreement will be concluded after the assessment of all the areas.

If the review of the Assignment Agreement determines that the value of acquired rights is greater than the amount initially paid, the Company may be required to pay the difference to the Brazilian Federal Government, or may proportionally reduce the total volume of barrels acquired under the agreement. If the review determines that the value of the acquired rights is lower than initially paid by the Company, the Brazilian Federal Government will reimburse the Company for the difference by delivering cash or bonds or equivalent means of payment, subject to budgetary regulations.



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The formal review procedures for each block are based on costs incurred over the exploration phase and estimated costs and production for the development period. The review of the Assignment Agreement may result in changes in: (i) the amount of the agreement; (ii) the total volume (in barrels of oil) to be produced; (iii) the term of the agreement; and (iv) the minimum percentages of local content.

Currently, the settlement form and the final amount to be established for this agreement are not defined. The beginning of negotiation with the Brazilian Federal Government still depends on the conclusion of the appraisals by independent experts engaged by both parties, and the issuance of the respective reports.

With respect to the negotiation with the Brazilian Federal Government, on October 21, 2016 the Company's Board of Directors approved the creation of the minority shareholders committee responsible for monitoring the agreement review process and providing support to the board decisions through opinions about related matters. This committee will be composed of two members nominated by the minority shareholders and an independent member with recognized expertise in technical-financial analysis of investment projects.

12.4. Oil and Gas fields operated by Petrobras returned to ANP

In 2016 the following oil and gas fields were returned to ANP: Tiziu, Japuaçu, Rio Joanes, part of Golfinho and part of Tambuatá. These fields were returned to ANP mainly due to their uneconomic feasibility and, as a consequence, the Company wrote off the amount of US\$ 4 as other expenses, net.

In 2015, the oil and gas fields Itaparica, Camaçari, Carapicú, Baúna Sul, Salema Branca, Nordeste Namorado, part of Rio Preto, Pirapitanga, Piracucá, Catuá and part of Mangangá were returned to ANP and the Company wrote-off the amount of US\$ 264 as other expenses, net.

In 2014, the oil and gas fields returned to ANP were: Cação, Carapiá, Moréia, Caravela, Cavalo Marinho, Estrela do Mar, Tubarão, Rio Mariricu, Rio Mariricu Sul, Lagoa Parda Sul, Urutau, Iraúna and Mosquito Norte and the Company wrote-off the amount of US\$ 283 as other expenses.



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13. Intangible assets

13.1. By class of assets

	Rights and Concessions	Software		Goodwill	Total
		Acquired	Developed in-house		
Balance at January 1, 2015	3,592	119	432	366	4,509
Addition	17	22	78	—	117
Capitalized borrowing costs	—	—	5	—	5
Write-offs	(163)	—	(2)	—	(165)
Transfers	71	6	11	—	88
Amortization	(23)	(33)	(97)	—	(153)
Impairment recognition	(32)	—	—	—	(32)
Cumulative translation adjustment	(1,024)	(34)	(137)	(82)	(1,277)
Balance at December 31, 2015	2,438	80	290	284	3,092
Cost	2,696	435	963	284	4,378
Accumulated amortization	(258)	(355)	(673)	—	(1,286)
Balance at December 31, 2015	2,438	80	290	284	3,092
Addition	11	15	59	—	85
Capitalized borrowing costs	—	—	5	—	5
Write-offs	(160)	—	(1)	—	(161)
Transfers	(15)	(4)	(1)	(99)	(119)
Amortization	(22)	(35)	(98)	—	(155)
Impairment recognition	(3)	—	—	—	(3)
Cumulative translation adjustment	429	12	52	35	528
Balance at December 31, 2016	2,678	68	306	220	3,272
Cost	2,875	487	1,209	220	4,791
Accumulated amortization	(197)	(419)	(903)	—	(1,519)
Balance at December 31, 2016	2,678	68	306	220	3,272
Estimated useful life in years	(*)	5	5	Indefinite	

(*) Mainly comprised of assets with indefinite useful lives, which are reviewed annually to determine whether events and circumstances continue to support an indefinite useful life assessment.



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(Expressed in millions of US Dollars, unless otherwise indicated)**13.2. Exploration rights returned to the Brazilian Agency of Petroleum, Natural Gas and Biofuels—
Agência Nacional de Petróleo, Gás Natural e Biocombustíveis (ANP)**

Exploration areas returned to the ANP in 2016, totaling US\$ 8 (US\$ 25 in 2015) are set out below:

Area	Exploratory phase	
	Exclusive	Partnership
Campos Basin	1	—
Santos Basin	1	—
Potiguar Basin	1	—
Recôncavo Basin	—	2
Tucano Sul Basin	—	3
Foz do Amazonas Basin	2	—
Amazonas Basin	—	1
Parecis Basin	2	—

13.3. Exploration rights—production sharing contract

Following the first pre-salt public auction held in October, 2013, the Libra consortium, composed of Petrobras (40% interest), Shell (20% interest), Total (20% interest), CNPC (10% interest), CNOOC (10% interest) and the *Pré-Sal Petróleo S.A. (PPSA)* as the manager of the agreement, entered into a production sharing contract with the Federal Government on December 2, 2013.

The contract granted rights and obligations to explore and operate oil and gas production in a strategic pre-salt area known as the Libra block, comprising an area of around 1,550 km², located in ultra-deep waters in the Santos Basin. This was the first oil and gas production sharing contract signed in Brazil. The contract is for 35 years and cannot be renewed.

Libra reservoir was discovered in 2010 following the drilling of 2-ANP-2A-RJS well. The Libra consortium offered a 41.65% stake of profit oil to the Brazilian Government, according to the rules of the first pre-salt public auction. This stake refers to the profit oil on a baseline scenario of price ranging from 100.01 US\$/bbl to 120 US\$/bbl, and production per producing well from 10 thousand bbl/d to 12 thousand bbl/d. This stake may vary with the international oil price and the productivity of the wells, as established by the Brazilian Agency of Petroleum, Natural Gas and Biofuels (ANP).

The signature bonus (acquisition cost) of US\$ 6,589 was paid by the consortium. The Company paid US\$ 2,636 relating to its share of the acquisition cost paid by the consortium, recognized in its intangible assets as Rights and Concessions.

Currently, the project is in its initial stage in the exploration phase (4 years), and its minimum work program have been partially performed and comprises a 3D seismic acquisition for the whole block, two exploratory wells and the extended well test (EWT) to be performed in 2017. The results confirmed oil reservoirs at depth of up to 410 meters with high porosity and permeability. The production tests confirmed the high productivity and oil quality of these reservoirs.

In September 2016, the Libra consortium commenced the process of hiring its second FPSO for the Northwest area (the FPSO of Libra Pilot Project), with expected start-up in 2020 and capacity of producing 180 thousands of barrels per day and processing 12 million cubic meters of gas.



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A FPSO will be allocated to 3 parts in the Northwest area of this block in order to perform extended well tests and early production systems.

The start-up of Libra Pioneer is expected to occur in 2017 with capacity of processing 50 thousand barrels per day and compressing 4 million cubic meters per day of associated gas. The Company also intends to mitigate risks and optimize producing systems in Libra through this FPSO.

At the end of 2016, the first two wells completions of Libra Block were concluded. These wells have intelligent completion systems in two zones, enabling real time data monitoring and control and will commence operation in 2017 interconnected to Libra Pioneer.

In 2020, four definitive systems will be installed in Libra northwest. The pilot system is planned to be concluded in September 2020 and the remaining systems in the following 3 years. The size of wells and subsea systems to be concluded after the pilot project will be based on extended well test data.

13.4. Service concession agreement—Distribution of piped natural gas

As of December 31, 2016, intangible assets include service concession agreements related to piped natural gas distribution in Brazil, in the amount of US\$ 177 (US\$ 149 in 2015), maturing between 2029 and 2043, which may be renewed. According to the distribution agreements, service is provided to customers in the industrial, residential, commercial, automotive, air conditioning and transport sectors, among others.

The consideration receivable is a factor of a combination of operating costs and expenses, and return on capital invested. The rates charged for gas distribution are subject to periodic reviews by the state regulatory agency.

The agreements establish an indemnity clause for investments in assets which are subject to return at the end of the service agreement, to be determined based on evaluations and appraisals.

On February 2, 2016, the state of Espírito Santo enacted the Law No. 10,493/2016 under which the service concession agreements related to piped natural gas distribution are considered ineffective pursuant Brazilian Federal Law 8,987/1995. This concession is accounted for as intangible assets totaling US\$ 84 as of December 31, 2016 (US\$ 69 as of December 31, 2015) and the Company has not recognized any provision on this matter based on indemnity established by law.

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14. Impairment

The Company's assets are tested for impairment on December 31, annually, or when there is an indication that their carrying amount may not be recoverable. During September 2016 such indication was identified for certain assets and triggered their impairment assessment due to changes mainly driven by a slower recovery of oil prices, a decrease in future capital expenditures, reflecting the Company's plan to reduce current debt levels and optimize its investment portfolio, as well as changes in Brazilian political and economic scenario. These changes impacted the medium and long term assumptions used in our updated Business and Management Plan that was finalized and approved in the third quarter of 2016 and also impacted the key assumptions for impairment testing. Changes in the political and economic scenario in Brazil also resulted in increases in discount rates applied for impairment testing purposes in 2016.

At December 31, 2016, the company reassessed the existence of any new indication of impairment in assets previously tested in the third quarter of 2016. Accordingly, additional impairment charges were recognized in the last quarter of 2016 with respect to producing properties relating to oil and gas activities in Brazil, COMPERJ, Transpetro's fleet of vessels, as well as reversals of impairment previously recognized for the Thermoelectric power generation plants, mainly as a result of: (i) Company's annual review of oil and gas reserves; (ii) annual review of decommissioning cost estimates; (iii) the work in progress relating to the infrastructure shared by Comperj's first refining unit and the natural gas processing plant (UPGN); (iv) changes in the Power CGU as described in note 5.3; and (v) the commencement of 5 vessels constructions, as part of Transportation CGU, following the signing of funding contracts which have enabled these projects funding.

In addition, the company also recognized in the last quarter of 2016 impairment charges relating to divestments and assets of certain subsidiaries that were tested for impairment based on their annual review at December 31, 2016.

For 2015, impairment losses were principally recognized in its fourth quarter pursuant to the annual tests in December, mainly due to changes in international crude oil prices, a downward review of proved and probable reserves estimates, a decrease in capex projections and an increase in Brazil's risk premium.

For 2014, the company recognized impairment losses mainly as a result of higher specific risk premium, planning deficiencies and postponements of COMPERJ and the 2nd refining unit of RNEST, as well as the fall in international crude oil prices, which impacted the cash flows of E&P assets.

The table below shows the impairment losses, net of reversals, recognized within the statement of income in 2016, 2015 and 2014:

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Assets or CGU by nature	Carrying amount(***)	Recoverable amount(***)	Impairment (*) / (**)	Business segment	Comments
2016					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	12,788	10,718	2,268	E&P–Brazil	item (a1)
Oil and gas production and drilling equipment in Brazil	918	64	854	E&P–Brazil	item (b1)
Second refining unit in RNEST	2,488	1,708	780	RTM–Brazil	item (c1)
Suape Petrochemical Complex	1,099	480	619	RTM–Brazil	item (d1)
Comperj	403	—	403	RTM–Brazil	item (e1)
Fertilizer Plant—UFN III	523	370	153	Gas & Power–Brazil	item (f1)
Araucária (fertilizers plant)	197	57	140	Gas & Power–Brazil	item (g)
Transpetro's fleet of vessels	1,793	1,549	244	RTM–Brazil	item (h)
Quixada Power plant	28	—	28	Biofuel, Brazil	
Others	614	424	148	Several Segments	
			5,637		
Assets classified as held for sale					item 14.2
Suape Petrochemical Complex	816	381	435	RTM–Brazil	
Petrobras Chile Distribución	546	464	82	Distribution–Abroad	
Power Plants Celso Furtado and Rômulo Almeida	120	72	47	RTM–Brazil	
Others	96	104	(8)	Several Segments	
			556		
Total			6,193		
2015					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	21,251	12,139	8,653	E&P–Brazil	item (a2)
Oil and gas production and drilling equipment in Brazil	750	243	507	E&P–Brazil	item (b2)
Suape Petrochemical Complex	1,143	943	200	RTM–Brazil	item (d2)
Comperj	1,586	234	1,352	RTM–Brazil	item (e2)
Fertilizer Plant—UFN III	935	434	501	Gas & Power–Brazil	item (f2)
Oil and gas producing properties abroad	1,548	918	637	E&P–Abroad	item (i1)
Nitrogen Fertilizer Plant—UFN-V	190	—	190	Gas & Power–Brazil	
Biodiesel plants	134	88	46	Biofuel–Brazil	
Others	341	156	210	Several segments	
Total			12,296		
2014					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	6,425	4,863	1,562	E&P–Brazil	item (a3)
Oil and gas production and drilling equipment in Brazil	1,091	555	536	E&P–Brazil	item (b3)
Second refining unit in RNEST	6,207	2,765	3,442	RTM–Brazil	item (c2)
Suape Petrochemical Complex	2,847	1,726	1,121	RTM–Brazil	item (d3)
Comperj	9,721	1,501	8,220	RTM–Brazil	item (e3)
Oil and gas producing properties abroad	3,126	1,458	1,668	E&P–Abroad	item (i2)
Araucária (fertilizers plant)	367	251	116	Gas & Power–Brazil	
Nansei Sekiyu K.K. refinery	129	—	129	RTM–Abroad	
Others	26	32	(6)		
Total			16,788		

(*) Impairment losses and reversals.

(**) In 2015 and 2014 does not include impairment on assets classified as held for sale in the amount of US\$ 3 and US\$ 35, respectively, as set out in note 14.2.

(***) CGUs only tested for impairment at September 30, 2016 are presented based information prevailing at this period.



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Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)**14.1. Impairment of property, plant and equipment and intangible assets**

For impairment testing purposes, the Company uses the value in use of its property, plant and equipment and intangible assets (individually or grouped into cash-generating units—CGUs) as their recoverable amount. In measuring value in use 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
- A pre-tax discount rate, which is derived from the Company's post-tax weighted average cost of capital (WACC).

Information on key assumptions for impairment testing and the definition of Company's CGUs are presented in notes 5.2 and 5.3, respectively. Management assumptions and judgements, which are based on the Company's business and management model, are required on these matters.

The cash flow projections used to measure the value in use of the CGUs in 2016 were mainly based on the following estimates of key assumptions for impairment testing:

	2017	2018	2019	2020	2021	Long term Average
Average Brent (US\$/bbl)	48	56	68	71	71	70
Average Brazilian Real (excluding inflation)—Real /U.S. dollar exchange rate	3.46	3.54	3.48	3.42	3.38	3.36

For comparative purposes, estimates of key assumptions for impairment testing in 2015 and 2014 are shown below:

2015

	2016	2017	2018	2019	2020	Long term Average
Average Brent (US\$/bbl)	45	59	61	64	67	71
Average Brazilian Real (excluding inflation)—Real /U.S. dollar exchange rate	4.06	3.73	3.66	3.60	3.60	3.06

2014

	2015	2016	2017	2018	2019	Long term Average
Average Brent (US\$/bbl)	52	65	70	70	70	85
Average Brazilian Real (excluding inflation)—Real /U.S. dollar exchange rate	2.85	2.85	2.75	2.75	2.75	2.64

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Information on the main impairment losses of property, plant and equipment and intangible assets are described below:

a1) Producing properties in Brazil – 2016

Impairment losses of US\$ 2,268 were recognized for certain oil and gas fields in Brazil under E&P concessions. Cash flow projections were based on: financial budgets/forecasts approved by Management and the post-tax discount rates (excluding inflation) derived from the WACC for the E&P business of 9.1% p.a. at September 30, 2016, which decreased to 8.6% p.a. at December 31, 2016 mainly reflecting improvement in Brazil's risk premium. The impairment losses were related primarily to the following fields and groups of fields: North group (US\$ 1,178), *Ceará Mar* Group (US\$ 210), *Guaricema* (US\$ 126), *Dourado* (US\$ 88), *Maromba* (US\$ 86), *Bijupirá* and *Salema* (US\$ 82), *Papa-Terra* (US\$ 72), *Trilha* (US\$ 69), *Uruguá* group (US\$ 62), *Pampo* (US\$ 67), *Frade* (US\$ 65), *Badejo* (US\$ 56), *Bicudo* (US\$ 49), *Riachuelo* (US\$ 44), *Fazenda Bálamo* (US\$ 41) and *Água Grande* group (US\$ 31). These impairment losses were mainly due to the appreciation of the Brazilian Real against the U.S. Dollar, price assumptions review, Company's annual reviews of oil and gas reserves and decommissioning cost estimates, as well a higher discount rate following the increase in Brazil's risk premium. In addition, an impairment reversal relating to *Centro Sul* group, amounting to US\$ 415, was recognized due to increased estimate of reserves and production, as well as lower operating expenses estimates based on a review of its fields operations, as set forth in 2017-2021 BMP, considering the decommissioning of a unit which had high operational costs and replacing another unit with an investment in a new processing plant which was committed to during the third quarter of 2016.

a2) Producing properties in Brazil—2015

In 2015, impairment losses of US\$ 8,653 were recognized for certain oil and gas fields in Brazil under E&P concessions. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.3% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the E&P business. The impairment losses were related primarily to the following fields: *Papa-Terra* (US\$ 2,234), *Centro Sul* group (US\$ 1,179), *Uruguá* group (US\$ 986), *Espadarte* (US\$ 593), *Linguado* (US\$ 489), *CVIT – Espírito Santo* group (US\$ 375), *Piranema* (US\$ 341), *Lapa* (US\$ 317), *Bicudo* (US\$ 240), *Frade* (US\$ 198), *Badejo* (US\$ 190), *Pampo* (US\$ 91) and *Trilha* (US\$ 84). These impairment losses are mainly due to the impact of the decline in international crude oil prices on the Company's price assumptions, the use of a higher discount rate, as well as the geological revision of *Papa-Terra* reservoir.

a3) Producing properties in Brazil—2014

In 2014, impairment losses of US\$ 1,562 were recognized, mainly with respect to certain oil and gas fields under E&P concessions, whose recoverable amount was determined to be below their carrying amount. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the E&P business. The impairment losses were mainly related to the impact of the decline in international crude oil prices on the Company's price assumptions and were principally recognized for the following fields: *Frade*, *Pirapitanga*, *Tambuatá*, *Carapicu* and *Piracucá*.

b1) Oil and gas production and drilling equipment in Brazil – 2016

Impairment losses of US\$ 854 were recognized for oil and gas production and drilling equipment which were not directly related to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 9.9% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. These impairment losses were mainly related to uncertainties over the ongoing hulls construction of the FPSOs P-71, P-72 and P-73, amounting to US\$ 593 as set out in note 14.4.



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(Expressed in millions of US Dollars, unless otherwise indicated)**b2) Oil and gas production and drilling equipment in Brazil—2015**

In 2015, impairment losses of US\$ 507 were recognized for oil and gas production and drilling equipment which were not directly related to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 9.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. The impairment losses were mainly related to the planned idle capacity of drilling rigs in the future and the use of a higher discount rate.

b3) Oil and gas production and drilling equipment in Brazil—2014

In 2014, impairment losses of US\$ 536 were recognized in oil and gas production and drilling equipment, unrelated to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. The impairment losses are mainly related to idle capacity of two drilling rigs in the future and to the demobilization of two oil platforms, which were not deployed in any oil and gas property as of December 31, 2014.

c1) Second refining unit in RNEST—2016

An impairment loss of US\$ 780 was recognized for the second refining unit in RNEST. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.7% p.a. (8.1% p.a. in 2015) post-tax discount rate (excluding inflation) derived from the WACC for the refining business, reflecting a specific risk premium for the postponed project. The impairment loss was mainly attributable to: (i) the use of a higher discount rate and (ii) a delay in expected future cash inflows to 2023 resulting from postponing the project, considering the completion of this project with the Company's own capital resources as set forth in the 2017-2021 Business and Management Plan.

c2) Second refining unit in RNEST—2014

In 2014, an impairment loss of US\$ 3,442 was recognized in the second refining unit in RNEST. Cash flow projections are based on: financial budgets/forecasts approved by Management; and a 7% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business. The impairment loss was mainly attributable to: (i) project planning deficiencies; (ii) the use of a higher discount rate, reflecting a specific risk premium for the postponed projects; (iii) a delay in expected future cash inflows resulting from postponing the project; and (iv) the Company's business context of lower projected economic growth.

d1) Suape Petrochemical Complex—2016

An impairment loss of US\$ 619 was recognized for Companhia Integrada Têxtil de Pernambuco S.A.—CITEPE and *Companhia Petroquímica de Pernambuco S.A. – Petroquímica Suape at September 30, 2016*. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.5% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the petrochemical business. The impairment loss was mainly attributable to lower market projections and the appreciation of Brazilian real against the U.S. dollar. Following the disposal of Suape Petrochemical Complex in December 2016, the Company recognized an additional impairment charge as set out in note 14.2.



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**d2) Suape Petrochemical Complex—2015**

In 2015, an impairment loss of US\$ 200 was recognized for *Companhia Integrada Têxtil de Pernambuco S.A.—CITEPE* and *Companhia Petroquímica de Pernambuco S.A. – PetroquímicaSuape*. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the petrochemical business. The impairment loss was mainly attributable to changes in market and price assumptions resulting from a decrease in economic activity in Brazil, a reduction in the spread for petrochemical products in the international market and the use of a higher discount rate.

d3) Suape Petrochemical Complex—2014

In 2014, an impairment loss of US\$ 1,121 was recognized in *Companhia Integrada Têxtil de Pernambuco S.A. – CITEPE* and *Companhia Petroquímica de Pernambuco S.A. – PetroquímicaSuape*. Cash flow projections were based on: 30-year period and zero-growth rate perpetuity; financial budgets/forecasts approved by Management; and a 6.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the petrochemical business. The impairment loss is mainly attributable to changes in market assumptions and forecasts resulting from a decrease in economic activity, a reduction in the spread for petrochemical products in the international market and modifications in tax regulations.

e1) Comperj—2016

Following a reassessment of COMPERJ project in the second quarter of 2016 confirming the postponement of its first refining unit until December 2020, with continuous efforts to seek new partnerships to resume the project, the Company recognized an impairment charge on the remaining balance of this project. However, the construction of Comperj's first refining unit facilities that will also support the natural gas processing plant (UPGN) are still in progress as the facilities are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in Santos Basin. Nevertheless, due to the interdependence between such infrastructure and Comperj first refining unit, the Company recognized additional impairment charges, totaling US\$ 403 of impairment losses in 2016.

e2) Comperj—2015

In 2015, an impairment loss of US\$ 1,352 was recognized for refining assets of Comperj. Cash flow projections were based on: financial budgets/forecasts approved by Management, and; an 8.1% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business reflecting a specific risk premium for the postponed projects. This impairment loss was mainly attributable to: (i) the use of a higher discount rate; and (ii) the delay in expected future cash inflows resulting from postponing construction.

e3) Comperj—2014

In 2014, an impairment loss of US\$ 8,220 was recognized in Comperj. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business. The impairment loss was mainly attributable to: (i) project planning deficiencies; (ii) the use of a higher discount rate, reflecting a specific risk premium for the postponed projects; (iii) a delay in expected future cash inflows resulting from postponing the project; and (iv) the Company's business context of lower projected economic growth.

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f1) Fertilizer Plant—UFN III—2016

An impairment loss of US\$ 153 was recognized for the fertilizer plant UFN III (*Unidade de Fertilizantes e Nitrogenados III*). Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.3% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the fertilizer business, reflecting a specific risk premium for the postponed projects. This impairment loss mainly relates to: (i) the use of a higher discount rate, (ii) the appreciation of Brazilian Real against the US Dollar.

f2) Fertilizer Plant—UFN III—2015

In 2015, an impairment loss of US\$ 501 was recognized for the fertilizer plant UFN III (*Unidade de Fertilizantes e Nitrogenados III*). Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.1% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the Gas & Power business, reflecting a specific risk premium for the postponed projects. The impairment losses were mainly related to: (i) the use of a higher discount rate; and (ii) the delay in expected future cash inflows resulting from postponing the project.

g) Araucaria—2016

An impairment loss of US\$ 140 was recognized for *Araucária Nitrogenados S.A.* Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.8% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the fertilizer business (6.6% p.a. in 2015). The impairment loss was mainly attributable to (i) the use of a higher discount rate, (ii) the appreciation of Brazilian Real against the U.S. Dollar and (iii) an increase in estimated production costs.

h) Transpetro's fleet of vessels—2016

In 2016, an impairment loss of US\$ 244 was recognized for Transpetro's fleet of vessels. Cash flow projections were based on: financial budgets/forecasts approved by Management; and post-tax discount rates (excluding inflation) ranging from 4.53% p.a. to 9.97% p.a. (3.92% p.a. to 8.92% p.a. in 2015) derived from the WACC for the transportation industry, considering financial leverage and the respective tax benefits. The impairment loss recognized in the third quarter mainly relates to a group of support vessels of Hidrovias project that were removed from this CGU due to the postponements and suspension of constructions projects, as well as the use of a higher discount rate. In the last quarter of 2016, additional impairment charges were accounted for due to the commencement of construction on 5 vessels after securing the projects funding, which avoided the possibility of future claims by alleging breach of contracts, as well as a further increase in discount rate.

i1) Producing properties abroad – 2015

In 2015, impairment losses of US\$ 637 were recognized in E&P assets abroad. Cash flow projections were based on: financial budgets/forecasts approved by Management; and 5.6% p.a. to 10.4% p.a. post-tax discount rates (excluding inflation) derived from the WACC for the E&P business in different countries. The impairment losses were mainly in producing properties located in the United States (US\$ 448) and Bolivia (US\$ 157), attributable to the decline in international crude oil prices.

i2) Producing properties abroad – 2014

In 2014, impairment losses of US\$ 1,668 were recognized in international E&P assets. Cash flow projections were based on: financial budgets/forecasts approved by Management; and 5.4% p.a. to 11.2% p.a. post-tax discount rates (excluding inflation) derived from the WACC for the E&P business in different countries. The impairment losses were mainly in Cascade and Chinook producing properties located in the United States (US\$ 1,567) and were mainly attributable to the decline in international crude oil prices.



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(Expressed in millions of US Dollars, unless otherwise indicated)**14.1.1. Carrying amounts of assets not substantially lower than their recoverable amounts**

In 2016, the recoverable amounts of certain mature producing fields in Brazil were not substantially in excess of their carrying amounts. The carrying amounts of these assets totaled US\$ 143 as of December 31, 2016. Changes in material assumptions for impairment testing may result in the recognition of additional impairment charges on such assets in future periods.

14.2. Assets classified as held for sale

In 2016, the Company recognized impairment losses amounting to US\$ 556 pursuant to certain sales of interests in investees approved by the Board of Directors, as described in note 10, mainly due to the following investments:

- Suape Petrochemical Complex—Impairment losses amounting to US\$ 435 following the sale of Suape and Citepe petrochemical plants, which is aligned to the Company's Strategic Plan that foresees the entire withdrawal from petrochemical interests. These losses are attributable to the lower the exit price of these investments when compared to their carrying amount adjusted by the debt to be settled by the Company, as part of the transaction closing.
- Petrobras Chile Distribución—Impairment loss of US\$ 82 was recognized for distribution assets in Chile, as the sales price of this disposal was lower than the respective carrying amount.
- Power plants *Romulo Almeida and Celso Furtado*—Impairment losses amounting to US\$ 47 were accounted for due to the difference between the exit price and the respective carrying amounts. A portion of this impairment (US\$ 7) was recognized in the third quarter of 2016 when these assets were part of the Power CGU.

For 2015, impairment losses were recognized in E&P assets classified as held for sale. The Board of Directors approved the disposal of the Bijupirá and Salema fields, PI, PIII and PIV drilling rigs and PXIV platform. As their fair values were below their carrying amount, impairment losses in the amount of US\$ 3 were recognized.

For 2014, impairment losses were recognized in E&P assets classified as held for sale. The Board of Directors approved the disposal of PI, PIII, PIV and PV drilling rigs and PXIV platform and their fair value was below their carrying amount. Therefore, impairment losses in the amount of US\$ 35 were recognized.

14.3. 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 pre-tax discount rate derived from the WACC or the Capital Asset Pricing Model (CAPM), when applicable.

The carrying amount and the value in use of the investments in associates and joint ventures which include goodwill as of December 31, 2016 are set out below:

<u>Investment</u>	<u>Segment</u>	<u>% Post-tax discount rate (excluding inflation) p.a.</u>	<u>Value in use</u>	<u>Carrying Amount</u>
Braskem S.A. (*)	RTM	11.6	3,885	1,033
Natural Gas Distributors	Gas & Power	6.0	440	330

(*) The discount rate of Braskem is CAPM of petrochemical segment, as the value in use considers the cash flow projections via dividends.



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(Expressed in millions of US Dollars, unless otherwise indicated)**14.3.1. Investment in publicly traded associate (Braskem S.A.)**

Braskem's shares are publicly traded on stock exchanges in Brazil and abroad. As of December 31, 2016 the quoted market value of the Company's investment in Braskem was US\$ 2,751 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 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 the following key assumptions:

- Estimated average exchange rate of R\$ 3.46 to U.S.\$1.00 in 2017 (converging to R\$ 3.36 in the long run);
- Average Brent crude oil price at US\$ 48 in 2017, converging to US\$ 70 in the long run;
- Prices of feedstock and petrochemical products reflecting projected international prices;
- Petrochemical products sales volume estimates reflecting projected Brazilian and global G.D.P growth; and
- Increases in the EBITDA margin during the growth cycle of the petrochemical industry in the next years and declining in the long run.

14.3.2. Impairment losses on equity-method investments

In 2016, impairment losses on equity-method investments in the amount of US\$ 182 were recognized in the statement of income as results in equity-accounted investments, substantially attributable to investees of biofuels segment, mainly relating to:

- Guarani S.A. – At September 30, 2016, impairment losses in the amount of US\$ 111 were recognized mainly due to an increase in post-tax discount rate (real rate) from 9.3% p.a. in 2015 to 10.2% p.a. and lower sugar prices forecasts. In addition, the company also recognized an impairment charge amounting to US\$ 67 made up of the difference between the exit price and the carrying amount following the disposal of interests in this associate approved in the last quarter of 2016.
- Nova Fronteira S.A. – The company recognized an impairment charge in the amount of US\$ 30 made up of the difference between the exit price and the carrying amount following the disposal of interests in this joint venture approved in the last quarter of 2016.

For 2015, impairment losses on equity-method investments in the amount of US\$ 550 (US\$ 251 in 2014) were recognized in the statement of income as results in equity-accounted investments, mainly due to (i) losses in investees abroad reflecting the fall in international crude oil price (US\$ 276); (ii) higher discount rates and capital expenditure decisions relating to the biofuels segment (US\$ 139); (iii) the deteriorated economic and financial conditions of the associate Sete Brasil (US\$ 88); and (iv) losses relating to the associate Arpoador Drilling B.V, an entity indirectly controlled by Sete Brasil (US\$ 14).



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14.4. Construction of platform hulls by Ecovix and Enseada shipyards

The Company entered into contracts with the suppliers Ecovix-Engevix Construções Oceânicas S.A and Enseada Industria Naval S.A. for supplying eight hulls for the FPSOs P-66 to P-73 and for hulls conversion of four FPSOs (P-74 to P-77), respectively.

Considering the relevance of these assets in the context of the Business and Management Plan and due to the financial difficulties faced by the suppliers, escrow accounts relating to these projects were created in the last quarter of 2015 in order to ensure the ongoing performance of the services hired.

These escrow accounts have comprised funds transferred in advance for payments to be made by the shipyards, restricted to the scope of the contracts and limited to their total balance. The deposits would be offset to the extent that services rendered or equipment delivered, with the remaining balance being reimbursed. This strategy was considered effective as the projects achieved significant progress up to September 2016, enabling the delivery of P-67 hull to a shipyard in China for integration services, the recommence of the work in progress of P-69 hull also in China, the continuity of the work in progress of P-68 hull in Rio Grande shipyard, as well as the progress on priority activities for the conclusion of minimum scope of P-74 and P-76 hulls, delivering these units to shipyards in China for integration services and for setting up topsides.

During the third quarter of 2016, the Company reassessed the progress of the hulls project and the continuity of the escrow accounts related to the projects. Consequently, significant delays on projects progress were detected and the Company concluded that this strategy, which in its beginning avoided the work in progress discontinuation, was not as effective as it was previously.

Due to uncertainties regarding the FPSOs P-71, P-72 and P-73 hulls construction continuity after significant delays on projects progress, the Company recognized, in the third quarter of 2016, impairment charges amounting to US\$ 593 as set out in note 14.1. Impacts in the Company's production curve are not expected in case of the discontinuation of this work in progress, as the 2017-2021 Business and Management Plan includes other options and additional budget funds.

Based on management evaluation, the Company recognized allowances for impairment amounting to US\$ 689 within other expenses, net with respect to the remaining balance of advances to these suppliers in the context of the escrow accounts (US\$ 352) and debts assumption relating to Ecovix and Enseada (US\$ 337), in which legal procedures to recover them are being assessed.

In addition, the Company wrote-off capital expenditures related to the right of use the Rio Grande shipyard in the amount of US\$ 155, as well as other investments related to the P-71, P-72 and P-73 amounting to US\$ 146.

The effects of the negotiation with each shipyard are presented below:

Negotiations with Ecovix

Pursuant the reassessment made by the Company in the third quarter of 2016 in order to verify the effectiveness of the escrow account approach implemented to ensure access to P-66 to P-73 hulls, a provision in the amount of US\$ 115 was recognized within other expenses, net.



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On December 9, 2016, the Company, through its investees TUPI BV and Petrobras Netherlands BV, entered into agreements with Ecovix Construções Oceânicas S.A establishing the termination of EPC contracts signed in 2010 for the construction of eight FPSO hulls. Therefore, the Company has assumed certain liabilities from Ecovix as the most adequate solution for Petrobras Group: ensure the access to the hulls of platforms P-66 to P-70 and the achievement of the 2017-2021 Business and Management Plan production targets. These debts were recognized in 2016 within other expenses, net in the amount of US\$ 234.

Along with those agreements signed in the last quarter of 2016, the Company assessed investments carried out for the construction of the P-71, P-72 and P-73 hulls to determine the best option for their allocation. As a result, the amount of US\$ 146 were written-off and accounted for as other expenses, net.

The negotiations with Ecovix in the last quarter of 2016 also resulted in a transfer of the right of use of Rio Grande shipyard from Ecovix to the Company pursuant to a finance lease agreement. The Company reassessed the recoverable amount of this right of use and related improvements totaling US\$ 155 and, as a consequence, these assets were written-off.

Negotiations with Enseada

With the escrow accounts, the Company eliminated any risk of non-delivery of the P-74 to P-77 hulls. In 2016, PNBV transferred funds in advance amounting to US\$ 237 for the payment in the name of Enseada of certain liabilities relating to the hull construction of these platforms. Due to financial difficulties faced by this supplier, the Company recognized a provision for impairment on this entire amount within other expenses, net.

In addition, as part of the Company's strategy of ensuring the continuity of FPSOs P-75 and P-77 hulls construction, the Company approved the transfer of the contract entered into by Enseada and COSCO (Dalian) Shipyard Co., Ltd to its wholly-owned subsidiary Petrobras Netherlands B.V. (PNBV), resulting in the recognition of payables within the scope of this contract. As a result, the Company recognized a provision in the amount of US\$ 103 within other expenses in the third quarter of 2016.

In addition, the Company also assessed the recoverable amount of improvements made for the hulls conversion of FPSOs P-74 to P-77 in the Inhaúma Shipyard, as well as the right of use of this shipyard. Accordingly, the Company did not accounted for any additional write-off related to these assets at December 31, 2016 based on the use of this location as a logistic center mainly dedicated to Santos Basin operations.



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**15. Exploration and evaluation of oil and gas reserves**

The exploration and evaluation activities include the search for oil and gas reserves from obtaining the legal rights to explore a specific area to the declaration of the technical and commercial viability of the reserves.

Changes in the balances of capitalized costs directly associated with exploratory wells pending determination of proved reserves and the balance of amounts paid for obtaining rights and concessions for exploration of oil and natural gas (capitalized acquisition costs) are set out in the following table:

Capitalized Exploratory Well Costs / Capitalized Acquisition Costs (*)	12.31.2016	12.31.2015
Property plant and equipment		
Opening Balance	5,201	7,000
Additions to capitalized costs pending determination of proved reserves	1,009	2,282
Capitalized exploratory costs charged to expense	(1,054)	(882)
Transfers upon recognition of proved reserves	(966)	(960)
Cumulative translation adjustment	943	(2,239)
Closing Balance	5,133	5,201
Intangible Assets	2,236	2,048
Capitalized Exploratory Well Costs / Capitalized Acquisition Costs	7,369	7,249

(*) Amounts capitalized and subsequently expensed in the same period have been excluded from this table.

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:

Exploration costs recognized in the statement of income	2016	2015	2014
Geological and geophysical expenses	371	416	830
Exploration expenditures written off (includes dry wells and signature bonuses)	1,281	1,441	2,178
Other exploration expenses	109	54	50
Total expenses	1,761	1,911	3,058

Cash used in :	2016	2015	2014
Operating activities	435	470	879
Investment activities	1,075	2,736	4,899
Total cash used	1,510	3,206	5,778

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15.1. 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):

<u>Aging of capitalized exploratory well costs (*)</u>	<u>2016</u>	<u>2015</u>
Exploratory well costs capitalized for a period of one year	806	1,387
Exploratory well costs capitalized for a period greater than one year	4,327	3,814
Total capitalized exploratory well costs	<u>5,133</u>	<u>5,201</u>
Number of projects relating to exploratory well costs capitalized for a period greater than one year	57	70

	<u>Capitalized costs (2016)</u>	<u>Number of wells</u>
2015	932	20
2014	1,126	23
2013	675	13
2012	717	12
2011 and previous years	<u>877</u>	<u>20</u>
Exploratory well costs that have been capitalized for a period greater than one year . . .	<u>4,327</u>	<u>88</u>

(*) Amounts paid for obtaining rights and concessions for exploration of oil and gas (capitalized acquisition costs) are not included.

Exploratory well costs that have been capitalized for a period greater than one year since the completion of drilling amount to US\$ 4,327. Those costs relate to 57 projects comprising (i) US\$ 4,094 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\$ 233 relate to costs incurred to evaluate the reserves and their potential development.

16. Trade payables

	<u>12.31.2016</u>	<u>12.31.2015</u>
Third parties in Brazil	3,280	3,331
Third parties abroad	2,019	2,566
Related parties	<u>463</u>	<u>476</u>
Balance on current liabilities	<u>5,762</u>	<u>6,373</u>

17. Finance debt

The Company obtains funding through debt financing for capital expenditures to develop crude oil and natural gas producing properties, construct vessels and pipelines, construct and expand industrial plants, among other uses.



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The Company has covenants that were not in default at December, 31 2016 in its loan agreements and notes issued in the capital markets requiring, among other obligations, 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. Non-compliance with these obligations do not represent immediate events of default and the grace period in which the Company has to deliver these financial statements ranges from 30 to 60 days, depending on the agreement. The Company also has covenants with respect to debt level in some of its loan agreements with the Brazilian Development Bank (*Banco Nacional de Desenvolvimento—BNDES*).

A roll-forward schedule of non-current debt is set out as follows:

	Export Credit Agencies	Banking Market	Capital Market	Others	Total
Non-current					
In Brazil					
Opening balance at January 1, 2015	—	29,288	1,301	28	30,617
Additions (new funding obtained)	—	4,918	989	—	5,907
Interest incurred during the period	—	289	—	—	289
Foreign exchange/inflation indexation charges	—	3,001	80	2	3,083
Transfer from long-term to short-term	—	(2,389)	(149)	(4)	(2,542)
Cumulative translation adjustment (CTA)	—	(10,410)	(496)	(9)	(10,915)
Balance as of December 31, 2015	—	24,697	1,725	17	26,439
Abroad					
Opening balance at January 1, 2015	5,244	29,898	53,810	649	89,601
Additions (new funding obtained)	163	5,753	2,045	—	7,961
Interest incurred during the period	5	34	48	8	95
Foreign exchange/inflation indexation charges	442	1,342	(1,092)	56	748
Transfer from long-term to short-term	(767)	(4,183)	(5,770)	(45)	(10,765)
Cumulative translation adjustment (CTA)	(442)	(1,877)	(222)	(56)	(2,597)
Balance as of December 31, 2015	4,645	30,967	48,819	612	85,043
Total Balance as of December 31, 2015	4,645	55,664	50,544	629	111,482
Non-current					
In Brazil					
Opening balance at January 1, 2016	—	24,697	1,725	17	26,439
Additions (new funding obtained)	—	448	—	—	448
Interest incurred during the period	—	302	—	—	302
Foreign exchange/inflation indexation charges	—	(1,408)	54	1	(1,353)
Transfer from long-term to short-term	—	(7,254)	(135)	(2)	(7,391)
Transfer to liabilities associated with assets classified as held for sale	—	(7)	—	—	(7)
Cumulative translation adjustment (CTA)	—	4,389	337	3	4,729
Balance as of December 31, 2016	—	21,167	1,981	19	23,167
Abroad					
Opening balance at January 1, 2016	4,645	30,967	48,819	612	85,043
Additions (new funding obtained)	—	7,392	9,758	—	17,150
Interest incurred during the period	4	17	52	9	82
Foreign exchange/inflation indexation charges	(165)	(1,133)	(609)	(21)	(1,928)
Transfer from long-term to short-term	(980)	(4,326)	(10,145)	(115)	(15,566)
Transfer to liabilities associated with assets classified as held for sale	—	—	(302)	—	(302)
Cumulative translation adjustment (CTA)	163	768	(227)	21	725
Balance as of December 31, 2016	3,667	33,685	47,346	506	85,204
Total Balance as of December 31, 2016	3,667	54,852	49,327	525	108,371

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	12.31.2016	12.31.2015
Current		
Short-term debt	358	1,523
Current portion of long-term debt	7,779	11,500
Accrued interest	1,618	1,660
Total	9,755	14,683

17.1. 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 and onwards	Total (*)	Fair value
Financing in Brazilian Reais								
(R\$):	2,463	2,439	4,348	6,005	3,325	5,595	24,175	20,899
Floating rate debt	1,860	1,985	3,907	5,583	2,908	3,765	20,008	
Fixed rate debt	603	454	441	422	417	1,830	4,167	
Average interest rate	10.2%	9.0%	8.6%	7.2%	6.3%	5.2%	7.9%	
Financing in U.S.Dollars (US\$):	6,648	7,328	14,998	9,928	14,493	29,824	83,219	87,839
Floating rate debt	4,835	6,317	11,601	5,941	2,474	12,347	43,515	
Fixed rate debt	1,813	1,011	3,397	3,987	12,019	17,477	39,704	
Average interest rate	5.1%	5.3%	5.3%	5.6%	5.2%	6.6%	6.0%	
Financing in R\$ indexed to								
US\$:	273	176	173	173	173	764	1,732	1,683
Floating rate debt	23	22	19	19	19	16	118	
Fixed rate debt	250	154	154	154	154	748	1,614	
Average interest rate	6.2%	6.4%	6.4%	6.5%	6.6%	6.9%	6.6%	
Financing in Pound Sterling (£):	57	—	—	—	—	2,120	2,177	1,593
Fixed rate debt	57	—	—	—	—	2,120	2,177	
Average interest rate	6.2%	—	—	—	—	6.3%	6.2%	
Financing in Japanese Yen (¥):	88	88	—	—	—	—	176	198
Floating rate debt	88	88	—	—	—	—	176	
Average interest rate	0.5%	0.4%	—	—	—	—	0.5%	
Financing in Euro (€):	219	1,185	1,379	207	786	2,864	6,640	6,549
Floating rate debt	1	—	—	160	—	—	161	
Fixed rate debt	218	1,185	1,379	47	786	2,864	6,479	
Average interest rate	3.7%	3.9%	4.2%	4.5%	4.6%	4.7%	4.3%	
Financing in other currencies:	7	—	—	—	—	—	7	7
Fixed rate debt	7	—	—	—	—	—	7	
Average interest rate	14.0%	—	—	—	—	—	14.0%	
Total as of December 31, 2016	9,755	11,216	20,898	16,313	18,777	41,167	118,126	118,768
Average interest rate	6.1%	6.0%	5.9%	5.9%	5.4%	6.4%	6.2%	
Total as of December 31, 2015	14,683	11,397	16,091	22,596	15,537	45,861	126,165	109,168
Average interest rate	5.9%	6.4%	5.6%	5.8%	6.9%	6.7%	6.3%	

(*) The average maturity of outstanding debt as of December 31, 2016 is 7.46 years (7.14 years as of December 31, 2015).



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The fair value of the Company's finance debts 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\$ 46,510 as of December 31, 2016 (US\$ 42,929 as of December 31, 2015); 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 the Petrobras' credit risk, amounting to US\$ 72,258 as of December 31, 2016 (US\$ 66,239 as of December 31, 2015). The fair value of finance debts categorized into level 2 were previously determined using a discounted cash flow based on a theoretical curve derived from the yield curve of the Company's most liquid bonds.

The sensitivity analysis for financial instruments subject to foreign exchange variation is set out in note 33.2.

17.2. 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. In 2016 the capitalization rate was 5.80% p.a. (5.03% p.a. in 2015).

17.3. Lines of credit

Company Abroad	Financial institution	Date	Maturity	Amount		
				Available (Lines of Credit)	Used	Balance
Petrobras	JBIC	7/16/2013	12/31/2018	1,500	—	1,500
PGT BV	CHINA EXIM	10/24/2016	Not defined	1,000	—	1,000
PGT BV	SACE	12/22/2016	12/22/2017	300	—	300
PGT BV				<u>2,800</u>	<u>—</u>	<u>2,800</u>
In Brazil						
Petrobras	FINEP	4/16/2014	12/26/2017	78	74	4
PNBV	BNDES	9/3/2013	3/26/2018	3,031	704	2,327
Transpetro	BNDES	1/31/2007	Not defined	689	195	494
Transpetro	Banco do Brasil	7/9/2010	4/10/2038	49	21	28
Transpetro	Caixa Econômica Federal	11/23/2010	Not defined	<u>101</u>	<u>—</u>	<u>101</u>
Total				<u>3,948</u>	<u>994</u>	<u>2,954</u>

17.4. Collateral

Most of the Company's debt is unsecured, but certain specific funding instruments to promote economic development are collateralized. In addition, financing agreements with China Development Bank (CDB) maturing in 2019 and 2026 are also collateralized based on future oil exports for specific buyers limited to 300 thousand barrels per day up to 2019 and 100 thousand barrels per day from 2020 to 2026. This collateral may not exceed the amount of the related debt.

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The loans obtained by structured entities are collateralized based on the projects' assets, as well as liens on receivables of the structured entities. Certain wholly-owned subsidiaries issue securities that are fully and unconditionally guaranteed by Petrobras.

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 36.

18. Leases

18.1. Future minimum lease payments / receipts – finance leases

Estimated lease payments / receivable	Receipts			Payments		
	Future value	Annual interest	Present value	Future value	Annual interest	Present value
2017	214	(123)	91	43	(25)	18
2018-2021	784	(419)	365	170	(87)	83
2022 and thereafter	1,371	(353)	1,018	388	(245)	143
As of December 31, 2016	<u>2,369</u>	<u>(895)</u>	<u>1,474</u>	<u>601</u>	<u>(357)</u>	<u>244</u>
Current			91			18
Non-current			1,383			226
As of December 31, 2016			<u>1,474</u>			<u>244</u>
Current (*)			66			19
Non-current (*)			1,393			78
As of December 31, 2015			<u>1,459</u>			<u>97</u>

(*) For comparative purposes, the present value of payments in the amount of US\$ 6 was reclassified from trade payables in current liabilities and the amount of US\$ 38 was reclassified from others in non-current liabilities.

18.2. Future minimum lease payments – operating leases

Operating leases mainly include oil and gas production units, drilling rigs and other exploration and production equipment, vessels and support vessels, helicopters, land and building leases.

2017	11,395
2018	8,749
2019	7,861
2020	7,560
2021	7,103
2022 and thereafter	<u>54,250</u>
As of December 31, 2016	<u>96,918</u>
As of December 31, 2015	<u>99,194</u>



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As of December 31, 2016, the balance of estimated future minimum lease payments under operating leases includes US\$ 49,671 (US\$ 60,628 as of December 31, 2015) with respect to assets under construction, for which the lease term has not commenced.

During 2016, the Company recognized expenditures of US\$ 9,920 (US\$ 9,898 in 2015) for operating leases installments.

19. Related-party transactions

The Company has a related-party transactions policy, which is applicable to all the Petrobras Group, in accordance with the Company's by-laws.

This policy provides for guidance to Petrobras and its workforce while entering into related-party transactions and dealing with potential conflicts of interest on these transactions, in order to ensure the goals of the Company and align them with transparency of processes and corporate governance best practices, such as: (i) Audit Committee prior assessment of transactions between the Company and its associates, the Brazilian Federal Government (including its agencies or similar bodies and controlled entities), as well as transactions with entities controlled by key management personnel or by their close family members; and (ii) prior approval of, at least, 2/3 of board members with respect to transactions with the Brazilian Federal Government.

The Related-Party Transactions Policy also aims to ensure an adequate and diligent decision-making process for the Company's key management.

19.1. 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 includes transactions with banks and other entities under its control, such as financing and banking, asset management and others.

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The balances of significant transactions are set out in the following table:

	2016	12.31.2016		2015	12.31.2015		2014
	Income (expense)	Assets	Liabilities	Income (expense)	Assets	Liabilities	Income (expense)
Joint ventures and associates							
State-controlled gas distributors	1,740	246	69	3,021	255	72	4,507
Petrochemical companies	3,578	131	27	3,676	144	45	7,703
Other associates and joint ventures	462	178	382	571	134	453	537
Subtotal	5,780	555	478	7,268	533	570	12,747
Government entities							
Government bonds	130	1,113	—	342	1,115	—	662
Banks controlled by the Brazilian Government	(3,073)	4,114	19,860	(4,121)	2,607	24,336	(3,246)
Receivables from the Electricity sector (note 8.4)	962	4,922	2	1,618	3,415	—	2,364
Petroleum and alcohol account—receivables from Brazilian Government (note 19.2)	5	268	—	5	219	—	3
Federal Government (Dividends and interest on capital)	—	—	—	—	—	—	22
Others	200	408	333	14	306	316	73
Subtotal	(1,776)	10,825	20,195	(2,142)	7,662	24,652	(122)
Pension plans	—	48	99	—	36	110	1
Total	4,004	11,428	20,772	5,126	8,231	25,332	12,626
Revenues, mainly sales revenues	6,558	—	—	8,544	—	—	14,297
Foreign exchange and inflation indexation charges, net	(284)	—	—	(1,486)	—	—	(465)
Finance income (expenses), net	(2,270)	—	—	(1,932)	—	—	(1,206)
Current assets	—	3,062	—	—	2,255	—	—
Non-current assets	—	8,366	—	—	5,976	—	—
Current liabilities	—	—	4,037	—	—	3,248	—
Non-current liabilities	—	—	16,735	—	—	22,084	—
Total	4,004	11,428	20,772	5,126	8,231	25,332	12,626

19.2. Petroleum and Alcohol accounts—Receivables from the Brazilian Federal Government

As of December 31, 2016, the balance of receivables related to the Petroleum and Alcohol accounts was US\$ 268 (US\$ 219 as of December 31, 2015). Pursuant to Provisional Measure 2,181 of August 24, 2001, the Federal Government may settle this balance by using National Treasury Notes in an amount equal to the outstanding balance, or allow the Company to offset the outstanding balance against amounts payable to the Federal Government, including taxes payable, or both.

The Company has provided all the information required by the National Treasury Secretariat (*Secretaria do Tesouro Nacional—STN*) in order to resolve disputes between the parties and conclude the settlement with the Brazilian Federal Government.

Following several negotiation attempts at the administrative level, the Company filed a lawsuit in July 2011 to collect the receivables.



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On October 28, 2016, the court ruled in favor of the Company, disallowing the use of an alleged debt from the liquidated company of the group, Petrobras Comércio Internacional S.A. – Interbrás, by the Brazilian Federal Government, when offsetting the outstanding balance. However, the parties are still able to file appeals at this stage.

19.3. Compensation of employees and 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 the months of December 2016 and December 2015 were:

<u>Compensation of employees, excluding officers (amounts in U.S. dollars)</u>	<u>Dez/2016</u>	<u>Dez/2015</u>
Lowest compensation	934.64	731.99
Average compensation	5,376.73	4,315.36
Highest compensation	27,996.49	23,442.18
Compensation of highest paid Petrobras officer	35,453.09	27,780.21

The total compensation of Petrobras' key management personnel is set out as follows:

	<u>2016</u>			<u>2015</u>		
	<u>Officers</u>	<u>Board (members and alternates)</u>	<u>Total</u>	<u>Officers</u>	<u>Board (members and alternates)</u>	<u>Total</u>
Wages and short-term benefits	3.4	0.4	3.8	3.9	0.4	4.3
Social security and other employee-related taxes	1.0	0.1	1.1	1.0	0.1	1.1
Post-employment benefits (pension plan)	0.4	—	0.4	0.4	—	0.4
Benefits due to termination of tenure	0.2	—	0.2	—	—	—
Total compensation recognized in the statement of income	<u>5.0</u>	<u>0.5</u>	<u>5.5</u>	<u>5.3</u>	<u>0.5</u>	<u>5.8</u>
Total compensation paid	5.0	0.5	5.5	5.3	0.5	5.8
Average number of members in the period (*) ..	7.67	11.00	18.67	8.00	13.67	21.67
Average number of paid members in the period (**)	<u>7.67</u>	<u>9.33</u>	<u>17.00</u>	<u>8.00</u>	<u>11.33</u>	<u>19.33</u>

(*) Monthly average number of members.

(**) Monthly average number of paid members.

In 2016 the board members and executive officers of the Petrobras group received US\$ 22.2 as compensation (US\$ 20.3 in 2015).



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The compensation of the Advisory Committees to the Board of Directors is apart from the fixed compensation set for the Board members and, therefore, has not been classified under compensation of Petrobras' key management personnel.

In 2016, the alternates of Board members, who were also members of these committees up to April 2016, received the amount of US\$ 14 thousand as compensation in 2016 (US\$ 17 thousand including related charges).

20. Provision for decommissioning costs**Non-current liabilities**

	2016	2015
Opening balance	9,150	8,267
Adjustment to provision	(564)	4,493
Transfers related to liabilities held for sale (*)	(35)	(125)
Payments made	(730)	(1,242)
Interest accrued	660	231
Others	(41)	121
Cumulative translation adjustment	1,812	(2,595)
Closing balance	10,252	9,150

(*) Includes US\$ 126 relating to the termination of sales contract of Bijupira and Salema fields, US\$ 52 relating to the intention to sell interest in Lapa, Sururu, Berbigão and Oeste de Atapu fields, and US\$ 109 transferred pursuant to the sale of the subsidiary PESA.

The estimates for abandonment and dismantling of oil and natural gas producing properties are revised annually at December 31 along with the annual process of oil and gas reserves certification or whenever an indication of significant change in the assumptions used in the estimates occurs.

In 2016, the adjustment to this provision was mainly due to a higher risk-adjusted discount rate (7.42% and 6.73% for 2016 and 2015, respectively), partially offset by an increase in cost estimates mainly due to additional drilling wells and other equipments.

21. Taxes**21.1. Income taxes and other taxes****Income taxes**

	Current assets		Current liabilities	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Taxes in Brazil	595	959	112	62
Taxes abroad	7	24	15	43
Total	602	983	127	105



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Other taxes	Current assets		Non-current assets		Current liabilities		Non-current liabilities (*)	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Taxes in Brazil								
Current / Deferred								
ICMS (VAT) ..	969	807	676	605	1,078	1,045	—	—
Current / Deferred								
PIS and								
COFINS	710	746	2,262	2,026	463	487	—	—
CIDE	22	18	—	—	118	115	—	—
Production								
taxes	—	—	—	—	1,232	622	—	—
Withholding								
income taxes ...	—	—	—	—	486	435	—	15
REFIS and								
PRORELIT	—	—	—	—	28	274	—	11
Others	165	150	191	184	190	244	20	—
Total in Brazil	1,866	1,721	3,129	2,815	3,595	3,222	20	26
Taxes abroad	34	44	12	6	33	143	—	—
Total	1,900	1,765	3,141	2,821	3,628	3,365	20	26

(*) Other non-current taxes are classified as other non-current liabilities.

21.2. Tax amnesty and refinancing program—Programa de Recuperação Fiscal (REFIS)

On July 16, 2015 Petrobras paid US\$ 514 (US\$ 385 in cash and US\$ 129 using tax credits) to settle a definitive ruling at the administrative stage with respect to a tax deficiency notice issued by the Brazilian Federal Tax Authorities. The notice is related to the tax on financial operations (Imposto sobre operações financeiras—IOf) applied to intercompany loans made by Petrobras to foreign subsidiaries in 2008.

In addition, Joint Ordinance 1,064 (Portaria Conjunta RFB/PGFN 1.064) issued by the Brazilian Federal Tax Authorities and by the Brazilian Federal Tax Attorney General's Office, and Normative Instruction 1,576/15 (Instrução Normativa RFB 1.576/15) issued by the Brazilian Federal Tax Authorities, on August 3, 2015, provided taxpayers an option for partial relief from existing federal tax debts, through a tax amnesty program created under Law 12,996/14 – Programa de Recuperação Fiscal (REFIS). The Company elected to join the REFIS to settle the tax liabilities as follows:

a) Pay amounts due under the tax deficiency notices related to the tax on financial operations (IOF) applicable to intercompany loans made by Petrobras to its foreign subsidiaries in 2007, 2009 and 2010, and to pay amounts due related to the IOF applicable to similar intercompany loans made in other periods, for which a tax deficiency notice has not been issued (2011 and 2012), in the amount of US\$ 1,049. The Company had modified its procedures with respect to the payment of the IOF applicable to transactions from 2013 and, therefore, does not expect any additional tax deficiency notices.

b) Pay the tax deficiency notices issued by the Brazilian Federal Tax Authorities related to the alleged failure to pay withholding income tax (Imposto de Renda Retido na Fonte- IRRF) on amounts Petrobras paid to its former subsidiary Petrobras International Finance Company (PifCo) with respect to crude oil and oil product imports between 1999 and 2002, 2004, 2005 and 2007 to 2012, in the amount of US\$ 800.

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c) Penalties for noncompliance with customs clearance procedures on crude oil and oil product imports from 2008 to 2013, in the amount of US\$ 13; and

d) Indexation charges related to REFIS balance of US\$ 9 recognized in the last quarter of 2015.

The Company has agreed to pay those federal tax liabilities in 30 monthly installments, which are updated by the Selic interest rate, following an immediate down payment of 20% of the total amount due (after the discounts provided under the REFIS) and using tax credits (tax loss carryforwards) to pay for interest and penalties.

As a result, the Company recognized a total charge of US\$ 2,334 in 2015, of which US\$ 1,566 was recognized as other taxes expenses and US\$ 768 as finance expenses, of which the Company has already settled a total amount of US\$ 1,833: US\$ 971 was paid in cash, US\$ 509 by using tax credits and US\$ 353 by using judicial deposits. The remaining amount was settled in January 2017.

21.3. Tax amnesty programs – State Tax (Programas de Anistias Estaduais)

In 2016, the Company elected to settle taxes in cash through an amnesty settlement programs administered by the State of São Paulo pursuant to the Decree No. 61,625/2015 and Decree No. 61,788/2016, as well as Complementary Law 333/2016 enacted by the State of Pernambuco. In 2015, the Company decided to benefit from tax amnesty programs relating to the states of Rio de Janeiro, Espirito Santo, Bahia, Pará and the Brazil Federal District.

In 2016 the Company charged to income US\$ 44 (US\$ 370 in 2015), of which US\$ 34 (US\$ 314 in 2015) was recognized as other taxes and US\$ 8 (US\$ 56 in 2015) as finance expense within Statement of Income.

21.4. Reduction tax litigation program (Programa de Redução de Litígios Tributários – PRORELIT)

On October 30, 2015, Petrobras joined the PRORELIT, established by Law No. 13,202 / 15 (Measure Conversion Act No. 685/15) paying US\$ 17, US\$ 5 in cash and US\$ 12 in tax credits debts and customs fines against the Company from 2014 and 2015 and to tax penalties for improper deduction of tax bases in 2003 and 2004. In 2015 the Company charged to income US\$ 17, of which US\$ 7 was recognized in other taxes expenses and US\$ 10 in finance expenses in the Statement of Income.

21.5. Brazilian Tax Law

On December 30, 2015, the state of Rio de Janeiro enacted two laws that increased the tax burden on the oil industry from March 2016, as follows:

- Law No. 7,182 – establishes a Rate Control, Monitoring and Supervision of Research, Mining, Oil and Gas Exploration and Utilization Activities tax (Taxa de Controle, Monitoramento e Fiscalização das Atividades de Pesquisa, Lavra, Exploração e Aproveitamento de Petróleo e Gás – TFPG) over each barrel of crude oil or equivalent unit of natural gas extracted in the State of Rio de Janeiro, and
- Law No. 7,183 – establishes a VAT (ICMS) tax over transactions involving crude oil operations.



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The Company believes that the taxation established by both laws is not legally justifiable, and therefore, the Company has supported the Brazilian Association of Companies for the Exploration and Production of Oil and Gas (ABEP—*Associação Brasileira de Empresas de Exploração e Produção de Petróleo e Gás*), which has filed complaints challenging the constitutionality of such laws before the Brazilian Supreme Court.

The Brazilian Federal Attorney has expressed favorable opinions regarding the basis of the ABEP complaints and the granting of judicial injunctions in favor of the oil and gas industry, to avoid the associated tax burden imposed on it.

As the Brazilian Supreme Court has not ruled on the ABEP request for formal injunctions, the Company filed individual complaints before the State Court of Rio de Janeiro challenging both laws and, as a result, judicial injunctions were granted in favor of the Company in December 2016 and this tax burden has been suspended.

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21.6. Deferred income taxes—non-current

a) The changes in the deferred income taxes are presented as follows:

Income taxes in Brazil comprise corporate income tax (IRPJ) and social contribution on net income (CSLL). Brazilian statutory corporate tax rates are 25% and 9%, respectively.

	Property, Plant and Equipment	Loans, trade payables and other receivables / financing	Finance leases	Provision for legal proceedings	Tax losses	Inventories	Employee Benefits	Others	Total
	Oil and gas exploration costs	Others (*)							
Balance at January 1, 2015	(13,647)	(224)	3,823	526	5,718	490	2,022	(141)	(2,025)
Recognized in the statement of income for the year	(1,284)	1,382	(525)	471	2,166	42	(157)	(96)	2,043
Recognized in shareholders' equity	—	14	6,490	—	(152)	—	(14)	65	6,389
Cumulative translation adjustment	4,608	223	(2,275)	(204)	(2,019)	(182)	(645)	180	(108)
Use of tax credits—REFIS and PRORELIT	—	—	—	—	(521)	—	—	—	(521)
Others	—	(104)	100	(1)	23	3	(7)	(14)	6
Balance at December 31, 2015	(10,323)	1,291	7,613	792	5,215	353	1,199	(6)	5,784
Recognized in the statement of income of the year	1,078	(533)	(374)	183	(230)	21	522	210	913
Recognized in shareholders' equity	—	—	(4,629)	—	(3)	—	1,058	—	(3,273)
Cumulative translation adjustment	(1,960)	106	918	179	1,094	55	252	(12)	564
Others (**)	—	73	(16)	(26)	(36)	—	(22)	92	56
Balance at December 31, 2016	(11,205)	937	3,512	1,128	6,040	429	3,009	284	4,044
Deferred tax assets									6,016
Deferred tax liabilities									(232)
Balance at December 31, 2015									5,784
Deferred tax assets									4,307
Deferred tax liabilities									(263)
Balance at December 31, 2016									4,044

(*) Mainly includes impairment adjustments and capitalized borrowing costs.

(**) Includes US\$ 77 transferred to liabilities associated with assets held for sale due to the disposal of subsidiaries Liquigás, PESA and NTS.

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b) 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 2017-2021 Business and Management Plan (BMP). The main goals and objectives outlined in its business plan include business restructuring, a divestment plan, demobilization of assets and reducing operating expenses.

Management considers that the deferred tax assets will be realized to the extent the deferred tax liabilities are reserved and expected taxable events occur, based on its 2017-2021 BMP.

The estimated schedule of recovery/reversal of net deferred tax assets (liabilities) recoverable (payable) as of December 31, 2016 is set out in the following table:

	Assets	Liabilities
2017	2,050	115
2018	326	9
2019	449	13
2020	544	14
2021	323	68
2022	239	—
2023 and thereafter	376	44
Recognized deferred tax credits	4,307	263
Brazil	483	—
Abroad	2,532	—
Unrecognized deferred tax credits	3,015	—
Total	7,322	263

At December 31, 2016, the Company had tax loss carryforwards arising from offshore subsidiaries, for which no deferred tax assets had been recognized. These tax losses totaling US\$ 2,532 (US\$ 2,437 as of December 31, 2015) arose mainly from oil and gas exploration and production and refining activities in the United States of US\$ 2,276 (US\$ 2,002 as of December 31, 2015), as well as activities in Spain in the amount of US\$ 256 (US\$ 435 as of December 31, 2015).

An aging of the unrecognized tax carryforwards, from companies abroad, classified by lapse of the applicable statute of limitations is set out below:

Lapse of Statute of Limitations	Unrecognized deferred tax credits
2020	38
2021	133
2022	5
2023	48
2024	32
2025	6
2026	113
2027	130
2028	147
2029	162
2030 and thereafter	1,718
Total	2,532



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21.7. Reconciliation between statutory tax rate and effective tax expense rate

The following table provides the reconciliation of Brazilian statutory tax rate to the Company's effective rate on income before income taxes:

	2016	2015	2014
Loss before income taxes	(3,665)	(9,748)	(8,824)
Nominal income taxes computed based on Brazilian statutory corporate tax rates (34%)	1,247	3,314	3,000
Adjustments to arrive at the effective tax rate:	—	—	—
· Different jurisdictional tax rates for companies abroad	(157)	(251)	559
· Brazilian income taxes on income of companies incorporated outside Brazil (*)	(320)	(751)	—
· Tax incentives	51	11	26
· Tax loss carryforwards (unrecognized tax losses)	(265)	(554)	(1,289)
· Write-off—overpayments incorrectly capitalized (note 3)	—	—	(907)
· Non-taxable income (non-deductible expenses), net (**)	(1,080)	(658)	(338)
· Others	(160)	(28)	270
Income taxes benefit (expense)	(684)	1,137	1,321
Deferred income taxes	912	2,043	3,045
Current income taxes	(1,597)	(906)	(1,724)
Total	(684)	1,137	1,321
Effective tax rate of income taxes	(18.7)%	11.7%	15.0%

(*) Relates to Brazilian income taxes on earnings of offshore investees generated up to December 31, 2016, as established by Law No. 12,973/2014.

(**) Includes results in equity-accounted investments and CTA transferred to income statement due to the disposal of Pesa and Nansei as set out in note 10.1.

22. Employee benefits (Post-Employment)

	2016	2015
Liabilities		
Petros Pension Plan	10,752	5,938
Petros 2 Pension Plan	293	71
AMS Medical Plan	11,214	6,753
Other plans	38	88
Total	22,297	12,850
Current	820	655
Non-current	21,477	12,195
Total	22,297	12,850

22.1. Petros Plan and Petros 2 Plan

The Company's post-retirement plans are managed by Fundação Petrobras de Seguridade Social (Petros), which was established by Petrobras as a nonprofit legal entity governed by private law with administrative and financial autonomy.

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a) Petros Plan—Fundação Petrobras de Seguridade Social

The Petros Plan was established by Petrobras in July 1970 as a defined-benefit pension plan and currently provides post-retirement benefits for employees of Petrobras and Petrobras Distribuidora S.A., in order to complement government social security benefits. The Petros Plan has been closed to new participants since September 2002.

Petros performs an annual actuarial review of its costs using the capitalization method for most benefits. The employers (sponsors) make regular contributions in amounts equal to the contributions of the participants (active employees, assisted employees and retired employees), on a parity basis.

On July 31, 2016, Petros Plan announced a deficit in the amount of US\$ 6,934. The deficit exceeds by US\$ 4,909 the ceiling amount of US\$ 2,025 as established in the Resolution 22/2015 enacted by the Post-Retirement Benefit Federal Council—CNPB, which outlines the terms of equating plans. Accordingly, participants of the plan and their employers (sponsors) would be called to cover this deficit based on their respective proportions of regular contributions and in accordance with an equating plan guideline in a period totaling 1.5 times the duration of the liabilities under the plan, which is estimated to be 18 years.

Pursuant to the aforementioned rule, Petros should have developed and approved by December 31, 2016, an equating plan to be implemented within 60 calendar days following the Executive Council approval. However, due to managerial and technical reasons, the Pension Plan requested a Conduct Adjustment Declaration (TAC) before Superintendency of Post-retirement Benefits – PREVIC, in order to postpone the implementation of its equating plan for 2015 within approximately 210 calendar days after the TAC approval. Therefore, the Company, as sponsor of this pension plan, expects to make additional contributions only after the term established in the TAC.

As of December 31, 2016, the balance of the Terms of Financial Commitment (TFC), signed by Petrobras and Petros in 2008 is US\$ 3,630. The TCF is a financial commitment agreement to cover obligations under the pension plan, which amounts are due in 20 years, with 6% p.a. semiannual coupon payments based on the updated balance. The Company has provided crude oil and oil products pledged as security for the TFC totaling US\$ 1,979 which are being reviewed.

The employers' expected contributions to the plan for 2017 are US\$ 191 and interest payments on TCF US\$ 221.

The average duration of the actuarial liability related to the plan, as of December 31, 2016, is 11.42 years (10.06 years as of December 31, 2015).

b) Petros 2 Plan—Fundação Petrobras de Seguridade Social

Petros 2 Plan was established in July 2007 by Petrobras and certain subsidiaries as a variable contribution plan recognizing past service costs for contributions for the period from August 2002 to August 29, 2007. The Petros 2 Plan currently provides post-retirement benefits for employees of Petrobras, Petrobras Distribuidora S.A., Stratura Asfaltos, Termobahia, Termomacaé, Transportadora Brasileira Gasoduto Brasil-Bolívia S.A. – TBG, Petrobras Transporte S.A. – Transpetro and Petrobras Biocombustível and e Araucária Nitrogenados. The plan is open to new participants although there will no longer be payments relating to past service costs.



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Certain elements of the Petros 2 Plan have defined benefit characteristics, primarily the coverage of disability and death risks and the guarantee of minimum defined benefit and lifetime income. These actuarial commitments are treated as defined benefit components of the plan and are accounted for by applying the projected unit credit method. Contributions paid for actuarial commitments that have defined contribution characteristics are accrued monthly in the statement of income and are intended to constitute a reserve for programmed retirement. The contributions for the portion of the plan with defined contribution characteristics were US\$ 267 in 2016.

The defined benefit portion of the contributions was suspended from July 1, 2012 to June 30, 2017, as determined by the Executive Council of Petros, based on advice of the actuarial consultants from Petros. Therefore, the entire contributions are being applied to the individual accounts of plan participants.

For 2017 the employers' expected contributions to the defined contribution portion of the plan are US\$ 262.

The average duration of the actuarial liability related to the plan, as of December 31, 2016 is 43.20 years (29.58 years as of December 31, 2015).

22.2. Other plans

The Company also sponsors other pension and health care plans of certain of its Brazilian and international subsidiaries. Most of these plans are unfunded and their assets are held in trusts, foundations or similar entities governed by local regulations.

Following the disposals of Petrobras Argentina and Nansei Sekiyu, the Company is not a sponsor of their pension and health care plans at December 31, 2016. In addition, the Company's Board of Directors approved the disposal of its interest in the subsidiary Liquigás and, accordingly, the related actuarial liabilities were reclassified as held for sale. Further information on these divestments is presented in note 10.1.

22.3. Pension Plans assets

Pension plans assets follow a long term investment strategy based on the risks assessed for each different class of assets and provide for diversification, in order to lower portfolio risk. The portfolio profile must comply with the Brazilian National Monetary Council (Conselho Monetário Nacional – CMN) regulations.

Petros 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.

Portfolio allocation limits for the period between 2017 and 2021 for the Petros Plan of the Petrobras Group are 40% to 75% in fixed-income securities, 10% to 35% in variable-income securities, 4% to 8% in real estate, 2% to 8% in loans to participants, as well as 0% to 7% in structured finance projects. Allocation limits for Petros 2 Plan for the same period are: 60% to 100% in fixed-income securities, 0% to 20% in variable-income securities, 0% to 5% in real estate, 2% to 8% in loans to participants, 0% to 4% in structured finance projects and 0% to 2% in investments abroad.

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The pension plan assets by type of asset are set out as follows:

Type of asset	2016				2015	
	Quoted prices in active markets	Unquoted prices	Total fair value	%	Total fair value	%
Fixed income	6,606	1,166	7,772	50%	5,451	43%
Corporate bonds	—	68	68	—	159	—
Government bonds	6,606	—	6,606	—	4,362	—
Other investments	—	1,098	1,098	—	930	—
Variable income	4,949	113	5,062	33%	4,478	36%
Common and preferred shares	4,949	—	4,949	—	4,309	—
Other investments	—	1,098	1,098	—	169	—
Structured investments	—	773	773	5%	978	8%
Private equity funds	—	670	670	—	894	—
Venture capital funds	—	17	17	—	9	—
Real estate Funds	—	86	86	—	75	—
Real estate properties	—	1,243	1,243	8%	1,075	9%
	11,555	3,295	14,850	96%	11,982	96%
Loans to participants			695	4%	531	4%
			15,545	100%	12,513	100%

As of December 31, 2016, the investment portfolio included Petrobras' common and preferred shares in the amount of US\$ 11 and US\$ 45, respectively, and real estate properties leased by the Company in the amount of US\$ 457.

Loans to participants are measured at amortized cost, which is considered to be an appropriate estimate of fair value.

22.4. Medical Benefits: Health Care Plan—Assistência Multidisciplinar de Saúde (“AMS”)

Petrobras, Petrobras Distribuidora S.A., Petrobras Transporte S.A. – Transpetro, Petrobras Biocombustível and Transportadora Brasileira Gasoduto Brasil-Bolívia—TBG operate a medical benefit plan for their employees in Brazil (active and retired) and their dependents: the AMS health care plan. The plan is managed by the Company based on a self-supporting benefit assumption and includes health prevention and health care programs. The plan is mainly exposed to the risk of an increase in medical costs due to new technologies, new types of coverage and to a higher level of usage of medical benefits. The Company continuously improves the quality of its technical and administrative processes, as well as the health programs offered to beneficiaries in order to hedge such risks.

The employees make fixed monthly contributions to cover high-risk procedures and variable contributions for a portion of the cost of the other procedures, both based on the contribution tables of the plan, which are determined based on certain parameters, such as salary and age levels. The plan also includes assistance towards the purchase of certain medicines in registered drugstores throughout Brazil. There are no health care plan assets. Benefits are paid and recognized by the Company based on the costs incurred by the participants.



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The average duration of the actuarial liability related to this health care plan, as of December 31, 2016, is 22.04 years (21,54 as of December 31, 2015).

22.5. Net actuarial liabilities and expenses calculated by independent actuaries and fair value of plans assets

Aggregate information is presented for other plans, whose total assets and liabilities are not material.

a) Changes in the actuarial liabilities, in the fair value of the assets and in the amounts recognized in the statement of financial position

	2016				
	Pension Plan		Medical Plan		
	Petros	Petros 2	AMS	Other plans	Total
Changes in the present value of obligations					
Obligations at the beginning of the year	18,170	297	6,753	143	25,363
Interest expense:	2,900	48	1,093	9	4,050
Term of financial commitment (TFC)	427	—	—	—	427
Actuarial	2,473	48	1,093	9	3,623
Current service cost	83	21	128	18	250
Contributions paid by participants	92	—	—	—	92
Benefits paid	(1,332)	(16)	(351)	(2)	(1,701)
Remeasurement: Experience (gains) / losses	(1,357)	(12)	(778)	1	(2,146)
Remeasurement: (gains) / losses—demographic assumptions	74	(6)	(40)	1	29
Remeasurement: (gains) / losses—financial assumptions	3,551	276	2,994	12	6,833
Others	—	—	—	(128)	(128)
Cumulative Translation Adjustment	3,691	70	1,415	24	5,200
Obligations at the end of the year	25,872	678	11,214	78	37,842
Changes in the fair value of plan assets					
Fair value of plan assets at the beginning of the year	12,233	226	—	54	12,513
Interest income	1,955	36	—	5	1,996
Contributions paid by the sponsor (Company)	195	—	354	9	558
Contributions paid by participants	92	—	—	—	92
Term of financial commitment (TFC) paid by the Company	202	—	—	—	202
Benefits Paid	(1,332)	(16)	(351)	(2)	(1,701)
Remeasurement: Return on plan assets due to lower interest income	(667)	87	—	—	(580)
Others	—	—	—	(35)	(35)
Cumulative Translation Adjustment	2,442	52	(3)	9	2,500
Fair value of plan assets at the end of the year	15,120	385	0	40	15,545
Amounts recognized in the Statement of Financial Position					
Present value of obligations	25,872	678	11,214	78	37,842
(-) Fair value of plan assets	(15,120)	(385)	—	(40)	(15,545)
Net actuarial liability as of December 31,	10,752	293	11,214	38	22,297
Changes in the net actuarial liability					
Balance as of January 1,	5,937	71	6,753	89	12,850
Remeasurement effects recognized in other comprehensive income	2,935	171	2,176	14	5,296
Costs incurred in the period	1,028	33	1,221	22	2,304
Contributions paid	(195)	—	(354)	(9)	(558)
Payments related to Term of financial commitment (TFC)	(202)	—	—	—	(202)
Others	—	—	—	(93)	(93)
Cumulative Translation Adjustment	1,249	18	1,418	15	2,700
Balance as of December 31,	10,752	293	11,214	38	22,297



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	2015				
	Pension Plan		Medical Plan		
	Petros	Petros 2	AMS	Other plans	Total
Changes in the present value of obligations					
Obligations at the beginning of the year	27,709	543	9,019	167	37,438
Interest expense:	2,847	56	933	19	3,855
Term of financial commitment (TFC)	454	—	—	—	454
Actuarial	2,393	56	933	19	3,401
Current service cost	77	35	58	12	182
Contributions paid by participants	102	—	—	—	102
Benefits paid	(1,213)	(5)	(347)	(4)	(1,569)
Remeasurement: Experience (gains) / losses	(521)	4	(764)	(4)	(1,285)
Remeasurement: (gains) / losses—demographic assumptions	(46)	(49)	3	(1)	(93)
Remeasurement: (gains) / losses—financial assumptions	(2,025)	(95)	853	(7)	(1,274)
Others	—	—	—	23	23
Cumulative Translation Adjustment	(8,760)	(192)	(3,002)	(62)	(12,016)
Obligations at the end of the year	18,170	297	6,753	143	25,363
Changes in the fair value of plan assets					
Fair value of plan assets at the beginning of the year	19,835	256	—	60	20,151
Interest income	2,046	27	—	4	2,077
Contributions paid by the sponsor (Company)	193	—	349	7	549
Contributions paid by participants	102	—	—	—	102
Term of financial commitment (TFC) paid by the Company	165	—	—	—	165
Benefits Paid	(1,213)	(5)	(347)	(4)	(1,569)
Remeasurement: Return on plan assets due to lower interest income	(2,744)	40	—	(1)	(2,705)
Others	—	—	—	13	13
Cumulative Translation Adjustment	(6,151)	(92)	(2)	(25)	(6,270)
Fair value of plan assets at the end of the year	12,233	226	—	54	12,513
Amounts recognized in the Statement of Financial Position					
Present value of obligations	18,170	297	6,753	143	25,363
(-) Fair value of plan assets	(12,233)	(226)	—	(54)	(12,513)
Net actuarial liability as of December 31,	5,937	71	6,753	89	12,850
Changes in the net actuarial liability					
Balance as of January 1,	7,874	287	9,019	107	17,287
Remeasurement effects recognized in other comprehensive income	152	(180)	92	(11)	53
Costs incurred in the period	878	64	991	27	1,960
Contributions paid	(193)	—	(349)	(7)	(549)
Payments related to Term of financial commitment (TFC)	(165)	—	—	—	(165)
Others	—	—	—	10	10
Cumulative Translation Adjustment	(2,609)	(100)	(3,000)	(37)	(5,746)
Balance as of December 31,	5,937	71	6,753	89	12,850



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b) Defined benefit costs

2016					
	Pension Plans		Medical Plan		Total
	Petros	Petros 2	AMS	Other Plans	
Service cost	83	21	128	18	250
Interest on net liabilities (assets)	945	12	1,093	4	2,054
Net expenses for the year	<u>1,028</u>	<u>33</u>	<u>1,221</u>	<u>22</u>	<u>2,304</u>
Related to active employees:					
Included in the cost of sales	257	18	287	2	564
Operating expenses in statement of income	128	11	154	19	312
Related to retirees	<u>643</u>	<u>4</u>	<u>780</u>	<u>1</u>	<u>1,428</u>
Net expenses for the year	<u>1,028</u>	<u>33</u>	<u>1,221</u>	<u>22</u>	<u>2,304</u>

2015					
	Pension Plans		Medical Plan		Total
	Petros	Petros 2	AMS	Other Plans	
Service cost	77	35	58	12	182
Interest on net liabilities (assets)	801	29	933	15	1,778
Net expenses for the year	<u>878</u>	<u>64</u>	<u>991</u>	<u>27</u>	<u>1,960</u>
Related to active employees:					
Included in the cost of sales	258	33	204	2	497
Operating expenses in statement of income	133	27	128	24	312
Related to retirees	<u>487</u>	<u>4</u>	<u>659</u>	<u>1</u>	<u>1,151</u>
Net expenses for the year	<u>878</u>	<u>64</u>	<u>991</u>	<u>27</u>	<u>1,960</u>

2014					
	Pension Plans		Medical Plan		Total
	Petros	Petros 2	AMS	Other Plans	
Service cost	58	33	176	11	278
Interest on net liabilities (assets)	736	16	969	13	1,734
Others	—	—	10	—	10
Net expenses for the year	<u>794</u>	<u>49</u>	<u>1,155</u>	<u>24</u>	<u>2,022</u>
Related to active employees:					
Included in the cost of sales	255	26	347	(1)	627
Operating expenses in statement of income	140	22	179	24	365
Related to retirees	<u>399</u>	<u>1</u>	<u>629</u>	<u>1</u>	<u>1,030</u>
Net expenses for the year	<u>794</u>	<u>49</u>	<u>1,155</u>	<u>24</u>	<u>2,022</u>



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c) Sensitivity analysis of the defined benefit plans

The effect of a 100 basis points (bps) change in the assumed discount rate and medical cost trend rate is as set out below:

	Discount Rate				Medical Cost	
	Pension Benefits		Medical Benefits		Medical Benefits	
	+100 bps	-100 bps	+100 bps	-100 bps	+100 bps	-100 bps
Pension Obligation	(2,503)	3,047	(1,334)	1,659	1,676	(1,376)
Current Service cost and interest cost	(4)	183	(75)	91	228	(184)

d) Actuarial assumptions

Assumptions	2016	2015
Discount rate—(real rate)	5.74% (1) / 5.69% (2) / 5.72% (3)	7.33% (1) / 7.28% (2) / 7.32% (3)
Expected Inflation (Brazilian price index-IPCA)	4.87% (1) (2) (3) (4)	6.87% (1) (2) (3) (4)
Nominal discount rate (real rate + inflation)	10.89% (1) / 10.84% (2) / 10.87% (3)	14.70% (1) / 14.65% (2) / 14.69% (3)
Expected salary growth—real rate	1.53% (1)(5) / 2.58% (2)(5)	1.48% (1)(5) / 2.79% (2)(5)
Expected salary growth—nominal (real rate + Inflation)	6.47% (1)(5) / 7.57% (2) (5)	8.45% (1) (5) / 9.85% (2) (5)
Medical plan turnover	0.597% a.a (6)	0.753% p.a (6)
Pension plan turnover	Null	Null
Expected changes in medical and hospital costs	13.91% to 4.00%a.a (7)	14.92% to 3.70% p.a (7)
Mortality table	EX-PETROS 2013 (both genders) (1) (3) AT-2000 female, smoothed in a 10% coefficient (2)	EX-PETROS 2013 (both genders) (1) (3) AT-2000 female, smoothed in a 10% coefficient (2)
Disability table	TASA 1927 (1) (3) / LIGHT-low (2)	TASA 1927 (1) (3) / Álvaro Vindas (2)
Mortality table for disabled participants	AT-49 male, amplified in a 10% coefficient (1) (3) IAPB 1957 low (2)	AT-49 male, amplified in a 10% coefficient (1) (3) IAPB 1957 low (2)
Age of retirement	Male, 57 years /Female, 56 years (8)	Male, 57 years /Female, 56 years (8)

(1) Petros Plan for Petrobras Group.

(2) Petros 2 Plan.

(3) AMS Plan.

(4) Inflation reflects market projections: 4.87% for 2017 and converging to 4.00% in 2026 onwards.

(5) Expected salary growth only of Petrobras, the sponsor, based on the Salaries and Benefits Plan.

(6) Average turnover (only of Petrobras, the sponsor) according to age and employment term.

(7) Decreasing rate, converging in 30 years to the long-term expected inflation. Refers only to Petrobras (sponsor) rate.

(8) Except for Petros 2 Plan, for which it was used the eligibility as the rules of Regime Geral de Previdência Social (RGPS) and the rules of the Plan.

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e) Expected maturity analysis of pension and medical benefits

	2016				
	Pension Plan		Medical Plan	Other plans	Total
	Petros	Petros 2	AMS		
Up to 1 Year	1,800	23	409	1	2,233
1 To 2 Years	1,581	23	430	1	2,035
2 To 3 Years	1,521	24	450	1	1,996
3 To 4 Years	1,469	24	465	1	1,959
Over 4 Years	19,501	584	9,460	74	29,619
Total	25,872	678	11,214	78	37,842

22.6. Other defined contribution plans

Petrobras, through its subsidiaries in Brazil and abroad, also sponsors other defined contribution pension plans for employees. Contributions paid of US\$ 5 in 2016 were recognized in the statement of income.

22.7. Voluntary Separation Incentive Plan

From January 2014 to December 31, 2016 the Company implemented voluntary separation incentive plans (PIDV) as described below:

- Petrobras (PIDV 2014) – the enrollment period lasted from February 12 to March 31, 2014. This plan was re-opened for eligible employees from November 30 to December 18, 2015, resulting in 7,634 enrollments with 6,878 separations and 415 cancellations;
- Petrobras Distribuidora S.A. (PIDV BR 2014) – the enrollment period lasted from February 12 to March 31, 2014, resulting in 712 enrollments with 656 separations and 55 cancellations;
- Petrobras Distribuidora S.A. (PIDV BR 2015) – the enrollment period lasted from October 13 to December 30, 2015, resulting in 345 enrollments with 316 separations and 29 cancellations;
- Petrobras PIDV 2016 – the enrollment period lasted from April 1 to August 31, 2016 resulting in 11,866 enrollments with 5,312 separations and 393 cancellations; and
- Petrobras Distribuidora S.A. (PIDV BR 2016) – the enrollment period lasted from November 1 to December 30, 2016, resulting in 1,105 enrollments. The separation period commenced on January 17, 2017.

Accordingly, 13,162 voluntary separations of employees who enrolled in these plans were made.



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As of December 31, 2016 changes in the provision are set out as follows:

Balance as of December 31, 2015	199
New enrolments PIDV Petrobras 2016	1,239
Revision of provisions	(11)
Separations in the period	(656)
Cumulative translation adjustment	40
Balance as of December 31, 2016	811
Current	811
Non-current	—

23. Shareholders' equity**23.1. Share capital (net of share issuance costs)**

As of December 31, 2016 subscribed and fully paid share capital was US\$ 107,380 and share issuance costs were US\$ 279, represented by 7,442,454,142 outstanding common shares and 5,602,042,788 outstanding 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.

23.2. Capital transactions**a) Incremental costs directly attributable to the issue of new shares**

Includes any transaction costs directly attributable to the issue of new shares, net of taxes.

b) Change in interest in subsidiaries

Includes any excess of amounts paid/received over the carrying value of the interest acquired/disposed. Changes in ownership interest in subsidiaries that do not result in loss of control of the subsidiary are equity transactions. Information on interest in subsidiaries is set out in note 11.

23.3. Profit reserves**a) Legal reserve**

Represents 5% of the net income for the year, calculated pursuant to article 193 of the Brazilian Corporation Law.

b) Statutory reserve

Appropriated by applying a minimum of 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 55 of the Company's bylaws.

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c) 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.

The effect of the tax incentives in the north and northeast regions of Brazil from *Superintendência de Desenvolvimento do Nordeste* (SUDENE) and *Superintendência de Desenvolvimento da Amazônia* (SUDAM) were not allocated to the tax incentives reserve. However, the impact of tax incentives will be allocated to the tax incentives reserve in future periods, pursuant to Chapter I of Law 12,973/14.

The accumulated amount of tax incentives derived from the statements of income for the years 2014, 2015 and 2016, to be allocated to the tax incentives reserve in upcoming periods, is US\$ 31 (US\$ 16 for 2016, US\$ 7.5 for 2015 and US\$ 7.5 for 2014).

d) Profit retention reserve

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.

The accumulated deficit balance of US\$ 4,838 as of December 31, 2016 will be allocated to the profit retention reserve.

23.4. Other comprehensive income

In 2016 the Company principally recognized as other comprehensive income the following effects:

- Cumulative translation adjustment of US\$ 10,986. As set out in note 10.1, this amount was impacted by the disposal of the Company's interests in the subsidiaries Petrobras Participaciones S.L. ("PPSL") and Nansei Seikyu (NSS) that triggered the reclassification of US\$ 1.457 to income statement within other expenses, net of the cumulative translation adjustment resulted from the depreciation of Argentinian Peso and Japanese Yen against the U.S Dollar since the acquisition of these investments to their disposals.
- Actuarial losses on defined benefit plans in the amount of US\$ 5,296, after taxes
- Foreign exchange rate variation gains of US\$ 10,779, after taxes and amounts reclassified to the statement of income, recognized in the Company's shareholders' equity in 2016, as a result of its cash flow hedge accounting policy. The cumulative balance of foreign exchange variation losses as of December 31, 2016 is US\$ 11,297, as set out in note 33.2.



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(Expressed in millions of US Dollars, unless otherwise indicated)**23.5. Dividends**

Shareholders are entitled to receive minimum mandatory dividends (and/or interest on capital) of 25% of the adjusted net income for the year proportional to the number of common and preferred shares, pursuant to Brazilian Corporation Law. 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.

Due to the loss recorded in 2016 and 2015, the Board of Directors did not propose dividend distributions for those years.

23.6. Earnings (losses) per share

	2016			2015			2014		
	Common	Preferred	Total	Common	Preferred	Total	Common	Preferred	Total
Net income (loss) attributable to shareholders of Petrobras	(2,760)	(2,078)	(4,838)	(4,821)	(3,629)	(8,450)	(4,203)	(3,164)	(7,367)
Weighted average number of common and preferred shares outstanding	7,442,454,142	5,602,042,788	13,044,496,930	7,442,454,142	5,602,042,788	13,044,496,930	7,442,454,142	5,602,042,788	13,044,496,930
Basic and diluted earnings (losses) per common and preferred share (US\$ per share)	(0.37)	(0.37)	(0.37)	(0.65)	(0.65)	(0.65)	(0.56)	(0.56)	(0.56)

Basic earnings per share are calculated by dividing the net income (loss) attributable to shareholders of Petrobras by the weighted average number of outstanding shares during the period.

Diluted earnings (losses) per share are calculated by adjusting the net income (loss) attributable to shareholders of Petrobras and the weighted average number of outstanding shares during the period taking into account the effects of all dilutive potential shares (equity instrument or contractual arrangements that are convertible into shares).

Basic and diluted earnings (losses) represent the amount as the Company has no potential share in issue.

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24. Sales revenues

	2016	2015	2014
Gross sales	102,895	121,490	174,031
Sales taxes (*)	(21,490)	(24,176)	(30,374)
Sales revenues (**)	81,405	97,314	143,657
Diesel	25,524	30,532	42,586
Automotive gasoline	16,263	16,320	23,702
Jet fuel	2,573	3,325	4,357
Liquefied petroleum gas	3,083	2,881	5,622
Naphtha	2,472	2,594	3,729
Fuel oil (including bunker fuel)	1,167	2,297	5,562
Other oil products	3,372	3,468	5,771
Subtotal oil products	54,454	61,417	91,329
Natural gas	3,952	5,894	8,035
Ethanol, nitrogen products and renewables	3,743	3,868	3,862
Electricity, services and others	2,753	4,850	8,384
Domestic market	64,902	76,029	111,610
Exports	8,439	9,692	13,930
Sales abroad (***)	8,064	11,593	18,117
Foreign market	16,503	21,285	32,047
Sales revenues (**)	81,405	97,314	143,657

(*) Includes, mainly, CIDE, PIS, COFINS and ICMS (VAT).

(**) Sales revenues by business segment are set out in note 29.

(***) Sales revenues from operations outside of Brazil, including trading and excluding exports.

In 2016, sales from transactions with two customers reached approximately 10 % or more of the Company's sales revenue, totaling US\$ 8,640 (US\$ 9,793 in 2015 and US\$ 14,171 in 2014) and US\$ 7,691 (US\$ 8,146 in 2015 and US\$ 11,937 in 2014). These sales revenues mainly impacted the Refining, Transportation and Marketing (RT&M) business segment.



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Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)**25. Other expenses, net**

	2016	2015	2014
Unscheduled stoppages and pre-operating expenses	(1,859)	(1,239)	(1,089)
Reclassification of cumulative translation adjustments—CTA	(1,457)	—	—
Pension and medical benefits—retirees	(1,428)	(1,151)	(1,030)
Gains / (losses) related to legal, administrative and arbitration proceedings	(1,393)	(1,569)	(194)
Voluntary Separation Incentive Plan—PIDV	(1,228)	(115)	(1,035)
Allowance for impairment of other receivables	(671)	(374)	(182)
Institutional relations and cultural projects	(253)	(428)	(743)
Provision for debt assumed from suppliers with subcontractors	(105)	—	—
Operating expenses with thermoelectric power plants	(96)	(119)	(304)
Health, safety and environment	(80)	(95)	(143)
Amounts recovered relating to Lava Jato Operation	131	72	—
Government grants	173	17	61
Ship/Take or Pay agreements	282	225	256
Gains / (losses) on disposal/write-offs of assets (*)	293	(758)	(481)
Expenses/Reimbursements from E&P partnership operations	569	530	360
Gains / (losses) on decommissioning of returned/abandoned areas	1,491	(144)	(443)
Others	424	(197)	(770)
Total	<u>(5,207)</u>	<u>(5,345)</u>	<u>(5,737)</u>

(*) Includes returned areas and cancelled projects.

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Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



26. Costs and Expenses by nature

	2016	2015	2014
Raw material and products for resale	(18,870)	(29,110)	(58,539)
Materials, third-party services, freight, rent and other related costs	(14,920)	(20,951)	(23,847)
Depreciation, depletion and amortization	(13,965)	(11,591)	(13,023)
Employee compensation	(9,984)	(9,079)	(13,215)
Impairment (losses) / reversals	(6,193)	(12,299)	(16,823)
Production taxes	(4,879)	(6,064)	(13,500)
Unscheduled stoppages and pre-operating expenses	(1,859)	(1,239)	(1,089)
(Losses) /Gains on legal, administrative and arbitration proceedings	(1,393)	(1,569)	(194)
Reclassification of cumulative translation adjustment	(1,457)	—	—
Exploration expenditures written off (includes dry wells and signature bonuses)	(1,281)	(1,441)	(2,178)
Allowance for impairment of trade receivables	(1,131)	(941)	(2,378)
Other taxes	(714)	(2,796)	(760)
Changes in inventories	(437)	(155)	(1,181)
Provision for debt assumed from suppliers with subcontractors	(105)	—	—
Gains and losses on disposal/write-offs of assets	293	(758)	(924)
Institutional relations and cultural projects	(253)	(428)	(743)
Health, safety and environment	(80)	(95)	(143)
Write-off—overpayments incorrectly capitalized and amounts recovered	131	72	(2,527)
Total	(77,097)	(98,444)	(151,064)
In the Statement of income			—
Cost of sales	(55,417)	(67,485)	(109,477)
Selling expenses	(3,963)	(4,627)	(6,827)
General and administrative expenses	(3,319)	(3,351)	(4,756)
Exploration costs	(1,761)	(1,911)	(3,058)
Research and development expenses	(523)	(630)	(1,099)
Other taxes	(714)	(2,796)	(760)
Impairment	(6,193)	(12,299)	(16,823)
Write-off—overpayments incorrectly capitalized	—	—	(2,527)
Other expenses, net	(5,207)	(5,345)	(5,737)
Total	(77,097)	(98,444)	(151,064)

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27. Net finance income (expense)

	2016	2015	2014
Debt interest and charges	(7,764)	(6,858)	(6,734)
Foreign exchange gains (losses) and indexation charges on net debt (*)	(2,507)	(3,834)	(561)
Income from investments and marketable securities (Government Bonds)	547	693	1,007
Financial result on net debt	(9,724)	(9,999)	(6,288)
Capitalized borrowing costs	1,729	1,773	3,600
Gains (losses) on derivatives	(111)	256	337
Interest income from marketable securities	5	25	(39)
Unwinding of discount on the provision for decommissioning costs	(662)	(231)	(201)
Other finance expenses and income, net (**)	291	(659)	42
Other foreign exchange gains (losses) and indexation charges, net	717	394	914
Net finance income (expenses)	(7,755)	(8,441)	(1,635)
Income	1,053	1,412	1,949
Expenses	(6,958)	(6,437)	(3,923)
Foreign exchange gains (losses) and indexation charges	(1,850)	(3,416)	339
Total	(7,755)	(8,441)	(1,635)

(*) Includes debt raised in Brazil (in Brazilian reais) indexed to the U.S. dollar.

(**) In 2015, includes US\$ 834 of finance expense related to the tax amnesty program (REFIS and State Tax) and PRORELIT, as set out on note 21.

28. Supplemental information on statement of cash flows

	2016	2015	2014
Additional information on cash flows:			
Amounts paid/received during the period:			
Withholding income tax paid on behalf of third-parties	932	1,034	1,852
Capital expenditures and financing activities not involving cash			
Purchase of property, plant and equipment on credit	123	171	123
Finance leases	90	—	—
Provision/(reversals) for decommissioning costs	937	4,145	1,999
Use of deferred tax and judicial deposit for the payment of contingency	138	960	147

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29. Segment information

The Extraordinary General Meeting held on April 28, 2016 approved adjustments to the Company's organization structure and governance and management model, aiming to align the organization with the new conditions faced by the oil and gas industry and to prioritize profitability and capital discipline.

The current business segment information is reported in the manner in which the Company's senior management assesses business performances and makes decisions regarding investments and resource allocation.

Consolidated assets by Business Area — 12.31.2016

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Current assets	5,604	12,460	3,592	405	3,039	24,934	(5,265)	44,769
Non-current assets	134,492	40,120	15,896	117	3,191	8,835	(437)	202,214
Long-term receivables	7,630	3,312	2,006	4	1,017	6,838	(387)	20,420
Investments	1,449	1,104	466	13	14	6	—	3,052
Property, plant and equipment	123,056	35,515	13,094	100	1,936	1,819	(50)	175,470
Operating assets	90,716	31,150	11,862	97	1,654	1,472	(50)	136,901
Under construction	32,340	4,365	1,232	3	282	347	—	38,569
Intangible assets	2,357	189	330	—	224	172	—	3,272
Total Assets	140,096	52,580	19,488	522	6,230	33,769	(5,702)	246,983

Consolidated assets by Business Area — 12.31.2015

Current assets	3,640	9,027	2,413	45	2,299	28,866	(3,111)	43,179
Non-current assets	120,157	36,465	17,056	437	2,971	10,589	(333)	187,342
Long-term receivables	6,467	2,384	1,608	3	858	8,398	(292)	19,426
Investments	1,807	879	456	343	34	8	—	3,527
Property, plant and equipment	109,724	33,032	14,674	91	1,868	1,949	(41)	161,297
Operating assets	79,585	28,803	12,193	81	1,581	1,485	(41)	123,687
Under construction	30,139	4,229	2,481	10	287	464	—	37,610
Intangible assets	2,159	170	318	—	211	234	—	3,092
Total Assets	123,797	45,492	19,469	482	5,270	39,455	(3,444)	230,521

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Notes to the financial statements

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Consolidated Statement of Income by Business Area

Jan-Dec/2016

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	33,675	62,588	9,401	240	27,927	—	(52,426)	81,405
Intersegments	32,195	17,090	2,490	231	420	—	(52,426)	—
Third parties	1,480	45,498	6,911	9	27,507	—	—	81,405
Cost of sales	(24,863)	(48,444)	(6,790)	(264)	(25,757)	—	50,701	(55,417)
Gross profit (loss)	8,812	14,144	2,611	(24)	2,170	—	(1,725)	25,988
Income (expenses)	(6,789)	(5,425)	(1,439)	(62)	(2,084)	(5,968)	87	(21,680)
Selling	(143)	(1,846)	(768)	(2)	(1,309)	10	95	(3,963)
General and administrative	(346)	(442)	(206)	(25)	(271)	(2,029)	—	(3,319)
Exploration costs	(1,761)	—	—	—	—	—	—	(1,761)
Research and development	(198)	(57)	(17)	(1)	—	(250)	—	(523)
Other taxes	(85)	(98)	(220)	(4)	(29)	(278)	—	(714)
Impairment of assets	(3,272)	(2,457)	(375)	(7)	(82)	—	—	(6,193)
Other expenses, net	(984)	(525)	147	(23)	(393)	(3,421)	(8)	(5,207)
Net income / (loss) before financial results and income taxes	2,023	8,719	1,172	(86)	86	(5,968)	(1,638)	4,308
Net finance income (expenses)	—	—	—	—	—	(7,755)	—	(7,755)
Results in equity-accounted investments	32	(75)	80	(265)	10	—	—	(218)
Net income / (loss) before income taxes	2,055	8,644	1,252	(351)	96	(13,723)	(1,638)	(3,665)
Income taxes	(687)	(2,964)	(397)	28	(29)	2,809	556	(684)
Net income (loss)	1,368	5,680	855	(323)	67	(10,914)	(1,082)	(4,349)
Net income (loss) attributable to:								
Shareholders of Petrobras	1,425	5,746	732	(323)	67	(11,403)	(1,082)	(4,838)
Non-controlling interests	(57)	(66)	123	—	—	489	—	489
Net income (loss)	1,368	5,680	855	(323)	67	(10,914)	(1,082)	(4,349)

Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



Consolidated Statement of Income by Business Area

	Jan-Dec/2015						
	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations
Sales revenues	35,680	74,321	13,145	229	33,406	—	(59,467)
Intersegments	34,178	22,451	2,073	213	552	—	(59,467)
Third parties	1,502	51,870	11,072	16	32,854	—	—
Cost of sales	(25,171)	(60,384)	(10,539)	(252)	(30,849)	—	59,710
Gross profit (loss)	10,509	13,937	2,606	(23)	2,557	—	243
Income (expenses)	(13,883)	(5,834)	(2,211)	(95)	(2,785)	(6,363)	212
Selling	(225)	(1,999)	(511)	(2)	(2,124)	20	214
General and administrative	(418)	(438)	(236)	(29)	(277)	(1,953)	—
Exploration costs	(1,911)	—	—	—	—	—	—
Research and development	(172)	(117)	(53)	(9)	(1)	(278)	—
Other taxes	(160)	(709)	(412)	(2)	(69)	(1,444)	—
Impairment of assets	(9,830)	(1,664)	(683)	(46)	(76)	—	—
Other expenses, net	(1,167)	(907)	(316)	(7)	(238)	(2,708)	(2)
Net income / (loss) before financial results and income taxes	(3,374)	8,103	395	(118)	(228)	(6,363)	455
Net finance income (expenses)	—	—	—	—	—	(8,441)	—
Results in equity-accounted investments	(309)	356	123	(199)	9	(157)	—
Net income / (loss) before income taxes	(3,683)	8,459	518	(317)	(219)	(14,961)	455
Income taxes	1,200	(2,746)	(132)	41	78	2,851	(155)
Net income (loss)	(2,483)	5,713	386	(276)	(141)	(12,110)	300
Net income (loss) attributable to:							
Shareholders of Petrobras	(2,480)	5,727	237	(276)	(142)	(11,816)	300
Non-controlling interests	(3)	(14)	149	—	1	(294)	—
Net income (loss)	(2,483)	5,713	386	(276)	(141)	(12,110)	300

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Consolidated Statement of Income by Business Area

	Jan-Dez/2014							
	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	68,611	114,431	18,373	266	46,893	—	(104,917)	143,657
Intersegments	66,336	35,484	1,730	238	1,129	—	(104,917)	—
Third parties	2,275	78,947	16,643	28	45,764	—	—	143,657
Cost of sales	(37,220)	(118,350)	(15,698)	(311)	(43,262)	—	105,364	(109,477)
Gross profit (loss)	31,391	(3,919)	2,675	(45)	3,631	—	447	34,180
Income (expenses)	(9,461)	(19,740)	(3,352)	(68)	(2,776)	(6,415)	225	(41,587)
Selling	(77)	(2,275)	(2,239)	(2)	(2,195)	(269)	230	(6,827)
General and administrative	(547)	(591)	(332)	(48)	(360)	(2,877)	(1)	(4,756)
Exploration costs	(3,058)	—	—	—	—	—	—	(3,058)
Research and development	(549)	(192)	(85)	(15)	(1)	(257)	—	(1,099)
Other taxes	(74)	(118)	(136)	—	(33)	(399)	—	(760)
Impairment of assets	(3,800)	(12,912)	(111)	—	—	—	—	(16,823)
Write-off—overpayments incorrectly capitalized	(806)	(1,403)	(266)	—	(11)	(41)	—	(2,527)
Other expenses, net	(550)	(2,249)	(183)	(3)	(176)	(2,572)	(4)	(5,737)
Net income / (loss) before financial results and income taxes	21,930	(23,659)	(677)	(113)	855	(6,415)	672	(7,407)
Net finance income (expenses)	—	—	—	—	—	(1,635)	—	(1,635)
Results in equity-accounted investments	(80)	132	211	(53)	5	3	—	218
Net income / (loss) before income taxes	21,850	(23,527)	(466)	(166)	860	(8,047)	672	(8,824)
Income taxes	(7,674)	7,758	139	39	(295)	1,582	(228)	1,321
Net income (loss)	14,176	(15,769)	(327)	(127)	565	(6,465)	444	(7,503)
Net income (loss) attributable to:								
Shareholders of Petrobras	14,151	(15,761)	(347)	(127)	565	(6,292)	444	(7,367)
Non-controlling interests	25	(8)	20	—	—	(173)	—	(136)
Net income (loss)	14,176	(15,769)	(327)	(127)	565	(6,465)	444	(7,503)



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Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)**30. Provisions for legal proceedings****30.1. 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) 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; (ii) lawsuits relating to overtime pay and (iii) individual actions of outsourced employees;
- Tax claims including: (i) claims relating to Brazilian federal tax credits applied that were disallowed; (ii) demands relating to the VAT (ICMS) tax collection on jet fuel sales and (iii) alleged misappropriation of VAT (ICMS) tax credits on import of platforms.
- Civil claims relating to: (i) royalties collection over the shale extraction; (ii) non-compliance with contractual terms relating to oil platform construction; (iii) ongoing agreements to settle Opt-out Claims filed before the United States District Court for the Southern District of New York and (iv) compensation relating to an easement over a property.
- Environmental claims regarding fishermen seeking indemnification from the Company for January 2000 oil spill in the State of Rio de Janeiro.

Provisions for legal proceedings are set out as follows:

	12.31.2016	12.31.2015
Non-current liabilities		
Labor claims	1,226	851
Tax claims	1,528	791
Civil claims	575	530
Environmental claims	60	72
Other claims	2	3
Total	<u>3,391</u>	<u>2,247</u>
	12.31.2016	12.31.2015
Opening Balance	2,247	1,540
Additions	997	1,490
Use of provision	(654)	(272)
Accruals and charges	350	100
Others	(52)	(13)
Cumulative translation adjustment	503	(598)
Closing Balance	<u>3,391</u>	<u>2,247</u>



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30.2. 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:

	12.31.2016	12.31.2015
Non-current assets		
Tax	1,803	1,044
Civil	1,101	690
Labor	1,006	684
Environmental	84	78
Others	5	3
Total	<u>3,999</u>	<u>2,499</u>

30.3. 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 estimated contingent liabilities for legal proceedings as of December 31, 2016, for which the possibility of loss is not considered remote, are set out in the following table:

Nature	
Tax	47,830
Labor	7,225
Civil—General	9,049
Civil—Environmental	2,172
Others	1
Total	<u>66,277</u>

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A brief description of the nature of the main contingent liabilities (tax, civil, environmental and labor) is set out in the following table:

Description of tax matters

Plaintiff: Secretariat of the Federal Revenue of Brazil

Estimate

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: This claim involves lawsuits in different administrative and judicial stages.	15,479
2) Immediate deduction from the basis of calculation of taxable income (income tax—IRPJ and social contribution—CSLL) of crude oil production development costs. Current status: This claim involves lawsuits in administrative stages.	6,305
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.	3,375
4) Income from subsidiaries and associates located outside Brazil not included in the basis of calculation of taxable income (IRPJ and CSLL). Current status: This claim involves lawsuits in different administrative and judicial stages.	3,095
5) Deduction from the basis of calculation of taxable income (income tax—IRPJ and social contribution—CSLL) of amounts paid to Petros Plan, as well as several expenses, related to employee benefits and Petros. Current status: This claim involves lawsuits in different administrative and judicial stages.	2,355
6) Incidence of social security contributions over contingent bonuses paid to employees. Current status: Awaiting the hearing of an appeal at the administrative level.	1,053
7) 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 judicial stages.	656

Plaintiff: State of São Paulo Finance Department

8) Penalty for the absence of a tax document while relocating a rig to an exploratory block, and on the return of this vessel, as well as collection of the related VAT (ICMS), as a result of the temporary admission being unauthorized, because the customs clearance has been done in Rio de Janeiro instead of São Paulo. Current status: This claim involves lawsuits in judicial stages.	1,703
9) 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 at administrative level.	834

Plaintiff: States of RJ and BA Finance Departments

10) 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.	1,354
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Plaintiff: States of RJ, SP, PR, RO and MG Finance Departments

- 11) Additional VAT (ICMS) due to differences in rates on jet fuel sales to airlines in the domestic market, among other questions relating to the use of tax benefits.

Current status: This claim involves lawsuits in different administrative and judicial stages. 1,285

Plaintiff: Municipal governments of the cities of Anchieta, Aracruz, Guarapari, Itapemirim, Marataízes, Linhares, Vila Velha and Vitória

- 12) 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 administrative and judicial stages. 1,117

Plaintiff: States of PR, AM, BA, ES, PA, PE and PB Finance Departments

- 13) 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 levels. 840

Plaintiff: States of SP, RS and SC Finance Departments

- 14) Collection of VAT (ICMS) related to natural gas imports from Bolivia, alleging that these states were the final destination (consumers) of the imported gas.

Current status: This claim involves lawsuits in different administrative and judicial stages, as well as three civil lawsuits in the Federal Supreme Court. 827

Plaintiff: States of RJ, RN, AL, AM, PA, BA, GO, MA and SP Finance Departments

- 15) Alleged failure to write-down VAT (ICMS) credits related to exemption or non-taxable sales made by the Company’s customers.

Current status: This claim involves lawsuits in different administrative and judicial stages. 755

Plaintiff: States of SP, CE, PB, RJ, BA and PA Finance Departments

- 16) 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 in different administrative and judicial stages. 566

Plaintiff: States of RJ, SP, ES and BA Finance Departments

- 17) Misappropriation of VAT tax credit (ICMS) on the acquisitions of goods that, per the tax authorities, are not related to property, plant and equipment.

Current status: This claim involves lawsuits in different administrative and judicial stages. 490

Plaintiff: States of RJ, SP, SE and BA Finance Departments

- 18) Use of VAT (ICMS) credits on the purchase of drilling rig bits and chemical products used in formulating drilling fluid.

Current status: This claim involves lawsuits in different administrative and judicial stages. 405

Plaintiff: States of AM, BA, RS and RJ Finance Departments

- 19) Disagreement about the basis of calculation of VAT (ICMS) on interstate sales and transfers between different stores from the same contributor.

Current status: This claim involves lawsuits in different administrative and judicial stages. 351



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Plaintiff: States of MG, MT, GO, RJ, PA, CE, BA, PR, SE, AL and RN Finance Departments

- 20) Misappropriation of VAT tax credit (ICMS) on the acquisitions of goods that, per the tax authorities, are not related to inventories.
Current status: This claim involves lawsuits in different administrative and judicial stages. 341

Plaintiff: State of Pernambuco Finance Department

- 21) Alleged incorrect application of VAT (ICMS) tax base with respect to interstate sales of natural gas transport through city-gates in the State of Pernambuco destined to the distributors in that State. The Finance Department of the State of Pernambuco understands that activity as being an industrial activity which could not be characterized as an interstate sale transaction (considering that the Company has facilities located in Pernambuco), and consequently charging the difference on the tax levied on the sale and transfer transactions.
Current status: This claim involves lawsuits in different administrative and judicial stages. 312
- 22) Other tax matters 4,332
- Total for tax matters 47,830

Description of labor matters

Plaintiff: Sindipetro of ES, RJ, BA, MG, SP, PE, SE, RN, CE, PR, SC and RS.

Estimate

- 1) Class 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: Awaiting the Superior Labor Court to judge appeals filed by the Company. The judgement on the Company's collective bargaining agreement is stayed pending the Superior Labor Court decision on the appeal. 4,383

Plaintiff: Sindipetro of Norte Fluminense – SINDIPETRO/NF

- 2) The plaintiff claims Petrobras failed to pay overtime for standby work exceeding 12-hours per day. It also demands that the Company respects a 12-hour limit per workday, subject to a daily fine.
Current status: Awaiting the Superior Labor Court to judge appeals filed by both parties. 369

Plaintiff: Sindipetro of ES, RJ, BA, MG, SP, PR, CE, SC, SE, PE and RS

- 3) Class Actions regarding wage underpayments to certain employees due to alleged changes in the methodology used to factor overtime into the calculation of paid weekly rest, allegedly computed based on ratios that are higher than those established by Law No. 605/49.
Current status: The Superior Labor Court ("Tribunal Superior do Trabalho—TST") unified a favorable understanding to the Company's opinion. There are TST decisions favorable to the plaintiffs on individual and collective proceedings judged before the mentioned unification. With respect to the claim filed by Sindipetro Norte Fluminense (NF): (i) the Company has filed an appeal in the TST to overturn a decision and is awaiting judgment; and (ii) The Regional Labor Court ("Tribunal Regional do Trabalho—TRT") from the First Region issued an opinion favorable to the Company in its review appeal. The court stated that the enforceable title changed the factors used on the calculation of extra hour, increasing it and resulting in a considerable decrease in the estimated amount. 311
- 4) Other labor matters 2,162
- Total for labor matters 7,225



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(Expressed in millions of US Dollars, unless otherwise indicated)**Description of civil matters****Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis—ANP****Estimate**

- 1) Proceedings challenging an ANP order requiring Petrobras to unite Lula and Cernambi fields on the BM-S-11 joint venture; to unite Baúna and Piracicaba fields; to unite Tartaruga Verde and Mestiça fields; and to unite Baleia Anã, Baleia Azul, Baleia Franca, Cachalote, Caxaréu, Jubarte and Pirambu, in the Parque das Baleias complex, which would cause changes in the payment of special participation charges.
Current status: The claims are being disputed in court and in arbitration proceedings. As a result of judicial decisions, the arbitrations have been suspended. On the Lula and Cernambi proceeding, for the alleged differences on the special participation, the Company made judicial deposits. However, with the cancellation of the favorable injunction, currently the payment of these alleged differences have been made directly to ANP, until a final judicial decision is handed down. On the Baúna and Piracicaba proceeding, Petrobras made court-ordered judicial deposits. On the Baleia Anã, Baleia Azul, Baleia Franca, Cachalote, Caxaréu, Jubarte and Pirambu, in the Parque das Baleias complex proceeding, as a result of a judicial decision and of a Chamber of Arbitration ruling, the collection of the alleged differences has been suspended. On the Tartaruga Verde and Mestiça proceeding, the arbitration is suspended by judicial decision and, so far, there has been no additional collection of special participation due to the unification. 1,992
- 2) Administrative proceedings challenging an ANP order requiring Petrobras to pay special participation fees and royalties (government take) with respect to several fields and alleged failure to comply with the minimum exploration activities program, as well as alleged irregularities related to compliance with the oil and gas industry regulation.
Current status: This claim involves lawsuits in different administrative and judicial stages. 1,668

Plaintiff: Several plaintiffs in Brazil and EIG Management Company in USA

- 3) Arbitration in Brazil and lawsuit in the USA regarding Sete Brasil.
Current status: The arbitrations in Brazil are at an early stage and a Chamber of Arbitration has not yet been established. The lawsuit filed by EIG and affiliates alleges that the Company committed fraud by inducing plaintiffs to invest in Sete Brasil Participações SA (“Sete”) through communications that failed to disclose the alleged corruption scheme. After a hearing held on January 31, 2017 in the federal court in Washington, D.C., the Company awaits a decision relating to the Motion to Dismiss requested by Petrobras. 1,644

Plaintiff: Refinaria de Petróleo de Manguinhos S.A.

- 4) Lawsuit seeking to recover damages for alleged anti-competitive practices with respect to gasoline, diesel and LPG sales in the domestic market.
Current status: This claim is in the judicial stage and was ruled in favor of the plaintiff in the first stage. The Company is taking legal actions to ensure its rights. The Brazilian Antitrust regulator (CADE) has analyzed this claim and did not consider the Company’s practices to be anti-competitive. 575

Plaintiff: Vantage Deepwater Company e Vantage Deepwater Drilling Inc.

- 5) Arbitration in the United States for unilateral termination of the drilling service contract tied to ship-probe Titanium Explorer.
Current status: The arbitration panel has been established and the parties will discuss the schedule of the proceeding. 400
- 6) Other civil matters 2,770
- Total for civil matters 9,049



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**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.****Estimate**

1) Legal proceeding related to specific performance obligations, indemnification and compensation for damages related to an environmental accident that occurred in the State of Paraná on July 16, 2000. Current status: The court partially ruled in favor of the plaintiff, however both parties (the plaintiff and the Company) filed an appeal.	855
Plaintiff: Instituto Brasileiro de Meio Ambiente—IBAMA and Ministério Público Federal	
2) Administrative proceedings arising from environmental fines related to exploration and production operations (Upstream) contested because of disagreement over the interpretation and application of standards by IBAMA, as well as a public civil action filed by the Ministério Público Federal for alleged environmental damage due to the accidental sinking of P-36 Platform. Current status: A number of defense trials and the administrative appeal regarding the fines are pending, and others are under judicial discussion. With respect to the civil action, the Company appealed the ruling that was unfavorable in the lower court and monitors the use of the procedure that will be judged by the Regional Federal Court.	442
3) Other environmental matters	875
Total for environmental matters	2,172

30.4. Class action and related proceedings

Between December 8, 2014 and January 7, 2015, five putative securities class action complaints were filed against the Company in the United States District Court for the Southern District of New York (SDNY). These actions were consolidated on February 17, 2015 (the “Consolidated Securities Class Action”). The Court appointed a lead plaintiff, Universities Superannuation Scheme Limited (“USS”), on March 4, 2015. Together with two other plaintiffs—Union Asset Management Holding AG (“Union”) and Employees’ Retirement System of the State of Hawaii (“Hawaii”)—USS filed a consolidated amended complaint (“CAC”) on March 27, 2015 that purported to be on behalf of investors who:

- purchased or otherwise acquired Petrobras securities traded on the NYSE or pursuant to other transactions in the U.S. during the period January 22, 2010 and March 19, 2015, inclusive (the “Class Period”), and were damaged thereby;
- purchased or otherwise acquired during the Class Period certain notes issued in 2012 pursuant to a registration statement filed with the SEC filed in 2009, or certain notes issued in 2013 or 2014 pursuant to a registration statement filed with the SEC in 2012, and were damaged thereby; and
- purchased or otherwise acquired Petrobras securities on the Brazilian stock exchange during the Class Period, who also purchased or otherwise acquired Petrobras securities traded on the NYSE or pursuant to other transactions in the U.S. during the same period.



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The CAC alleged, among other things, that in the Company's press releases, filings with the SEC and other communications, the Company made materially false and misleading statements and omissions regarding the value of its assets, the amounts of the Company's expenses and net income, the effectiveness of the Company's internal controls over financial reporting, and the Company's anti-corruption policies, due to the alleged corruption purportedly committed in connection with certain contracts, which allegedly artificially inflated the market value of the Company's securities.

On April 17, 2015, Petrobras, Petrobras Global Finance—PGF and the underwriters of notes issued by PGF (the "Underwriter Defendants") filed a motion to dismiss the CAC.

On July 9, 2015, the judge presiding over the Consolidated Securities Class Action ruled on the motion to dismiss, partially granting the Company's motion. Among other decisions, the judge dismissed claims relating to certain debt securities issued in 2012 under the Securities Act of 1933 as time barred by the Securities Act's statute of repose, and ruled claims relating to securities purchased on the Brazilian stock exchange must be arbitrated, as established in the Company's bylaws. The judge rejected other arguments presented in the motion to dismiss the CAC and, as a result, the Consolidated Securities Class Action continued with respect to those other claims.

As allowed by the judge, a second consolidated amended complaint was filed on July 16, 2015, a third consolidated amended complaint ("TAC") was filed on September 1, 2015, among other things extending the Class Period through July 28, 2015 and adding Petrobras America, Inc. as a defendant, and a fourth consolidated amended complaint ("FAC") was filed on November 30, 2015. The TAC and FAC, brought by lead plaintiff, Union, Hawaii, and an additional plaintiff, North Carolina Department of State Treasurer ("North Carolina") (collectively, "class plaintiffs")—brings those claims alleged in the CAC that were not dismissed or were allowed to be re-pleaded under the judge's July 9, 2015 ruling.

Petrobras, PGF, Petrobras America, Inc. and the Underwriter Defendants filed motions to dismiss the TAC on October 1, 2015 and the FAC on December 7, 2015.

On December 20, 2015, the judge ruled on the motions to dismiss, partially granting the motions. Among other decisions, the judge dismissed the claims of USS and Union based on their purchases of notes issued by PGF for failure to plead that they purchased the notes in U.S. transactions. The judge also dismissed claims under the Securities Act of 1933 for certain purchases for which class plaintiffs had failed to plead the element of reliance. The judge rejected other arguments presented in the motion to dismiss the FAC and, as a result, the Consolidated Securities Class Action continued with respect to the remaining claims.

On October 15, 2015, class plaintiffs filed a motion for class certification in the Consolidated Securities Class Action, and on November 6, 2015, Petrobras, PGF, Petrobras America, Inc. and the Underwriter Defendants opposed the motion. On February 2, 2016, the judge granted plaintiffs' motion for class certification, certifying a Securities Act Class represented by Hawaii and North Carolina and an Exchange Act Class represented by USS. On June 15, 2016, the United States Court of Appeals for the Second Circuit ("Second Circuit") granted Petrobras's motion requesting interlocutory appellate review of the class certification decision. The parties completed briefing the appeal on September 8, 2016. Petrobras and the other defendants moved in district court for a stay of all district court proceedings pending the Second Circuit's decision on the merits of the appeal of the class certification, which the district judge denied on June 24, 2016. Defendants then moved in the Second Circuit for a stay of all district court proceedings pending a decision on the appeal of the class certification decision. On August 2, 2016, the Second Circuit granted Defendants' motion and stayed all district court proceedings. Oral argument regarding the appeal was held before the Second Circuit on November 2, 2016.



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On June 27, 2016, the parties filed motions for summary judgment. Further summary judgment briefing is stayed pursuant to the Second Circuit's August 2, 2016 decision.

In addition to the Consolidated Securities Class Action, to date, 33 lawsuits have been filed by individual investors before the same judge in the SDNY (six of which have been stayed), and one has been filed in the United States District Court for the Eastern District of Pennsylvania (collectively, the "Opt-out Claims"), consisting of allegations similar to those in the Consolidated Securities Class Action. On August 21, 2015, Petrobras, PGF and underwriters of notes issued by PGF filed a motion to dismiss certain of the Opt-out Claims in the SDNY, and on October 15, 2015, the judge ruled on the motion to dismiss, partially granting the motion. Among other decisions, the judge dismissed several Exchange Act, Securities Act and state law claims as barred by the relevant statutes of repose. The judge denied other portions of the motion to dismiss and, as a result, these actions continued with respect to other claims brought by these plaintiffs.

In the action in the Eastern District of Pennsylvania, Petrobras and PGF filed a motion to dismiss on May 13, 2016, and the district judge denied the motion on November 1, 2016, allowing the action to continue. On January 26, 2017, the district judge set a schedule for discovery and dispositive motions, with a pre-trial conference scheduled for January 5, 2018.

On October 31, 2015, the SDNY judge ordered that the Opt-out Claims before him in the SDNY and the Consolidated Securities Class Action be tried together in a single trial not to exceed a total of eight weeks. On November 5, 2015, the judge scheduled the trial to begin on September 19, 2016; however, the trial is now stayed due to the stay imposed by the Second Circuit decision on August 2, 2016.

On November 18, 2015, the judge ordered that any Opt-out Claim filed before him in the SDNY after December 31, 2015 will be stayed in all respects until after the completion of the trial.

On October 21, 2016, Petrobras' board of directors approved agreements to settle Opt-out Claims in four cases: Dodge & Cox Int'l Stock Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-10111 (JSR), Janus Overseas Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-10086 (JSR), PIMCO Funds: PIMCO Total Return Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-08192 (JSR) and Al Shams Investments Ltd., et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-6243 (JSR). The terms of the settlements are confidential.

On November 23, 2016, Petrobras' board of directors approved agreements to settle Opt-out Claims in eleven cases: Ohio Public Employees Retirement System v. Petróleo Brasileiro S.A. – Petrobras et al., No. 15-cv-03887 (JSR); Abbey Life Assurance Company Limited, et al. v. Petróleo Brasileiro S.A., et al., No. 15-cv-6661 (JSR); Aberdeen Emerging Markets Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-3860 (JSR); Aberdeen Latin American Income Fund Limited, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-4043 (JSR); Delaware Enhanced Global Dividend and Income Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-4043 (JSR); Dimensional Emerging Markets Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-02165 (JSR); Manning & Napier Advisors, LLC, et al. v. Petróleo Brasileiro S.A. – Petrobras, No. 15-cv-10159 (JSR); Russell Investment Company, et al. v. Petróleo Brasileiro S.A. – Petrobras, No. 15-cv-07605 (JSR); Skagen, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-2214 (JSR); State of Alaska Department of Revenue, Treasury Division, et al. v. Petróleo Brasileiro S.A. – Petrobras, No. 15-cv-8995 (JSR), and State Street Cayman Trust Co., Ltd., v. Petróleo Brasileiro S.A. – Petrobras, No. 15-cv-10158 (JSR).



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On February 24, 2017, Petrobras' board of directors approved agreements to settle Opt-out Claims in four cases: New York City Employees Retirement System, et al. v. Petróleo Brasileiro S.A.—Petrobras et al., No. 15-cv-2192 (JSR), Transamerica Income Shares, Inc., et al v. Petróleo Brasileiro S.A.—Petrobras, et al., No. 15-cv-3733 (JSR), Internationale Kapitalanlagegesellschaft mbH v. Petróleo Brasileiro S.A.—Petrobras, et al., No. 15-cv-6618 (JSR) Lord Abbett Investment Trust – Lord Abbett Short Duration Income Fund, et al v. Petróleo Brasileiro S.A.—Petrobras, et al., No. 15-cv-7615 (JSR).

Based on the settlements reached, and the status of certain other Opt-out Claims, the Company charged to statement of income the amount of US\$ 372 in 2016. The terms of the settlements are confidential and Petrobras denies all allegations of wrongdoing and continues to defend itself vigorously in all pending actions. The settlements, the terms of which are confidential, are aimed at eliminating the uncertainties, burdens and expense of ongoing litigation.

The Consolidated Securities Class Action and certain Opt-out Claims involve highly complex issues that are subject to substantial uncertainties and depend on a number of factors such as the novelty of the legal theories, the information produced in discovery, the timing of court decisions, rulings by the court on key issues, analysis by retained experts, and the possibility that the parties negotiate in good faith toward a resolution.

In addition, the claims asserted are broad, span a multi-year period and involve a wide range of activities, and the contentions of the plaintiffs in the Consolidated Securities Class Action and certain Opt-out Claims concerning the amount of alleged damages are varied and, at this stage, their impact on the course of the litigation is complex and 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 the Consolidated Securities Class Action and certain Opt-out Claims.

Depending on the outcome of the litigation, we may be required to pay substantial amounts, which could have a material adverse effect on the Company's financial condition, its consolidated results of operations or its consolidated cash flows for an individual reporting period.

The Company has engaged a U.S. firm as legal counsel and intends to defend these actions vigorously.

30.5. Contingent assets

30.5.1. Recovery of PIS and COFINS

The Company filed civil lawsuits against the Federal Government claiming to recover PIS and COFINS paid over finance income and foreign exchange variation gains, claiming that paragraph 1 of article 3 of Law No. 9,718/98 is unconstitutional, comprising:

- i) PIS: from February 1999 to November 2002; and
- ii) COFINS: from February 1999 to January 2004.

Up to the year 2014, the court granted to the Company the definitive right to recover those taxes. Currently, these legal proceedings are in their court-ordered liquidation stage.

As of December 31, 2016, the Company had non-current receivables of US\$ 980 (US\$758 as of December 31, 2015) related to PIS and COFINS, which are indexed to inflation.



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(Expressed in millions of US Dollars, unless otherwise indicated)**31. Commitment to purchase natural gas**

As of December 31, 2016, the total amount of the GSA agreement (Gas Supply Agreement), entered into by Petrobras and Yacimientos Petroliferos Fiscales Bolivianos – YPF, for the 2017 to 2019 period is approximately 32.94 billion cubic meters (m³) of natural gas (equivalent to 30.08 million cubic meters (m³) per day) and corresponds to a total estimated value of US\$ 4.68 billion.

32. Collateral for crude oil exploration concession agreements

The Company has granted collateral to the Brazilian Agency of Petroleum, Natural Gas and Biofuels (*Agência Nacional de Petróleo, Gás Natural e Biocombustíveis—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\$ 2,444 of which US\$ 991 were still in force as of December 31, 2016, net of commitments undertaken. The collateral comprises crude oil from previously identified producing fields, pledged as collateral, amounting to US\$ 797 and bank guarantees of US\$ 194.

33. 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. 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.



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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, 2016, as well as the amounts recognized in the statement of income and other comprehensive income and the guarantees given is set out as follows:

	Statement of Financial Position					
	Notional value		Fair value		Maturity	
	12.31.2016	12.31.2015	Asset	Position (Liability)		
			12.31.2016	12.31.2015		
Derivatives not designated for hedge accounting						
Future contracts—total (*)	(1,866)	(5,694)	(8)	38		
Long position/Crude oil and oil products	88,303	53,735	—	—	2017	
Short position/Crude oil and oil products	(90,169)	(59,429)	—	—	2017	
Options—total (*)	120	123	—	10		
Call/Crude oil and oil products	—	—	—	—	2017	
Put/Crude oil and oil products	120	123	—	10	2017	
Forward contracts—total			0.3	6.3		
Long position/Foreign currency forwards						
(BRL/USD)(**)	US\$ 0	US\$ 217	—	6		
Short position/Foreign currency forwards						
(BRL/USD)(**)	US\$ 15	US\$ 50	0.3	0.3	2017	
Derivatives designated for hedge accounting						
Swap—total			(10)	(33)		
Foreign currency / Cross-currency Swap (**)	US\$ 0	US\$ 298	—	(16)	2016	
Interest – Libor / Fixed rate (**)	US\$ 371	US\$ 396	(10)	(17)	2019	
Total recognized in the Statement of Financial Position			(17.7)	21.3		

(*) Notional value in thousands of bbl.

(**) Amounts in US\$ are presented in million.

	Gains/(losses) recognized in the statement of income (*)			Gains/(losses) recognized in the Shareholders' Equity (**)			Guarantees given as collateral	
	2016	2015	2014	2016	2015	2014	12.31.2016	12.31.2015
Commodity derivatives	(48)	238	368	—	—	—	55	7
Foreign currency derivatives	(55)	27	(20)	7	9	10	—	—
Interest rate derivatives	(8)	(9)	(11)	4	1	(1)	—	—
	(111)	256	337	11	10	9	55	7
Cash flow hedge on exports (***)	(2,841)	(2,057)	(702)	13,620	(19,075)	(5,741)	—	—
Total	(2,952)	(1,801)	(365)	13,631	(19,065)	(5,732)	55	7

(*) Amounts recognized in finance income in the period.

(**) Amounts recognized as other comprehensive income in the period.

(***) Using non-derivative financial instruments as designated hedging instruments, as set out in note 33.2.



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A sensitivity analysis of the derivative financial instruments for the different types of market risks as of December 31, 2016 is set out following:

Financial Instruments	Risk	Probable Scenario*	Stressed Scenario (Δ of 25%)	Stressed Scenario (Δ of 50%)
Derivatives not designated for hedge accounting				
Future contracts	Crude oil and oil products—price changes	—	(68)	(136)
Forward contracts	Foreign currency—depreciation BRL x USD	—	4	8
Options	Crude oil and oil products—price changes	—	—	—
		—	(64)	(128)
Derivatives designated for hedge accounting				
Swap		3	(1)	(2)
Debt	Interest—LIBOR increase	(3)	1	2
Net effect		—	—	—

(*) The probable scenario was computed based on the following risks: oil and oil products prices: fair value on December 31, 2016/ R\$ x U.S. Dollar—a 0.6% depreciation of the Real/ Japanese Yen x U.S. Dollar—a 1.5% appreciation of the Japanese Yen/ LIBOR Forward Curve—a 0.27% increase throughout the curve. Source: Focus and Bloomberg.

33.1. Risk management of price risk (related to crude oil and oil products prices)

Petrobras does not regularly use derivative instruments to hedge exposures to commodity price cycles related to products purchased and sold to fulfill operational needs. Derivatives are used as hedging instruments to manage the price risk of certain short-term commercial transactions.

33.2. Foreign exchange risk management

The Company's Risk Management Policy provides for, as an assumption, an integrated risk management extensive 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 group of cash flows derived from its operations. 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 by using natural hedges derived from the business of the Company.

The foreign exchange risk management strategy may involve the use of derivative financial instruments to hedge certain liabilities, minimizing foreign exchange rate risk exposure, especially when the Company is exposed to a foreign currency in which no cash inflows are expected, for example, Pound Sterling.



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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

Considering the natural hedge aforementioned, the Company designates hedging relationships to account for the effects of the existing hedge between a portion of its long-term debt obligations (denominated in U.S. dollars) and 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.

A portion of principal amounts and accrued interest (non-derivative financial instruments), as well as foreign exchange rate forward contracts (derivative financial instruments) have been designated as hedging instruments. Derivative financial instruments expired during the year were replaced by principal and interest amounts in the hedging relationships for which they had been designated.

Individual hedging relationships were designated in a one-to-one proportion, meaning that a portion of the highly probable future exports for each month will be the hedged transaction of an individual hedging relationship, hedged by a portion of the company's long-term debt. Only a portion of the Company's forecast exports are considered highly probable.

Whenever a portion of future exports for a certain period for which a 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 a portion of future exports for which a 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.

Mainly due to the decrease in international oil prices, a portion of future exports for which a hedging relationship had been designated was no longer expected to occur or did not occur in 2016. Therefore, a hedging relationship was revoked and a portion was reclassified to the statement of income in the amount of US\$ 299 in 2016.



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The carrying amounts, the fair value as of December 31, 2016, 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\$ 3,2591 exchange rate are set out below:

<u>Hedging Instrument</u>	<u>Hedged Transactions</u>	<u>Nature of the Risk</u>	<u>Maturity Date</u>	<u>Principal Amount (US\$ million)</u>	<u>Carrying amount as of December 31, 2016 (R\$ million)</u>
Non-derivative financial instruments (debt: principal and interest) . . .	Portion of highly probable future monthly exports revenues	Foreign Currency – Real vs U.S. Dollar Spot Rate	January 2017 to March 2027	61,763	201,292

<u>Changes in the reference value (principal and interest)</u>	<u>US\$</u>	<u>R\$ million</u>
Amounts designated as of December 31, 2015	61,520	240,222
Additional hedging relationships designated, designations revoked and hedging instruments re-designated	23,275	79,211
Exports affecting the statement of income	(2,621)	(9,074)
Principal repayments / amortization	(20,411)	(68,740)
Foreign exchange variation	—	(40,327)
Amounts designated as of December 31, 2016	61,763	201,292

The ratio of highly probable future exports to debt instruments for which a hedging relationship has been designated in future periods is set out below:

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024 to 2027</u>	<u>Average</u>
Hedging instruments designated / Highly probable future exports (%)	73	61	66	73	86	88	74	62	73



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(Expressed in millions of US Dollars, unless otherwise indicated)


A roll-forward schedule of cumulative foreign exchange losses recognized in other comprehensive income as of December 31, 2016 is set out below:

	Exchange rate	Tax effect	Total
Balance at January 1, 2015	(11,664)	3,966	(7,698)
Recognized in shareholders' equity	(21,132)	7,185	(13,947)
Reclassified to the statement of income—occurred exports	2,004	(682)	1,322
Reclassified to the statement of income—exports no longer expected or not occurred	53	(18)	35
Balance at December 31, 2015	(30,739)	10,451	(20,288)
Recognized in shareholders' equity	10,779	(3,665)	7,114
Reclassified to the statement of income—occurred exports	2,542	(864)	1,678
Reclassified to the statement of income—exports no longer expected or not occurred	299	(100)	199
Balance at December 31, 2016	(17,119)	5,822	(11,297)

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 forecast export prices and export volumes following a review of the Company's business 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 most recent update of the 2017-2021 Business and Management Plan (Plano de Negócios e Gestão – PNG), a US\$ 31 reclassification adjustment from equity to the statement of income would occur.

A schedule of expected reclassification of cumulative foreign exchange losses recognized in other comprehensive income to the statement of income as of December 31, 2016 is set out below:

	2017	2018	2019	2020	2021	2022	2023	2024 to 2027	Total
Expected realization	(4,718)	(4,672)	(3,158)	(2,301)	(1,947)	(2,226)	(1,021)	2,924	(17,119)

b) Cash flow hedges involving swap contracts – Yen x Dollar

The Company had cross currency swap to fix in U.S. dollars for the payments related to bonds denominated in Japanese yen, which matured on September 23, 2016. The relationship between the derivative and the bonds was designated for cash flow hedge accounting.

c) Sensitivity analysis for foreign exchange risk on financial instruments

A sensitivity analysis is set out below, showing the probable scenario for foreign exchange risk on financial instruments, computed based on external data along with stressed scenarios (a 25% and a 50% change in the foreign exchange rates), except for assets and liabilities of foreign subsidiaries, when transacted in a currency equivalent to their respective functional currencies.



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(Expressed in millions of US Dollars, unless otherwise indicated)


Financial Instruments	Exposure at 12.31.2016	Risk	Probable Scenario (*)	Stressed Scenario (Δ of 25%)	Stressed Scenario (Δ of 50%)
Assets	4,149	Dollar/Real	27	1,037	2,075
Liabilities	(65,175)		(418)	(16,294)	(32,588)
Cash flow hedge on exports	61,763		396	15,441	30,882
	737		5	184	369
Liabilities	(184)	Yen/Dollar	(3)	(46)	(92)
	(184)		(3)	(46)	(92)
Assets	4	Euro/Real	—	1	2
Liabilities	(50)		—	(13)	(25)
	(46)		—	(12)	(23)
Assets	6,780	Euro/Dollar	(97)	1,695	3,390
Liabilities	(13,363)		191	(3,341)	(6,681)
	(6,583)	Pound Sterling/Real	94	(1,646)	(3,291)
Assets	2		—	1	1
Liabilities	(19)		—	(5)	(10)
	(17)	Pound Sterling/Dollar	—	(4)	(9)
Assets	2,658		(62)	665	1,329
Liabilities	(4,524)		105	(1,131)	(2,262)
	(1,866)		43	(466)	(933)
Total	(7,959)		139	(1,990)	(3,979)

(*) On December 31, 2016, the probable scenario was computed based on the following risks: R\$ x U.S. Dollar—a 0.6% depreciation of the Real/ Japanese Yen x U.S. Dollar—a 1.5% appreciation of the Japanese Yen/ Euro x U.S. Dollar: a 1.4% depreciation of the Euro / Pound Sterling x U.S. Dollar: a 2.3% depreciation of the Pound Sterling/ Real x Euro—a 0.8% appreciation of the Real / Real x Pound Sterling—a 1.7% appreciation of the Real. Source: Focus and Bloomberg.

33.3. 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 encountered by certain subsidiaries of Petrobras.

33.4. 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, divestments, loan agreements with commercial banks and debt issuance in the international capital markets.

In line with the assumptions in the 2017-2021 Business and Management Plan, the Company does not foresee net proceeds from financing for the two year period 2017-2018. However, the Company has continually assessed options of funding following its liability management strategy, aiming at improving its debt repayment profile and achieving a lower cost of its debt along with an indebtedness level matching the capital expenditures. Currently, the average repayment term is approximately 7 years.

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Net debt is calculated as total debt (short-term debt and long-term debt) less cash, cash equivalents and government bonds from Brazil, U.S.A., Germany and England, as well as time deposits with maturities higher than three months. Adjusted EBITDA 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 of assets and reversals, cumulative foreign exchange adjustments reclassified to the income statement and gains and losses on disposal and write-offs of assets. These measures are not defined by the International Financial Reporting Standards – IFRS (non-GAAP measures) and should neither be considered in isolation or as substitutes for profit, indebtedness and cash flow provided by operating activities as defined by the IFRS, nor be compared to those measures of other companies.

	2016	2015
Total debt (current and noncurrent)	118,370	126,262
Cash and cash equivalents	(21,205)	(25,058)
Government securities and time deposits (maturity of more than three months)	(784)	(779)
Net debt	96,381	100,425
Net debt/(net debt+shareholders' equity)	55%	60%
Adjusted EBITDA	25,630	23,518
Net debt/Adjusted EBITDA ratio	3.76	4.27

The venture and divestment program for the 2017-2018 period, with forecasted divestments of US\$ 21 billion and the Net debt/Adjusted EBITDA ratio reaching 2.5 in 2018, is part of the Company's financial planning, aimed at reducing leverage, preserving cash and prioritizing capital expenditures, primarily in oil and gas production in Brazil in highly productive and profitable areas.

However, this divestment portfolio is dynamic and the occurrence of the transactions depend on business conditions, market conditions and the Company's continuing assessment of its businesses, due to these reasons the rating conditions for assets available for sale were not fulfilled as set out in note 4.12.

33.5. Credit risk

Credit risk management in Petrobras aims at minimizing 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.

33.5.1. Credit quality of financial assets

a) Trade and other receivables

Most of the company's customers have no credit agency ratings. Thus, credit commissions assess creditworthiness and define credit limits, which are regularly monitored, based on the customer's main activity, commercial relationship and credit history with Petrobras, solvency, financial situation and external market assessment of the customer.

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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 have been impaired, are set out below:

	Cash and cash equivalents		Marketable securities	
	2016	2015	2016	2015
AAA	5,217	—	—	—
AA	7	567	—	—
A	11,372	18,947	—	—
BBB	42	3,601	—	67
BB	2,794	167	—	—
B	10	7	—	—
AAA.br	373	1,688	874	779
AA.br	1,369	11	—	—
Other ratings	21	70	—	22
	<u>21,205</u>	<u>25,058</u>	<u>874</u>	<u>868</u>

33.6. Liquidity risk

Liquidity risk is represented by the possibility of a shortage of cash or other financial assets in order to settle the Company's obligations on the agreed dates and is managed by the Company based on policies such as: centralization of cash management, optimization of the level of cash and cash equivalents held and reduction of working capital; maintenance of an adequate cash balance to ensure that cash needed 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, and developing a strong presence in the capital markets and also searching for new funding sources (such as new markets and financial products), as well as funds under the venture and divestment program.

In 2016, the Company used traditional funding sources (export credit agencies – ECAs, banking market, capital markets and development banks) to obtain the necessary funding to repay debt and fund its capital expenditures. The Company raised approximately US\$ 18.8 billion through proceeds from long-term financing, mainly from the international capital markets. The Company used part of these funds (US\$ 17.9 billion) to repurchase global notes previously issued, to settle certain debts with the Brazilian Development Bank (BNDES) in advance and also to push forward other debts.

In December 2016, the Company raised funds through financing agreements with China Development Bank CDB in the amount of US\$ 5 billion, maturing in 10 years.

A maturity schedule of the Company's finance debt (undiscounted), including face value and interest payments is set out as follows:

Maturity	2017	2018	2019	2020	2021	2022 and thereafter	Balance at December 31, 2016	Balance at December 31, 2015
Principal	8,809	11,331	21,099	16,488	18,903	43,104	119,734	127,354
Interest	7,165	6,673	5,868	4,522	3,208	30,969	58,406	59,038
Total	<u>15,974</u>	<u>18,004</u>	<u>26,967</u>	<u>21,010</u>	<u>22,111</u>	<u>74,073</u>	<u>178,140</u>	<u>186,392</u>



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Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)**33.7. Insurance (unaudited)**

The Company's insurance strategy involves acquiring insurance to cover risks that may produce material impacts and also to cover risks that are subject to compulsory insurance coverage (pursuant to legal or contractual requirements). The remaining risks are self-insured and Petrobras intentionally assumes the entire risk by abstaining from contracting insurance.

The Company assumes a significant portion of its risk, by entering into insurance policies that have deductible clauses up to the equivalent to US\$ 180 (US\$ 25 as of December 31, 2015). The higher amount related to deductible clauses was based on a reassessment of the Company's adverse events historical data, which resulted in economic benefits through a decrease in the amount of insurance premiums.

The Company's risk assumptions for insurance are not part of the audit scope of the financial statements audit and therefore were not examined by the Company's Independent Registered Public Accounting Firm.

The main information concerning the insurance coverage outstanding at December 31, 2016 is set out below:

<u>Assets</u>	<u>Types of coverage</u>	<u>Amount insured</u>
Facilities, equipment inventory and products inventory	Fire, operational risks and engineering risks	160,399
Tankers and auxiliary vessels	Hulls	4,060
Fixed platforms, floating production systems and offshore drilling units	Oil risks	32,985
Total		<u>197,444</u>

Petrobras does not have loss of earnings insurance or insurance related to well control, automobiles and pipeline networks in Brazil.

34. Fair value of financial assets and liabilities

Fair values are determined based on market prices, when available, or, in the absence thereof, on the present value of expected future cash flows.

The hierarchy of the fair values of the financial assets and liabilities, recorded on a recurring basis, is set out below:

- Level 1: inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2: inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: inputs are unobservable inputs for the asset or liability.



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	Fair value measured based on			Total fair value recorded
	Level I	Level II	Level III	
Assets				
Marketable securities	784	—	—	784
Foreign currency derivatives	—	0.3	—	0.3
Balance at December 31, 2016	784	0.3	—	784.3
Balance at December 31, 2015	833	6.3	—	839.3
Liabilities				
Commodity derivatives	(8)	—	—	(8)
Interest derivatives	—	(10)	—	(10)
Balance at December 31, 2016	(8)	(10)	—	(18)
Balance at December 31, 2015	—	(33)	—	(33)

There are no material transfers between levels.

The estimated fair value for the Company's long term debt as of December 31, 2016, computed based on the prevailing market rates is set out in note 17.1.

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.

35. Subsequent events**Global notes issued in international capital market**

On January 17, 2017, the Company concluded, through its wholly-owned subsidiary Petrobras Global Trading – PGF, a US\$ 4 billion global notes issuance in the international market. This issuance comprises two series of notes each in the amount of US\$ 2 billion, maturing in 5 and 10 years and bearing interest at the rates of 6.125% and 7.375% per annum, respectively.

The net proceeds of this issuance were entirely used to repurchase global notes previously issued by the Company through a tender offer that expired on February 8, 2017. Old notes accepted for purchase amounted to US\$ 4,899 and € 632 million (US\$ 676) in accordance with the tender cap.

Legal Proceeding in the Netherlands

On January 24, 2017, the Stichting Petrobras Compensation Foundation, which is not a Petrobras entity, filed a complaint before the district court in Rotterdam, in Netherlands, against the wholly-owned subsidiaries Petrobras International Braspetro B.V. and Petrobras Global Finance B.V.

This foundation represents a group of investors alleging damages from fraud and bribery schemes perpetrated by Company. These investors purchased shares or bonds issue by Company and traded outside U.S.A. before July 28, 2015.

This action is at an early stage, and the Company did not have access to the allegations and claims in this complaint.



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Cross currency swap

In the first quarter of 2017, the Company, through its wholly-owned subsidiary Petrobras Global Trading B.V. (PGT), entered into a £ 700 million notional amount cross currency swap maturing in 2026, in order to hedge its Pounds/U.S. Dollar exposure arose from the Company's debt denominated in Pounds.

Formal Notice from CVM – Hedge accounting

On March 07, 2017, the Company received from the Brazilian Securities and Exchange Commission (Comissão de Valores Mobiliários – CVM) a Formal Notice (Ofício CVM) requesting the Company to restate its Annual Financial Statements and Interim Financial Reporting filed since the second quarter of 2013. This formal notice requested the restatement of the effects of the hedge accounting policy application relating to the cash flow hedge involving the Company's future exports as described in note 33.2. The CVM does not believe the foreign exchange losses and gains should have been deferred. The Company believes its accounting policy complies with the applicable literature. The Company filed before CVM a request to suspend the effects of this notice, which was granted by the authority's collegiate body.

The Company appealed the CVM decision on March 17, 2017 and has taken all the measures to safeguard its interests.

ANP's notice on government participation in Lula Field

On March 30, 2017, the Consortium BM-S-11 received a notice issued by the ANP, regarding Lula Field, located on the pre-salt area of Santos Basin, in the amount of US\$798, alleging divergence in the oil prices applied to calculate production taxes from May 2013 to December 2016.

The Company and the other consortium members understand that we acted according to the legislation in force since 2000. The change in the interpretation of the rules applied to the concession contract by the regulatory agency directly affects the economic and technical assumptions that supported the investment decisions. Thus, the Company and the other consortium members will appeal the ANP's notice and, if necessary, will adopt all legal measures in defense of their interests.

Consortium BM-S-11 is formed by Petrobras (65%), as operator, in partnership with BG E&P Brasil - a subsidiary company of Royal Dutch Shell plc (25%) - and Petrogal Brasil (10%).

Closing of disposal of interest in Nova Transportadora do Sudeste (NTS)

On April 4, 2017, the disposal of interest in Nova Transportadora do Sudeste (NTS), as set in note 10.4, was concluded upon the payment of US\$4.23 billion, after performing all conditions precedent and adjustments provided for in the purchase and sale agreement. The remaining balance (US\$850) will be paid in the fifth year, bearing annual interests at a fixed rate, as established in the purchase and sale agreement.

The Company will continue to use NTS' natural gas transport facilities, through current gas transport contracts, with no impact on its operations neither on the delivery of gas to distributors and other customers.



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Upgrade in Petrobras' rating

On April 10, 2017, the rating agency Moody's upgraded the Company's corporate debt rating to B1 from B2 and changed the outlook to positive from stable. Moody's highlighted the continuous improvement of Petrobras' liquidity profile and financial metrics over the last quarters, due to greater cost efficiency and the new fuel pricing policy, among other factors. Those factors have also helped the company to maintain access to capital markets and refinance part of its debt.

The agency emphasized developments in the Brazilian regulatory environment, which facilitate greater returns in long-term investments. Additionally, the agency recognized the company's management commitment to achieve the financial and operating targets set in the 2017-2021 Business and Management Plan.

The agency reported that the positive outlook indicates that, in the next 18 months, if the company's liquidity and overall credit risk continues to improve, further positive rating actions could occur.

36. Information Related to Guaranteed Securities Issued by Subsidiaries

36.1. Petrobras Global Finance B.V. (PGF)

Petróleo Brasileiro S.A.—Petrobras fully and unconditionally guarantees the debt securities issued by Petrobras Global Finance B.V. (PGF), a 100-percent-owned finance subsidiary of Petrobras. There are no significant restrictions on the ability of Petrobras to obtain funds from PGF.



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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)**

In accordance with Codification Topic 932—Extractive Activities – Oil and Gas, 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.

Beginning in 1995, the Federal Government of Brazil undertook a comprehensive reform of the country's oil and gas regulatory system. On November 9, 1995, the Brazilian Constitution was amended to authorize the Federal Government to contract with any state or privately owned company to carry out the activities related to the upstream and downstream segments of the Brazilian oil and gas sector. This amendment eliminated Petrobras' effective monopoly. The amendment was implemented by the Oil Law, which liberated the fuel market in Brazil beginning January 1, 2002.

The Oil Law established a regulatory framework ending Petrobras' exclusive agency and enabling competition in all aspects of the oil and gas industry in Brazil. As provided in the Oil Law, Petrobras was granted the exclusive right for a period of 27 years to exploit the petroleum reserves in all fields where the Company had previously commenced production. However, the Oil Law established a procedural framework for Petrobras to claim exclusive exploratory (and, in case of success, development) rights for a period of up to three years with respect to areas where the Company could demonstrate that it had "established prospects". To perfect its claim to explore and develop these areas, the Company had to demonstrate that it had the requisite financial capacity to carry out these activities, alone or through financing or partnering arrangements.

The Company, on December 31, 2016, maintains activities in South America, which includes Argentina, Colombia and Bolivia; North America, which includes Mexico and the United States of America; and Turkey (others). The equity-accounted investments are comprised of the operations of Petrobras Oil and Gas B.V. (PO&G) in Africa, mainly Nigeria, as well as Venezuelan companies involved in exploration and production activities, over which the Company had significant influence until July 2016. However, the Company only estimates reserves in the United States, Nigeria and Argentina.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)



i) Capitalized costs relating to oil and gas producing activities

The following table summarizes capitalized costs for oil and gas exploration and production activities with the related accumulated depreciation, depletion and amortization, and asset retirement obligations:

	Consolidated entities						Equity Method Investees
	Abroad					Total	
	Brazil	South America	North America	Africa	Others	Total	
December 31, 2016							
Unproved oil and gas properties . .	6,978	115	276	—	—	391	7,369
Proved oil and gas properties	87,925	88	4,264	—	—	4,352	92,277
Support Equipment	84,549	473	70	—	4	547	85,096
Gross Capitalized costs	179,452	676	4,610	—	4	5,290	184,742
Depreciation, depletion and amortization	(55,580)	(348)	(1,917)	—	(4)	(2,269)	(57,849)
Net capitalized costs	123,872	328	2,693	—	—	3,021	126,893
December 31, 2015							
Unproved oil and gas properties . .	6,720	133	396	—	—	529	7,249
Proved oil and gas properties	70,822	2,016	4,107	—	—	6,123	76,945
Support Equipment	70,931	1,066	65	—	4	1,135	72,066
Gross Capitalized costs	148,473	3,215	4,568	—	4	7,787	156,260
Depreciation, depletion and amortization	(40,763)	(2,037)	(1,574)	—	(4)	(3,615)	(44,378)
Net capitalized costs	107,710	1,178	2,994	—	—	4,172	111,882
December 31, 2014							
Unproved oil and gas properties . .	9,298	72	673	—	—	745	10,043
Proved oil and gas properties	96,520	2,007	4,247	—	—	6,254	102,774
Support Equipment	79,497	1,181	78	—	3	1,262	80,759
Gross Capitalized costs	185,315	3,260	4,998	—	3	8,261	193,576
Depreciation, depletion and amortization	(46,691)	(1,753)	(1,274)	—	(3)	(3,030)	(49,721)
Net capitalized costs	138,624	1,507	3,724	—	—	5,231	143,855



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Supplementary information on Oil and Gas Exploration and Production (unaudited)
(Expressed in millions of US Dollars, unless otherwise indicated)



ii) Costs incurred in oil and gas property acquisition, exploration and development activities

Costs incurred are summarized below and include both amounts expensed and capitalized:

	Consolidated entities					Equity Method Investees
	Brazil	South America	North America	Africa	Total	
December 31, 2016						
Acquisition costs:						
Proved	—	98	—	—	98	—
Unproved	—	—	—	—	—	—
Exploration costs	1,459	44	6	—	51	1,510
Development costs	12,429	176	148	—	324	12,753
Total	13,888	318	154	—	473	14,361
December 31, 2015						
Acquisition costs:						
Proved	—	—	—	—	—	—
Unproved	—	—	—	—	—	—
Exploration costs	3,266	59	83	—	142	3,408
Development costs	15,536	451	397	—	848	16,384
Total	18,802	510	480	—	990	19,792
December 31, 2014						
Acquisition costs:						
Proved	—	89	—	—	89	—
Unproved	54	—	—	—	—	54
Exploration costs	5,455	122	135	15	272	5,727
Development costs	18,158	546	418	—	964	19,122
Total	23,667	757	552	15	1,325	24,992

(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, 2016, 2015 and 2014 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.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)



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.

(iii) Results of operations for oil and gas producing activities

	Consolidated entities						Equity Method Investees
	Abroad					Total	
	Brazil	South America	North America	Africa	Others	Total	
December 31, 2016							
Net operation revenues:							
Sales to third parties	693	224	563	—	—	787	381
Intersegment	31,689	506	—	—	—	506	31
	32,382	730	563	—	—	1,293	412
Production costs	(13,939)	(315)	(132)	—	—	(447)	(56)
Exploration expenses	(1,603)	(35)	(122)	—	(1)	(158)	(4)
Depreciation, depletion and amortization	(10,051)	(99)	(327)	—	—	(426)	(170)
Impairment of oil and gas properties	(3,102)	(126)	(44)	—	—	(170)	—
Other operating expenses	(1,497)	(97)	(184)	—	22	(259)	(28)
Results before income tax expenses	2,190	58	(246)	—	21	(167)	154
Income tax expenses	(745)	(44)	—	—	12	(32)	(108)
Results of operations (excluding corporate overhead and interest costs)	1,445	14	(246)	—	33	(199)	46
December 31, 2015							
Net operation revenues:							
Sales to third parties	2,867	303	590	—	—	893	561
Intersegment	30,951	969	—	—	—	969	19
	33,818	1,272	590	—	—	1,862	580
Production costs	(17,023)	(556)	(189)	—	—	(745)	(209)
Exploration expenses	(1,582)	(18)	(311)	—	—	(329)	(30)
Depreciation, depletion and amortization	(7,403)	(301)	(246)	—	—	(547)	(187)
Impairment of oil and gas properties	(9,165)	(207)	(458)	—	—	(665)	(278)
Other operating expenses	(2,932)	47	(91)	—	(160)	(204)	(43)
Income before income tax expenses	(4,287)	237	(705)	—	(160)	(628)	(167)
Income tax expenses	1,458	(77)	1	—	16	(60)	(84)
Results of operations (excluding corporate overhead and interest costs)	(2,829)	160	(704)	—	(144)	(688)	(251)
December 31, 2014							
Net operation revenues:							
Sales to third parties	500	847	919	—	—	1,766	676
Intersegment	65,116	1,234	—	—	—	1,234	1,394
	65,616	2,081	919	—	—	3,000	2,071
Production costs	(27,397)	(998)	(227)	—	—	(1,225)	(579)
Exploration expenses	(2,882)	(28)	(142)	(15)	—	(185)	(280)
Depreciation, depletion and amortization	(7,675)	(352)	(558)	—	—	(910)	(174)
Impairment of oil and gas properties	(2,133)	(87)	(1,585)	(6)	—	(1,678)	(74)
Other operating expenses	(2,827)	1,059	(112)	2	113	1,063	(8)
Income before income tax expenses	22,702	1,675	(1,705)	(20)	113	64	954
Income tax expenses	(7,719)	(490)	(4)	—	17	(477)	(653)
Results of operations (excluding corporate overhead and interest costs)	14,983	1,186	(1,709)	(20)	130	(413)	301



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)**(iv) Reserve quantities information**

The Company's estimated net proved oil and gas reserves and changes thereto for the years 2016, 2015 and 2014 are shown in the following table. Proved reserves are estimated by the Company's reservoir geoengineers in accordance with the reserve definitions prescribed by the Securities and Exchange Commission.

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, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence within a reasonable time.

Developed oil and gas reserves are reserves of any category 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.

In some cases, substantial new investments in additional wells and related facilities will be required to recover these proved reserves and are named proved undeveloped reserves. Due to the inherent uncertainties and the limited nature of reservoir data, estimates of reserves are subject to change as additional information becomes available.



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)
(Expressed in millions of US Dollars, unless otherwise indicated)



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	Crude oil in Brazil	Abroad			Total of crude oil abroad	Synthetic oil in Brazil	Total
		South America	North America	Africa			
Reserves at December 31, 2013	10,658.4	166.0	123.1	—	289.2	8.8	10,956.4
Revisions of previous estimates	629.3	(3.2)	5.3	—	2.1	0.2	631.6
Extensions and discoveries	267.7	3.0	1.6	—	4.6	—	272.3
Improved Recovery	—	0.5	—	—	0.5	—	0.5
Sales of reserves	—	(104.4)	(0.1)	—	(104.5)	—	(104.5)
Purchases of reserves	—	22.9	—	—	22.9	—	22.9
Production for the year	(704.6)	(18.3)	(10.0)	—	(28.3)	(1.1)	(734.0)
Reserves at December 31, 2014	10,850.9	66.5	119.9	—	186.5	7.9	11,045.1
Revisions of previous estimates	(1,968.9)	(3.5)	(18.1)	—	(21.6)	0.1	(1,990.4)
Extensions and discoveries	407.1	4.8	—	—	4.8	—	411.9
Improved Recovery	0.4	0.7	—	—	0.7	—	1.1
Sales of reserves	(2.3)	(4.5)	—	—	(4.5)	—	(6.8)
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	(743.1)	(11.7)	(11.2)	—	(22.8)	(1.0)	(767.0)
Reserves at December 31, 2015	8,544.1	52.3	90.6	—	142.9	6.9	8,693.9
Revisions of previous estimates	179.5	0.1	17.9	—	18.0	0.8	198.4
Extensions and discoveries	87.8	—	—	—	—	—	87.8
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	(46.6)	—	—	(46.6)	—	(46.6)
Purchases of reserves	—	0.7	—	—	0.7	—	0.7
Production for the year	(748.5)	(5.7)	(12.1)	—	(17.8)	(0.9)	(767.2)
Reserves at December 31, 2016	8,063.0	0.8	96.4	—	97.3	6.8	8,167.1

Apparent differences in the sum of installments are due to rounding.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)


Proved developed and undeveloped reserves—Equity Method Investees	Crude Oil abroad	Abroad			Total of crude oil abroad	Brazil's Synthetic Oil	Total
		South America	North America	Africa			
Reserves at December 31, 2013	—	21.2	—	63.2	84.5	—	84.5
Revisions of previous estimates	—	(1.6)	—	0.5	(1.1)	—	(1.1)
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	—	—	—	—	—	—
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(1.7)	—	(9.6)	(11.3)	—	(11.3)
Reserves at December 31, 2014	—	18.0	—	54.1	72.1	—	72.1
Revisions of previous estimates	—	(2.2)	—	5.2	3.1	—	3.1
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	16.2	16.2	—	16.2
Sales of reserves	—	—	—	—	—	—	—
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(1.2)	—	(9.7)	(10.9)	—	(10.9)
Reserves at December 31, 2015	—	14.6	—	65.8	80.4	—	80.4
Revisions of previous estimates	—	—	—	11.9	11.9	—	11.9
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	(14.1)	—	—	(14.1)	—	(14.1)
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(0.5)	—	(8.7)	(9.2)	—	(9.2)
Reserves at December 31, 2016	—	—	—	69.0	69.0	—	69.0

Apparent differences in the sum of installments are due to rounding.



Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)
(Expressed in millions of US Dollars, unless otherwise indicated)



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	Natural Gas in Brazil	Abroad			Total abroad's Natural Gas	Brazil's Synthetic Gas	Total
		South America	North America	Africa			
Reserves at December 31, 2013	11,291.7	1,058.5	132.9	—	1,191.4	11.8	12,494.8
Revisions of previous estimates	468.0	25.5	46.1	—	71.6	0.1	539.7
Extensions and discoveries	216.0	42.1	6.0	—	48.1	—	264.1
Improved Recovery	—	10.8	—	—	10.8	—	10.8
Sales of reserves	—	(351.7)	(0.1)	—	(351.8)	—	(351.8)
Purchases of reserves	—	47.1	—	—	47.1	—	47.1
Production for the year	(805.4)	(101.5)	(4.9)	—	(106.4)	(1.4)	(913.2)
Reserves at December 31, 2014	11,170.3	730.8	180.0	—	910.8	10.6	12,091.5
Revisions of previous estimates	(1,178.3)	16.8	(17.0)	—	(0.2)	0.2	(1,178.3)
Extensions and discoveries	417.6	74.6	—	—	74.6	—	492.2
Improved Recovery	0.2	27.7	—	—	27.7	—	27.9
Sales of reserves	(1.3)	(90.2)	—	—	(90.2)	—	(91.5)
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	(820.8)	(79.2)	(24.5)	—	(103.7)	(1.4)	(925.9)
Reserves at December 31, 2015	9,587.7	680.5	138.5	—	819.1	9.3	10,416.1
Revisions of previous estimates	(476.2)	22.9	(19.3)	—	3.6	1.2	(471.4)
Extensions and discoveries	92.1	—	—	—	—	—	92.1
Improved Recovery	0.1	—	—	—	—	—	0.1
Sales of reserves	—	(631.9)	—	—	(631.9)	—	(631.9)
Purchases of reserves	—	93.3	—	—	93.3	—	93.3
Production for the year	(809.7)	(50.9)	(32.1)	—	(82.9)	(1.4)	(894.0)
Reserves at December 31, 2016	8,394.0	113.9	87.2	—	201.1	9.2	8,604.3

Apparent differences in the sum of installments are due to rounding

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)


Proved developed and undeveloped reserves—Equity Method Investees	Natural Gas in Brazil	Abroad			Total abroad's Natural Gas	Brazil's Synthetic Gas	Total
		South America	North America	Africa			
Reserves at December 31, 2013	—	41.3	—	20.6	61.9	—	61.9
Revisions of previous estimates	—	(13.1)	—	(1.2)	(14.4)	—	(14.4)
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	—	—	—	—	—	—
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(0.6)	—	—	(0.6)	—	(0.6)
Reserves at December 31, 2014	—	27.6	—	19.3	46.9	—	46.9
Revisions of previous estimates	—	(10.4)	—	(2.7)	(13.1)	—	(13.1)
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	—	—	—	—	—	—
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(0.3)	—	—	(0.3)	—	(0.3)
Reserves at December 31, 2015	—	16.9	—	16.6	33.5	—	33.5
Revisions of previous estimates	—	—	—	(4.1)	(4.1)	—	(4.1)
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	(16.8)	—	—	(16.8)	—	(16.8)
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(0.1)	—	—	(0.1)	—	(0.1)
Reserves at December 31, 2016	—	—	—	12.5	12.5	—	12.5

Apparent differences in the sum of installments are due to rounding.



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)


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 non consolidated affiliate for 2016, 2015 and 2014:

Proved developed and undeveloped reserves – Consolidated Entities	Oil equivalent in Brazil	Abroad			Total oil equivalent abroad	Total synthetic oil equivalent in Brazil	Total for all products
		South America	North America	Africa			
Reserves at December 31, 2013	12,540.4	342.5	145.4	—	487.9	10.7	13,039.0
Revisions of previous estimates	707.3	1.1	13.0	—	14.1	0.2	721.6
Extensions and discoveries	303.7	10.0	2.6	—	12.6	—	316.3
Improved Recovery	—	2.3	—	—	2.3	—	2.3
Sales of reserves	—	(163.0)	(0.1)	—	(163.1)	—	(163.1)
Purchases of reserves	—	30.8	—	—	30.8	—	30.8
Production for the year	(838.8)	(35.2)	(10.8)	—	(46.0)	(1.3)	(886.1)
Reserves at December 31, 2014	12,712.6	188.3	150.1	—	338.3	9.6	13,060.7
Revisions of previous estimates	(2,165.3)	(0.7)	(20.9)	—	(21.6)	0.1	(2,187.1)
Extensions and discoveries	476.7	17.2	—	—	17.2	—	494.0
Improved Recovery	0.4	5.3	—	—	5.3	—	5.8
Sales of reserves	(2.5)	(19.5)	—	—	(19.5)	—	(22.0)
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	(879.9)	(24.9)	(15.3)	—	(40.2)	(1.3)	(921.3)
Reserves at December 31, 2015	10,142.1	165.7	113.7	—	279.4	8.5	10,430.0
Revisions of previous estimates	100.2	3.9	14.7	—	18.6	1.0	119.8
Extensions and discoveries	103.2	—	—	—	—	—	103.2
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	(151.9)	—	—	(151.9)	—	(151.9)
Purchases of reserves	—	16.3	—	—	16.3	—	16.3
Production for the year	(883.4)	(14.2)	(17.4)	—	(31.6)	(1.2)	(916.2)
Reserves at December 31, 2016	9,462.0	19.8	111.0	—	130.8	8.3	9,601.1

Apparent differences in the sum of installments are due to rounding.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)

PETROBRAS

Proved developed and undeveloped reserves – Equity Method Investees	Oil equivalent in Brazil	Abroad			Total oil equivalent abroad	Total synthetic oil equivalent in Brazil	Total for all products
		South America	North America	Africa			
Reserves at December 31, 2013	—	28.1	—	66.7	94.8	—	94.8
Revisions of previous estimates	—	(3.7)	—	0.3	(3.5)	—	(3.5)
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	—	—	—	—	—	—
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(1.8)	—	(9.6)	(11.4)	—	(11.4)
Reserves at December 31, 2014	—	22.6	—	57.3	79.9	—	79.9
Revisions of previous estimates	—	(3.9)	—	4.8	0.9	—	0.9
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	16.2	16.2	—	16.2
Sales of reserves	—	—	—	—	—	—	—
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(1.3)	—	(9.7)	(11.0)	—	(11.0)
Reserves at December 31, 2015	—	17.4	—	68.6	86.0	—	86.0
Revisions of previous estimates	—	—	—	11.2	11.2	—	11.2
Extensions and discoveries	—	—	—	—	—	—	—
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	(16.9)	—	—	(16.9)	—	(16.9)
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	—	(0.5)	—	(8.7)	(9.2)	—	(9.2)
Reserves at December 31, 2016	—	0.0	—	71.1	71.1	—	71.1

Apparent differences in the sum of installments are due to rounding.



Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)



Proved developed and undeveloped reserves – Consolidated and Equity Method Investees	Abroad				Total oil equivalent abroad	Total synthetic oil equivalent in Brazil	Total for all products
	Oil equivalent in Brazil	South America	North America	Africa			
Reserves at December 31, 2013	12,540.4	370.6	145.4	66.7	582.7	10.7	13,133.8
Revisions of previous estimates	707.3	(2.6)	13.0	0.3	10.6	0.2	718.1
Extensions and discoveries	303.7	10.0	2.6	—	12.6	—	316.3
Improved Recovery	—	2.3	—	—	2.3	—	2.3
Sales of reserves	—	(163.0)	(0.1)	—	(163.1)	—	(163.1)
Purchases of reserves	—	30.8	—	—	30.8	—	30.8
Production for the year	(838.8)	(37.0)	(10.8)	(9.6)	(57.4)	(1.3)	(897.6)
Reserves at December 31, 2014	12,712.6	211.0	150.1	57.3	418.4	9.6	13,140.6
Revisions of previous estimates	(2,165.3)	(4.6)	(20.9)	4.8	(20.8)	0.1	(2,186.2)
Extensions and discoveries	476.7	17.2	—	—	17.2	—	493.9
Improved Recovery	0.4	5.3	—	16.2	21.5	—	21.9
Sales of reserves	(2.5)	(19.5)	—	—	(19.5)	—	(22.0)
Purchases of reserves	—	—	—	—	—	—	—
Production for the year	(879.9)	(26.2)	(15.3)	(9.7)	(51.2)	(1.3)	(932.3)
Reserves at December 31, 2015	10,142.1	183.1	113.7	68.6	365.4	8.5	10,516.0
Revisions of previous estimates	100.2	3.9	14.7	11.2	29.8	1.0	131.0
Extensions and discoveries	103.2	—	—	—	—	—	103.2
Improved Recovery	—	—	—	—	—	—	—
Sales of reserves	—	(168.8)	—	—	(168.8)	—	(168.8)
Purchases of reserves	—	16.3	—	—	16.3	—	16.3
Production for the year	(883.4)	(14.7)	(17.4)	(8.7)	(40.8)	(1.2)	(925.4)
Reserves at December 31, 2016	9,462.0	19.8	111.0	71.1	201.8	8.3	9,672.2

Apparent differences in the sum of installments are due to rounding.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

In 2016, we incorporated 103 million boe of proved reserves from extensions and discoveries in Brazil (Santos Basin), and we added 131 mmboe to our proved reserves due to revisions of previous estimates, as a result of drilling of new production development wells and better reservoir response in onshore and offshore post-salt fields, in Brazil and the USA, and as result of positive answers from the reservoirs, recovery mechanisms (water injection) and operating efficiency of production systems in operation, as well as the growing drilling activities and tie-back activities, in the pre-salt fields, in Santos and Campos Basin, both in Brazil.

We reduced 169 mmboe of our proved reserves due to sales of minerals in situ and increased 16 mmboe in our proved reserves due to purchases of minerals in situ, resulting in a net effect of a decrease of 153 mmboe in our proved reserves. The net result of these additions and disposals, excluding production, was an increase of 81 mmboe to our proved reserves in 2016. Considering a production of 925 mmboe in 2016, our decrease of proved reserves was 844 mmboe. This volume production does not take into account the production of Extended Well Tests (EWTs) in exploratory blocks in Brazil, and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)
(Expressed in millions of US Dollars, unless otherwise indicated)



We had a total of 4,441.1 mmboe of proved undeveloped reserves company-wide at December 31, 2016, approximately 7.4% (329.1 mmboe) of which have remained undeveloped for five years or more as a result of several factors affecting development and production, including the inherent complexity of ultra-deep water development projects, particularly in the Santos Basin and in the Campos Basin, in which we are making investments to develop necessary infrastructure.

In 2015, our proved reserves decreased by 2,186 mmboe due to revisions of previous estimates, mostly as result of the decrease in oil prices during fiscal year of 2015, and decreased by 22 mmboe due to sales of proved reserves. This decrease was partially offset by the incorporation of 494 mmboe of proved reserves from discoveries of new accumulations and extensions in Brazil, specifically in the Santos, Campos and Espírito Santo Basins, and in Argentina, in the Neuquina Basin, and the incorporation of 22 mmboe due to improved recovery. The net result (excluding production) was a decrease of 1,692 mmboe in our proved reserves in 2015. Considering a production of 932 mmboe in 2015, our net decrease of proved reserves was 2,625 mmboe. This volume production does not take into account the production of Extended Well Tests (EWTs) in exploratory blocks in Brazil, and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

In 2014, 1,097 mmboe were added to our proved reserves, excluding synthetic oil and synthetic gas, while we (i) returned to the ANP eleven fields in Brazil (four with proved reserves) and (ii) we divested from fields in which we had interests in Peru, Colombia, Argentina and United States, representing aggregate proved reserves of 193 mmboe. The net result of these additions and dispositions was an increase of 904 mmboe to our proved reserves in 2014. Considering a production of 896 mmboe in 2014, our net increase of proved reserves was 8 mmboe. This volume production does not take into account the production of Extended Well Tests (EWTs) in exploratory blocks in Brazil, production of synthetic oil and synthetic gas and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.



Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)
(Expressed in millions of US Dollars, unless otherwise indicated)

	2016				2015				2014			
	Crude Oil (millions of barrels)	Synthetic Oil (billions of barrels)	Natural Gas (billions cubic feet)	Synthetic Gas (billions cubic feet)	Crude Oil (millions of barrels)	Synthetic Oil (billions of barrels)	Natural Gas (billions cubic feet)	Synthetic Gas (billions cubic feet)	Crude Oil (millions of barrels)	Synthetic Oil (billions of barrels)	Natural Gas (billions cubic feet)	Synthetic Gas (billions cubic feet)
Net proved developed reserves:												
Consolidated Entities												
Brazil	4,250.1	6.8	5,034.2	9.2	4,266.5	6.9	5,320.5	9.3	7,002.7	7.9	6,661.0	10.6
South America	0.5	—	33.7	—	39.7	—	366.3	—	52.0	—	358.2	—
North America	79.6	—	83.6	—	53.6	—	122.5	—	63.6	—	146.2	—
Abroad	80.1	—	117.3	—	93.4	—	488.8	—	115.6	—	504.3	—
Total Consolidated Entities	4,330.2	6.8	5,151.5	9.2	4,359.8	6.9	5,809.3	9.3	7,118.3	7.9	7,165.4	10.6
Nonconsolidated Entities												
South America	—	—	—	—	6.6	—	8.0	—	9.4	—	15.7	—
Africa	32.5	—	8.6	—	28.0	—	10.4	—	30.8	—	14.4	—
Abroad	32.5	—	8.6	—	34.7	—	18.4	—	40.2	—	30.1	—
Total Nonconsolidated Entities	32.5	—	8.6	—	34.7	—	18.4	—	40.2	—	30.1	—
Total Consolidated and Nonconsolidated Entities	4,362.7	6.8	5,160.1	9.2	4,394.5	6.9	5,827.7	9.3	7,158.5	7.9	7,195.5	10.6
Net proved undeveloped reserves:												
Consolidated Entities												
Brazil	3,812.9	—	3,359.7	—	4,277.7	—	4,267.2	—	3,848.2	—	4,509.2	—
South America	0.3	—	80.2	—	12.5	—	314.2	—	14.6	—	372.5	—
North America	16.8	—	3.6	—	37.0	—	16.0	—	56.4	—	33.8	—
Abroad	17.1	—	83.8	—	49.5	—	330.3	—	71.0	—	406.3	—
Total Consolidated Entities	3,830.0	—	3,443.6	—	4,327.2	—	4,597.5	—	3,919.2	—	4,915.5	—
Nonconsolidated Entities												
South America	—	—	—	—	7.9	—	8.9	—	8.6	—	11.9	—
Africa	36.5	—	3.9	—	37.8	—	6.2	—	23.3	—	4.9	—
Abroad	36.5	—	3.9	—	45.7	—	15.1	—	31.9	—	16.8	—
Total Nonconsolidated Entities	36.5	—	3.9	—	45.7	—	15.1	—	31.9	—	16.8	—
Total Consolidated and Nonconsolidated Entities	3,866.5	—	3,447.5	—	4,372.9	—	4,612.6	—	3,951.1	—	4,932.3	—

Apparent differences in the sum of installments are due to rounding.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.



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Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)**(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 in existence 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 year-end cost indications, assuming continuation of year-end economic conditions. Estimated future income taxes (including future social contributions on net income—*CSLL*) are calculated by applying appropriate year-end statutory tax rates. The amounts presented as future income taxes expenses reflect allowable deductions considering statutory tax rates. Discounted future net cash flows are calculated using 10% mid-period discount factors. This discounting requires a year-by-year estimate of when the future expenditures will be incurred and when the reserves will be produced.

The valuation prescribed under Codification Topic 932 – Extractive Activities – Oil and Gas requires assumptions as to the timing and amount of future development and production costs. The calculations are made as of December 31 each year and should not be relied upon as an indication of Petrobras' future cash flows or the value of its oil and gas reserves.



Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)

(Expressed in millions of US Dollars, unless otherwise indicated)



	Consolidated entities							
		Abroad						
	Brazil	South America	North America	Africa	Others	Total	Total	Equity Method Investees
December 31, 2016								
Future cash inflows	357,374	600	3,809	—	—	4,408	361,783	2,950
Future production costs	(209,413)	(239)	(2,153)	—	—	(2,392)	(211,806)	(1,088)
Future development costs	(42,357)	(120)	(531)	—	—	(652)	(43,009)	(703)
Future income tax expenses	(46,234)	(65)	(40)	—	—	(105)	(46,338)	(229)
Undiscounted future net cash flows	59,370	175	1,084	—	—	1,259	60,630	929
10 percent midyear annual discount for timing of estimated cash flows (*) . . .	(24,946)	(78)	(255)	—	—	(332)	(25,279)	(346)
Standardized measure of discounted future net cash flows	34,424	98	830	—	—	927	35,351	584
December 31, 2015								
Future cash inflows	462,364	6,541	4,720	—	—	11,261	473,625	3,942
Future production costs	(256,130)	(3,165)	(2,684)	—	—	(5,849)	(261,979)	(1,404)
Future development costs	(65,449)	(1,056)	(992)	—	—	(2,048)	(67,497)	(1,228)
Future income tax expenses	(61,408)	(527)	(23)	—	—	(550)	(61,958)	(349)
Undiscounted future net cash flows	79,377	1,793	1,021	—	—	2,814	82,191	961
10 percent midyear annual discount for timing of estimated cash flows (*) . . .	(36,608)	(588)	(148)	—	—	(736)	(37,344)	(449)
Standardized measure of discounted future net cash flows	42,769	1,205	873	—	—	2,078	44,847	512
December 31, 2014								
Future cash inflows	1,080,516	7,164	11,334	—	—	18,498	1,099,014	6,282
Future production costs	(469,252)	(3,743)	(3,687)	—	—	(7,430)	(476,682)	(1,904)
Future development costs	(70,098)	(1,195)	(2,351)	—	—	(3,547)	(73,644)	(1,613)
Future income tax expenses	(188,740)	(618)	(408)	—	—	(1,026)	(189,766)	(920)
Undiscounted future net cash flows	352,427	1,608	4,888	—	—	6,495	358,922	1,846
10 percent midyear annual discount for timing of estimated cash flows (*) . . .	(178,720)	(526)	(1,582)	—	—	(2,108)	(180,828)	(553)
Standardized measure of discounted future net cash flows	173,707	1,082	3,306	—	—	4,388	178,094	1,292

(*) Semiannual capitalization

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.



Petróleo Brasileiro S.A. – Petrobras

Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



	Consolidated entities							
	Abroad							Equity Method Investees
	Brazil	South America	North America	Africa	Others	Total	Total	
Balance at January 1, 2016	42,770	1,205	873	—	—	2,078	44,848	511
Sales and transfers of oil and gas, net of production cost	(18,425)	(351)	(432)	—	—	(783)	(19,208)	(208)
Development cost incurred	12,429	176	148	—	—	324	12,753	389
Net change due to purchases and sales of minerals in place	—	(1,094)	—	—	—	(1,094)	(1,094)	(54)
Net change due to extensions, discoveries and improved recovery related costs	1,234	—	484	—	—	484	1,718	67
Revisions of previous quantity estimates	1,197	—	223	—	—	223	1,420	242
Net change in prices, transfer prices and in production costs	(27,031)	—	(760)	—	—	(760)	(27,791)	(477)
Changes in estimated future development costs	9,175	—	231	—	—	231	9,406	(18)
Accretion of discount	4,277	162	82	—	—	244	4,521	52
Net change in income taxes	8,799	—	(1)	—	—	(1)	8,798	62
Other—unspecified	—	(1)	(19)	—	—	(19)	(19)	17
Balance at December 31, 2016	34,424	98	830	—	—	927	35,351	583
Balance at January 1, 2015	173,707	1,082	3,306	—	—	4,388	178,095	1,292
Sales and transfers of oil and gas, net of production cost	(17,330)	(560)	(403)	—	—	(963)	(18,293)	(248)
Development cost incurred	15,536	451	397	—	—	848	16,384	431
Net change due to purchases and sales of minerals in place	(34)	(58)	—	—	—	(58)	(92)	—
Net change due to extensions, discoveries and improved recovery related costs	6,522	324	—	—	—	324	6,846	487
Revisions of previous quantity estimates	(29,592)	2	(655)	—	—	(653)	(30,245)	134
Net change in prices, transfer prices and in production costs	(185,071)	150	(2,809)	—	—	(2,659)	(187,730)	(1,737)
Changes in estimated future development costs	(6,948)	(370)	538	—	—	168	(6,780)	(121)
Accretion of discount	17,371	157	314	—	—	471	17,842	130
Net change in income taxes	68,608	67	93	—	—	160	68,768	337
Other—unspecified	—	(40)	92	—	—	52	52	(193)
Balance at December 31, 2015	42,769	1,205	873	—	—	2,078	44,847	512
Balance at January 1, 2014	188,569	2,754	3,335	—	—	6,088	194,657	1,704
Sales and transfers of oil and gas, net of production cost	(38,212)	(652)	(700)	—	—	(1,352)	(39,563)	(952)
Development cost incurred	18,158	546	418	—	—	964	19,122	638
Net change due to purchases and sales of minerals in place	—	(1,092)	106	—	—	(985)	(985)	—
Net change due to extensions, discoveries and improved recovery related costs	7,197	182	—	—	—	182	7,379	—
Revisions of previous quantity estimates	16,764	(28)	213	—	—	185	16,949	(30)
Net change in prices, transfer prices and in production costs	(33,371)	(255)	(378)	—	—	(633)	(34,004)	(576)
Changes in estimated future development costs	(11,824)	(361)	38	—	—	(323)	(12,147)	(116)
Accretion of discount	18,857	132	343	—	—	475	19,331	176
Net change in income taxes	7,570	(114)	(94)	—	—	(208)	7,363	86
Other—unspecified	—	(30)	25	—	—	(6)	(6)	362
Balance at December 31, 2014	173,707	1,082	3,306	—	—	4,388	178,094	1,292

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

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



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Exhibit 1.1

BYLAWS OF PETRÓLEO BRASILEIRO S.A. (PETROBRAS)

Chapter I – Nature, Headquarters and Purpose of the Company

Article 1 – Petróleo Brasileiro S.A. (Petrobras), hereinafter referred to as “Petrobras” or “Company,” is a partially state-owned enterprise, controlled by the Federal Government, of indeterminate duration, to be governed by the terms and conditions of the Corporation Law (Law 6,404 of December 15, 1976) and these Bylaws.

Sole paragraph: The Federal Government will exercise its control by means of the ownership and possession of at least 50% (fifty percent) plus 1 (one) share of the Company’s voting capital.

Article 2 – Petrobras has its headquarters and legal venue in the city of Rio de Janeiro, state of Rio de Janeiro, and it may establish, in Brazil and abroad, subsidiaries, agencies, branches and offices.

Article 3 – The Company’s purpose is the exploration, extraction, refining, processing, sale and transportation of oil from wells, shale or other rocks, oil products, natural gas and other fluid hydrocarbons, in addition to other energy related activities. It may research, develop, produce, transport, distribute and sell all forms of energy, and engage in any other related or similar activities.

Section 1 – The Company will carry out the economic activities related to its corporate purpose in free competition with other companies, in line with market conditions and the other principles and guidelines of Law 9,478 of August 6, 1997 and Law 10,438 of April 26, 2002.

Section 2 – Petrobras may perform any of the activities related to its corporate purpose, directly or through its wholly owned subsidiaries, controlled companies, alone or in association with third parties, in Brazil or abroad.

Chapter II – Capital Ownership, Shares and Shareholders

Article 4 – The capital stock is R\$205,431,960,490.52 (two hundred five billion, four hundred thirty-one million, nine hundred sixty thousand, four hundred ninety reais and fifty-two cents), divided into 13,044,496,930 (thirteen billion, forty-four million, four hundred ninety-six thousand, nine hundred thirty) no-par-value shares, of which 7,442,454,142 (seven billion, four hundred forty-two million, four hundred fifty-four thousand, one hundred forty-two) are common shares and 5,602,042,788 (five billion, six hundred two million, forty-two thousand, seven hundred eighty-eight) are preferred shares.

Section 1 – Increases in the capital stock via share issues will be submitted in advance to a General Shareholders’ Meeting for decision making.

Section 2 – If the Board of Directors so decides, the Company may acquire its own shares to keep in the treasury, cancel or subsequently dispose of, up to the amount of the balance of earnings and available reserves, except the minimum legal reserve, without reducing the size of the capital stock, in accordance with prevailing legislation.

Section 3 – The capital stock may be expanded by issuing preferred shares, without maintaining the ratio with common shares, but within the legal limit of two-thirds of the total capital stock, and respecting the preemptive rights of all shareholders.

Article 5 – The Company’s shares will be common shares, with voting rights, and preferred shares, always without voting rights.



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Section 1 – Preferred shares may not be converted into common shares, or vice versa.

Section 2 – Preferred shares will have priority in the event of capital reimbursement and the distribution of the 5% (five percent) minimum dividend, calculated on the part of capital represented by this kind of shares, or 3% (three percent) of the equity share value, always with the higher prevailing, participating equally with common shares in capital stock increases arising from the incorporation of reserves and earnings.

Section 3 – Preferred shares will participate non-cumulatively, on equal conditions with the common shares, in the distribution of dividends, whenever they are higher than the minimum percentage as guaranteed to them in the preceding paragraph.

Article 6 – Shares will be paid-in in accordance with the rules established at General Shareholders' Meetings. In the case of a shareholder's default and irrespective of appeals, the Company may initiate the execution and determine the sale of the shares at that shareholder's expense and risk.

Article 7 – The Company's shares, all of them book entry shares, will be kept in the name of their holders, in a deposit account at a financial institution authorized by the Brazilian Securities and Exchange Commission (Comissão de Valores Mobiliários, CVM) without the issuance of certificates.

Article 8 – Shareholders will be entitled to dividends every financial year and/or additional payments on shareholders' equity, which must not be less than 25% (twenty-five percent) of net adjusted earnings, according to the Corporation Law, and divided pro rata by the shares into which the capital of the Company is divided.

Article 9 – Unless decided otherwise at a General Shareholders' Meeting, the Company will pay the dividends and make the additional payments on shareholders' equity within 60 (sixty) days following the date they are announced and, in any case, within the corresponding financial year, in accordance with the pertinent legal rules.

Sole paragraph: If so determined by the Board of Directors, the Company may advance amounts to its shareholders as dividends or additional payments on shareholders' equity, adjusted by the SELIC benchmark interest rate as of the date of actual payment, until the end of the respective financial year, in the manner foreseen in article 204 of Law 6,404 of 1976.

Article 10 – Dividends not claimed by shareholders within 3 (three) years as of the date they were placed at shareholders' disposal shall prescribe in behalf of the Company.

Article 11 – The amounts of dividends and additional payments on shareholders' equity, due to the National Treasury and other shareholders, will be subject to financial charges equivalent to the SELIC benchmark interest rate as of the end of the financial year until actual collection or payment, without detriment to the incidence of interest on arrears when such collection does not take place on the date established by a General Shareholders' Meeting.

Article 12 – In addition to the Federal Government in its capacity as controlling shareholder of the Company, individuals or legal entities, either Brazilian or foreign, resident in Brazil or otherwise, may be shareholders.

Article 13 – Shareholders may be represented at General Shareholders' Meetings in the manner specified in Article 126 of Law 6,404 of 1976, either by attending them personally, or by previously submitting a statement issued by the depository financial institution together with their identity document or a power of attorney with special powers.

Section 1 – The Federal Government will be represented at the Company's General Shareholders' Meetings in accordance with specific federal legislation.

Section 2 – At General Shareholders' Meetings that elect members of the Board of Directors, the right to vote of shareholders that hold preferred shares is conditional upon compliance with the condition established in Section 6 of article 141 of Law 6,404 of 1976, proving uninterrupted ownership of the shares for a period of at least 3 (three) months immediately prior to the holding of the Meeting.



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Chapter III – Wholly Owned Subsidiaries, Controlled Companies and Affiliates

Article 14 – For the strict performance of activities related to its corporate purpose, Petrobras may, according to the authority granted by Law 9,478 of 1997, set up wholly owned subsidiaries as well as associate itself, in a majority and/or minority position, with other companies.

Article 15 – In accordance with Law 9,478 of 1997, Petrobras and its wholly owned subsidiaries, controlled companies and affiliates may acquire shares or quotas in other companies, participate in special purpose entities, and associate themselves with domestic or foreign companies, and constitute with them consortia, either as lead company or otherwise, in order to expand activities, combine technologies and increase investments in activities related to its corporate purpose.

Article 16 – Petrobras' governance rules and the common corporate rules established by Petrobras, by means of technical, administrative, accounting, financial and legal guidelines, fully apply to its wholly owned subsidiaries and controlled companies, and as far as possible, to affiliates, in line with the decisions of the administrative bodies of each company and the strategic plan approved by Petrobras' Board of Directors.

Chapter IV – Management of the Company

Section I – Board Members and Executive Directors

Article 17 – Petrobras will be led by a Board of Directors, with decision-making functions, and an Executive Board.

Article 18 – The Board of Directors will consist of between 7 (seven) and 10 (ten) members. General Shareholders' Meetings will be responsible for appointing from among them the Chairman of the Board. The term of office of all members may not exceed 2 (two) years. Members may be reelected.

Section 1 – If the position of the Chairman of the Board becomes vacant, a substitute will be elected at the first ordinary meeting of the Board of Directors, to serve until the next General Shareholders' Meeting.

Section 2 – The member of the Board of Directors appointed in the manner described at the start of this article may be reelected at most 3 (three) consecutive times.

Section 3 – In the case of the member of the Board of Directors elected by employees, the reelection limit must comply with prevailing legislation and regulations.

Section 4 – The functions of the Chairman of the Board of Directors and the Company's Chief Executive Officer may not be held by the same person;

Section 5 – The Board of Directors shall be composed by at least 25% (twenty five percent) of independent members, pursuant to Article 22, Paragraph 1 of Law No. 13.303 of June 30, 2016, or by at least one (1), if decided for the exercise of the multiple voting option by minority shareholders, pursuant to Article 141 of Law No. 6.404 of December 15, 1976.

Article 19 – In the process by which the members of the Board of Directors are elected at General Shareholders' Meetings, the following rules will be complied with:

I - Minority shareholders are guaranteed the right to elect one board member, if a higher number is not assigned to them by the multiple vote process;

II - Preferred shareholders representing collectively at least 10% (ten percent) of the share capital, excluding the controlling shareholder, are entitled to appoint and remove 1 (one) member of the Board of Directors, in a separate vote at General Shareholders' Meetings;



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III - Whenever, cumulatively, a Board of Directors election occurs by the multiple vote system and the common or preferred shareholders exercise the right to elect a board member, the Federal Government will be entitled to elect as many board members as those elected by the other shareholders and employees, plus one, regardless of the number of board members established in article 18 hereof;

IV - Employees are entitled to appoint one (1) member of the Board of Directors in a separate vote, by direct vote, as provided for in Section 1 of article 2 of Law 12,353 of December 28, 2010.

Article 20 – The Executive Board shall comprise a Chief Executive Officer, chosen by the Board of Directors from among the members, and 7 (seven) Executive Officers elected by the Board of Directors from among Brazilians residing in the country, with a term of office that may not be longer than 2 (two) years, with no more than 3 (three) consecutive re-elections allowed, and who may be removed at any moment.

Section 1 – In choosing and electing the members of the Executive Board, the Board of Directors must consider their professional qualifications, proven knowledge and specialization in the respective areas of contact in which these managers will operate, in accordance with the Basic Organizational Plan.

Section 2 – The members of the Executive Board will perform their duties on a full-time basis, dedicating themselves exclusively to Petrobras. However, if justified to and approved by the Board of Directors, they may be permitted to simultaneously perform management roles at the Company's wholly owned subsidiaries, controlled companies and affiliates, and in exceptional cases, to serve on the Board of Directors of other companies.

Article 21 – The installation in an administrative office of the Company must comply with the conditions established by Article 147 and according rules listed by Article 162 of Law No. 6404 of December 15, 1976, as well as those set out in the Appointment Policy, and in Law No. 13303 of June 30, 2016.

Section 1 – It will be prohibited investiture in management positions of those who possess ascendants, descendants or collateral relatives occupying positions on the Board of Directors, Executive Board or the Company's Fiscal Council Board.

Section 2 – The installation of an employee representative on the Board of Directors, a university level degree shall not be required, and will not interfere with the election of the vacancy, which is specifically referred to in Paragraph 2, art. 162 of Law nº 6.404, of 1976.

Article 22 – Members of the Board of Directors and Executive Board will formally be installed in their position by signing a declaration of acceptance of office in the book of minutes of the Board of Directors and Executive Board, respectively.

Section 1 – The declaration of acceptance of office must contain, under penalty of nullity: (i) an indication of at least one domicile where the administrator may receive summonses and subpoenas for administrative and judicial proceedings related to acts they have performed, which will be deemed served by means of delivery at the indicated domicile. This domicile may only be altered through written notice to the Company; (ii) acceptance of contracts that may be entered into by Petrobras with stock exchanges or over-the-counter market entities registered with the Brazilian Securities and Exchange Commission, in order to adopt the corporate governance standards established by these entities, accepting responsibility for compliance with these contracts and the respective regulations for differentiated corporate governance practices, if applicable; and (iii) acceptance of the terms of the arbitration clause set forth in article 58 of these Bylaws and other terms established by legislation and the Company.

Section 2 – The installation of a board member resident or domiciled abroad is conditional upon the appointment of a representative who resides in Brazil, with powers to receive summonses in lawsuits initiated against this member, based on corporate law, by means of a power of attorney valid for at least 3 (three) years after the end of the member's term of office.

Section 3 – Prior to their installation and also upon departing from office, the members of the Board of Directors and Executive Board will submit a statement of assets, to be filed at the Company.



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Article 23 – The members of the Board of Directors and Executive Board will be liable, in accordance with article 158 of Law 6,404 of 1976, individually and jointly, for the acts they practice and any losses to the Company resulting from them. They are prohibited from participating in decision making concerning operations involving companies in which they own a stake of more than 10% (ten percent), or in which they have held a management position in the period immediately prior to their installation at the Company.

Section 1 – The Company will ensure the defense in judicial and administrative proceedings of its present and past officers, and maintain a long-term insurance contract on their behalf to shield them from liabilities resulting from acts arising from the performance of their position or function, covering the whole period when they performed their respective terms of office.

Section 2 – The guarantee provided for in the previous paragraph extends to the members of the Audit Council, as well as all employees and agents who legally act through delegation by the Company's officers.

Article 24 – A member of the Board of Directors who fails to attend 3 (three) consecutive meetings without a justified reason or license granted by the Board of Directors will forfeit his office.

Article 25 – In the case of a vacant position on the Board of Directors, a substitute member will be appointed by the remaining members, to serve until the next General Shareholders' Meeting, as provided for in article 150 of Law 6,404 of 1976.

Section 1 – A member of the Board of Directors or Executive Board elected as a substitute will complete the term of office of the member he replaces, and once this term has elapsed, he will remain in the post until the installation of his successor.

Section 2 – If the member of the Board of Directors representing employees does not conclude his term of office, the following will occur:

I - The person who received the second most votes will take over the position, if the term is not yet halfway through;

II - New elections will be called, if the term is more than halfway through.

Section 3 – In the hypothesis described in Section 2, the substitute board member will complete the term of office of the member he replaces.

Article 26 – The Company will be represented, in and out of court, individually by the Chief Executive Officer, or jointly by at least 2 (two) Executive Directors, who may appoint proxies or representatives.

Article 27 – The Chief Executive Officer and the Executive Directors may not be absent from their office, over the course of a year, for more than 30 (thirty) days, whether or not they are consecutive, without being licensed or authorized by the Board of Directors.

Section 1 – The Chief Executive Officer and the Executive Directors shall be entitled annually to 30 (thirty) days of paid leave, with prior authorization from the Executive Board, sealed the double payment of remuneration for leave not taken during the previous year.

Section 2 – It is incumbent upon the Chief Executive Officer to designate from among the Executive Directors his possible substitute.

Section 3 – If the position of Chief Executive Officer should become vacant, the Chairman of the Board of Directors will appoint a substitute from among the other members of the Executive Board until a substitute CEO has been appointed in accordance with the terms of article 20.

Section 4 – In the event of absence or impediment of an Executive Director, his functions will be taken over by a substitute chosen by him, from among the other members of the Executive Board or one of his direct subordinates, the latter for a maximum period of 30 (thirty) days.

Section 5 – In the event a subordinate is appointed, conditional upon approval from the Chief Executive Officer, he will take part in all of the Executive Director's routine activities, including at board meetings, to provide guidance on issues in the area of contact of the respective Executive Director, but without exercising the right to vote.



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Article 28 – After the end of the management period, the former members of the Executive Board, Board of Directors and Audit Council are impeded, for a period of 6 (six) months, counting from the end of the term, if a longer period is not established in regulations, from:

I - accepting a management or Audit Council member position, performing activities or providing any services at companies that are the Company's competitors;

II - accepting a management or Audit Council member position, or establishing an employment relationship with an individual or legal entity with which they have had a direct and relevant official relationship in the six months prior to the end of their term, if a longer period is not established in regulations; and

III - sponsoring, directly or indirectly, the interests of an individual or legal entity, in dealings with a federal government administrative entity with which they have had a direct and relevant official relationship in the six months prior to the end of their term, if a longer period is not established in regulations.

Section 1 – Any periods of paid annual leave not taken are included in the period referred to at the start of this article.

Section 2 – During the period of impediment, former members of the Executive Board, Board of Directors and Audit Council will be entitled to compensatory remuneration equivalent only to monthly fees for the function they held.

Section 3 – Will have no right to compensatory remuneration, the former members of the Executive Board, the Board of Directors and the Fiscal Council Board who opt for the return, before the end of the period of impediment, to its previous function or position, effective or superior, who, prior to his inauguration, held on private or public administration.

Section 4 – The breach of the prevention of six months implies, besides the loss of compensatory remuneration, the return of value already received and the payment of a fine of 20% (twenty per cent) over the total of the remuneration which would be due in the period, Notwithstanding the provisions to the compensation of damages that eventually already have caused.

Section 5 – The beginning of the payment of compensatory remuneration shall be preceded by formal consultation to the Ethics Committee of the Presidency of the Republic pursuant to article 8 of law No. 12,813/2013.

Section II – Board of Directors

Article 29 – The Board of Directors is Petrobras' highest guidance and management body. It is responsible for:

I - establishing general orientation for the Company's business, defining its mission, strategic objectives and guidelines;

II - approving strategic plans proposed by the Executive Board, the respective plurennials plans, as well the plans and annual spending and investment programs;

III - overseeing the management of the Executive Board and its members, and giving them duties, examining the Company's books and papers at any time;

IV - to evaluate, annually, performance results, individual and collective, of the executive officers and members of the Committees of the Board of Directors, including the analysis of compliance with the goals approved;

V - approving, annually, the amount above which acts, contracts or operations, although the responsibility of the Executive Board or its members, must be submitted to the Board of Directors for approval;

VI - deciding on the issuing of debentures not convertible into shares and without a secured guarantee;

VII - to set up the overall policies of the Company, including those concerning the strategic management of the following areas: commercial, financial, risk, investment, environment, information disclosure, dividend distribution, transactions with related parties, spokesperson and human resources;



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VIII - approving the transfer of the ownership of Company assets, including concession contracts and authorizations regarding oil refining, natural gas processing, and the transportation, importing and exporting of oil, oil products and natural gas. Limits for the practice of these acts by the Executive Board or its members may be established;

IX - approving the Election Rules for choosing the member of the Board of Directors elected by employees;

X - approving plans regarding the entry, careers, succession benefits and disciplinary regime of Petrobras employees;

XI - approve the Appointment Policy with the minimum requirements for the appointment of members of the Board of Directors and its Committees, of the Audit Committee and of the Executive Board, to be made broadly available to the shareholders and to the market, within the limits of the applicable legislation;

XII - approve and disseminate Annual Letter and the Corporate Governance Letter, as provided by Law No. 13303/16.

Section 1: The establishment of the human resources policy referred to in part VII may not involve the participation of the board member who represents employees, if the discussions and decisions on the agenda involve union relations, remuneration, benefits and advantages, including private pensions and assistance, because in these cases there would be a conflict of interest;

Section 2: Where the Appointment Policy intends to impose additional requirements to those in the applicable law to the members of the Board of Directors and to the members of the Audit Committee, these requirements should be resolved by the shareholders at a Shareholders' Meeting.

Article 30 – The Board of Directors is also tasked with deciding on the following matters:

I - The Basic Organizational Plan and its amendments, respecting the duties of each member of the Executive Board, as set out in Article 36 hereof;

II - Approval of appointments and dismissals of the Company's Executive Managers, as proposed by the Executive Board, based on the criteria established by the Board of Directors itself;

III - Authorization to acquire shares issued by the Company to keep in the treasury, cancel or subsequently dispose of, except in cases that are the responsibility of General Shareholders' Meetings, in accordance with legal, regulatory and statutory provisions;

IV - Approval of the exchange of securities issued by the Company;

V - Election and dismissal of members of the Executive Board;

VI - Establishment of wholly owned subsidiaries, stakes in controlled companies or affiliates, or the termination of such interests, as well as the acquisition of shares or quotas in other companies;

VII - The calling of General Shareholders' Meetings, in the cases provided by law, publishing the respective public notice at least 15 (fifteen) days in advance;

VIII - Approval of the Code of Ethics, Code of Best Practices and the Internal Rules of the Board of Directors;

IX - Approval of Petrobras' Corporate Governance Policy and Guidelines;

X - Selection and dismissal of independent auditors, which may not provide the Company with consulting services during the contract term;

XI - Management report and accounts of the Executive Board;

XII - Selection of the members of Board Committees, from among its members and/or from among people of proven experience and technical expertise in the market, in line with the specialty of the respective Committee, and approval of the duties and operating rules of the Committees;

XIII - Matters that, due to a legal provision or decision by a General Shareholders' Meeting, are subject to its decision making;



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XIV - Approval of integrity and compliance criteria, as well as other relevant criteria and requirements applicable to the election of members of the Executive Board and the appointment of Executive Managers;

XV - Any cases missing from these Bylaws.

Sole paragraph – The Board of Directors will have 5 (five) Advisory Committees, with specific analysis and recommendation duties regarding certain subjects, reporting directly to the Board: Strategic Committee; Finance Committee; Audit Committee; Health, Environment and Safety Committee; and Indication, Remuneration and Succession Committee.

I - The opinions of the Committees do not constitute a necessary condition for the submission of matters to the Board of Directors for examination and decision making;

II - The committee members may attend all Board of Directors meetings as guests;

III - The composition and operating rules of the Committees will be established in rules to be approved by the Board of Directors.

Article 31 – The Board of Directors may order inspections, audits or the disclosure of accounts at the Company, as well as the hiring of specialists, experts or external auditors, to provide more information on matters subject to its decision making.

Article 32 – The Board of Directors will meet with the attendance of the majority of its members, upon being convened by its Chairman or the majority of its members, ordinarily at least every thirty days, and extraordinarily whenever necessary.

Section 1 – If required, members of the Board of Directors may participate in a meeting by telephone, videoconference or other communication means capable of ensuring effective participation and the authenticity of their respective vote. In such cases, these members of the Board of Directors will be deemed present at the meeting and their votes will be deemed valid for all legal purposes and incorporated into the minutes of the meeting.

Section 2 – Matters submitted to the Board of Directors for appreciation will be accompanied by the decisions of the Executive Board, the statements of the technical area or relevant Committee, and a legal opinion whenever necessary to examine the subject.

Section 3 – The Chairman of the Board of Directors, at his own initiative or at the request of any of its members, may call members of the Company's Executive Board to attend the meetings and to provide clarifications or information about the subjects being discussed.

Section 4 – The Board of Directors will take its decisions by majority vote of the members present, and they will be recorded in the book of minutes.

Section 5 – In the event of a tie, the Chairman of the Board of Directors will have the deciding vote.

Section III – Executive Board

Article 33 – The Executive Board and its members are responsible for managing the Company's business, in accordance with the mission, objectives, strategies and guidelines established by the Board of Directors.

Section 1: The power to report directly to the Board of Directors in the cases set forth in Article 9, Paragraph 4 of Law No. 13303/16 is assured to the Governance and Compliance Executive Officer, in the exercise of its duties;

Section 2: The Board of Directors may delegate duties to the Executive Board, except those explicitly provided for in corporate law and in line with the levels of authorities established in such delegation.

Article 34 – Responsibilities of the Executive Board:

I - Evaluate, approve and submit for the approval of the Board of Directors:

a) the foundations and guidelines for producing the strategic plan, annual programs and pluriannual plans;



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- b) the Company's strategic plan, the respective pluriannual plans, as well as the plans and annual spending and investment programs, together with the respective projects;
- c) the Company's operating cost and investment budgets;
- d) the results of the performance of the Company's activities.
- e) appointments of the Company's Executive Managers, based on the criteria established by the Board of Directors.
- f) plans related to the entry, careers, succession, benefits and disciplinary regime of Petrobras employees.

II - Approve:

- a) the technical and financial evaluation criteria for investment projects, together with the respective plans for delegation of responsibility for their execution and implementation;
- b) the criteria for the economic use of producing areas and the minimum coefficient of oil and gas reserves, in accordance with specific legislation;
- c) the Company's pricing policy and basic structures for the prices of its products;
- d) the accounting plans, basic criteria for calculating results, amortization and depreciation of invested capital, and changes in accounting practices;
- e) the manuals and corporate rules of governance, accounting, finance, personnel administration, the procurement and execution of construction work and services, the supply and disposal of materials and equipment, operations and other corporate rules necessary for the guidance of Company operations;
- f) the rules concerning the assignment of the use, rental or leasing of real estate owned by the Company;
- g) the basic and complementary structure of the Company, considering the definitions in the Basic Organizational Plan, with its respective responsibilities, as well as to set up, to transform or to extinguish Operational Unities, agencies, branches, bureaus and offices, in the country and abroad;
- h) the creation and winding up of non-statutory committees, reporting to the Executive Board or its members, approving the respective operating rules, duties and limits of authority for action;
- i) the the amount above which acts, contracts or operations, although the responsibility of the Chief Executive Officer or Executive Directors, must be submitted to the Executive Board for approval, in line with the level of authority defined by the Board of Directors.
- j) the insurance annual plan of the Company.

III - Guarantee the implementation of the Company's Strategic Plan, pluriannual plans and annual spending and investment programs, together with the respective projects, in line with the approved budget limits;

IV - Decide on trademarks, patents, names and logos.

Article 35 – The Executive Board will ordinarily meet once a week, with the majority of its members, including the Chief Executive Officer or his substitute, and extraordinarily whenever convened by the Chief Executive Officer or two-thirds of the Executive Directors.

Section 1: The Executive Board will rely on the advice of the Investment and Divestment Statutory Technical Committee;

Section 2: The members of the Executive Board will have 7 (seven) Statutory Advisory Technical Committees, composed of Executive Managers, with specific tasks to analyze and recommend regarding certain subjects, in accordance with article 160 of Law 6,404/76: Statutory Technical Committee for Production Development and Technology; Statutory Technical Committee for Exploration and Production; Statutory Technical Committee for Refining and Natural Gas; Statutory Technical Committee for Finance and Investor Relations; Statutory Technical Committee for Corporate Affairs; Statutory Technical Committee for Governance, and Compliance; and Statutory Strategy Committee, Organization and Management System.



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Section 3: The advice of the Technical Statutory Committees is not binding to the Executive Board or its members, as appropriate, but will be a necessary condition for the examination and resolution of the matter within their duties;

Section 4: The composition, operating rules and duties of the Statutory Technical Committees will be governed by Internal Rules to be approved by the Board of Directors.

Article 36 – Individual responsibilities:

Section 1 – The Chief Executive Officer is responsible for:

- I** - convening, presiding over and coordinating the work of Executive Board meetings;
- II** - proposing the appointment of Executive Directors to the Board of Directors;
- III** - providing information to the Board of Directors, the minister to which the Company reports, and the Federal Government's oversight bodies, as well as the Federal Audit Court and National Congress;
- IV** - guaranteeing the mobilization of resources to respond to extreme hazards for health, the environment and safety;
- V** - performing other duties assigned to him by the Board of Directors.

Section 2 – The Executive Director for Production Development & Technology is responsible for:

- I** - ensuring the development of projects and production systems involving E&P, Refining, Natural Gas and Energy;
- II** - upholding the Company's interests in dealings with regulators related to his area of activity;
- III** - managing and developing projects for the construction, maintenance and abandonment of wells, and the installation of subsea, surface and offshore production systems, industrial facilities and onshore pipelines, among other things;
- IV** - developing and providing technology solutions to deliver the Company's strategic plan;
- V** - performing other duties assigned to him by the Board of Directors.

Section 3 – The Executive Director for Exploration & Production is responsible for:

- I** - coordinating projects to optimize assets in on shore, shallow, deep and ultra-deep waters;
- II** - managing exploration assets, as well as implementing corporate strategy, operational plans and operational performance evaluations;
- III** - approving and managing partnerships and participation in exploration blocks;
- IV** - upholding the Company's interests in dealings with regulators related to his area of activity;
- V** - managing logistics services to support operations and the Company's investments in his area of activity;
- VI** - defining the strategy and guidelines for decommissioning and maintenance of wells and subsea systems;
- VII** - performing other duties assigned to him by the Board of Directors.

Section 4 – The Executive Director for Refining and Natural Gas is responsible for:

- I** - managing industrial, logistics and sales operations for oil products, natural gas, electricity and nitrogen fertilizers;
- II** - coordinating the implementation of corporate strategy, portfolio decisions, operational planning and operational performance evaluations;
- III** - approving and managing partnerships related to his area of activity;
- IV** - upholding the Company's interests in dealings with regulators related to his area of activity;



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V - managing the supply of oil products, natural gas, electricity and nitrogen fertilizers;

VI - performing other duties assigned to him by the Board of Directors.

Section 5 – The Chief Financial Officer and Investor Relations Executive Director is responsible for:

I - providing the financial resources needed for the Company's operations, conducting the processes of taking out loans and financing, as well as related services;

II - moving the Company's monetary resources, always in conjunction with another Executive Director;

III - the provision of information to investors, the Brazilian Securities and Exchange Commission (CVM) and stock exchanges or over-the-counter markets, domestic and foreign, as well as the corresponding regulatory and oversight bodies, keeping the Company's records at these institutions up to date;

IV - accounting for, monitoring and reporting to the Executive Board the Company's financial operations, including its wholly owned subsidiaries and other controlled companies;

V - promoting the Company's financial management and monitoring the financial management of its wholly owned subsidiaries, controlled companies, affiliates and consortia;

VI - coordinating the processes of acquiring and disposing of equity stakes held by the Company, in accordance with prevailing legislation and regulations;

VII - performing other duties assigned to him by the Board of Directors.

Section 6 – The Executive Director for Corporate Affairs is responsible for:

I - proposing plans to the Executive Board concerning the entry, careers, succession, benefits and disciplinary regime of Petrobras employees;

II - approve the staffing capacity of the company's unities

III - guiding and promoting the application of the Company's human resources policies and guidelines;

IV - proposing, implementing and maintaining the Company's telecommunications and information technology systems;

V - providing the Company with shared infrastructure and administrative support resources and services;

VI - coordinating the process of planning and procuring goods and services, and the acquisition and disposal of materials and property;

VII - guiding and promoting the application of the Company's Health, Environment and Safety policies, guidelines and rules;

VIII - guiding and promoting the application of the Company's Social Responsibility policies, guidelines and rules;

IX - performing other duties assigned to him by the Board of Directors.

Section 7 – The Executive Director for Governance and Compliance is responsible for:

I - guiding and promoting the application of governance and compliance rules, guidelines and procedures;

II - coordinating the management of compliance and necessary internal controls, including fraud and corruption aspects;

III - monitoring developments related to the Company's reporting channel and ensuring the reporting of identified violations and their results to the Executive Board and Board of Directors;

IV - performing other duties assigned to him by the Board of Directors.



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Section 8 – The Executive Director for Strategy, Organization and Management System is responsible for:

- I** - proposing the foundations and guidelines for producing the strategic plan, as well as annual programs and pluriannual plans;
- II** - coordinating the production of the Company's strategic plan, as well as the respective pluriannual plans and annual spending and investment programs, together with the respective projects;
- III** - submit to the Executive Board's the approval of the criteria of technical and economic assessment for investment projects and the delegation of duties for their performances and deployments;
- IV** - monitor and report to the Executive Board the financial and economic performance of investment projects, according to the goals and results approved by the Executive Board and by the Board of Directors;
- V** - coordinate the preparation of the Basic Organization Plan, containing, among others, the general structure of the Company and its general duties, as well as the organizational model of Petrobras;
- VI** - ensure the implementation of the strategies with a greater dynamism in the decisions, establishing action plans with goals for costs, risks, business performance and investment;
- VII** - guide and promote the implementation of risk management policies in accordance with the current legislation;
- VIII** - coordinate the integrated view of the business risks, incorporate the risk management in strategic decisions, contributing to the development of the matrix of corporate risk of all types and report to the Executive Board and to the Board of Directors the main effects of the risks in Petrobras' results
- IX** - proposing the establishment of a management system that:
 - a)** modernizes the company's management, improving its performance monitoring and control, by using internal and external benchmarks and risk analyses to support decision making;
 - b)** achieves objectives and targets up to the supervision level;
 - c)** indicates the respective responsible people;
 - d)** permits the timely monitoring of achievement of these targets and the associated risks, together with the respective mitigation plans, in alignment with the responsible departments;
 - e)** establishes a system of consequences aligned with compliance, in line with the principle of meritocracy.

Section 9 – The Chief Executive Officer and each Executive Director, within the areas of contact described in the Basic Organizational Plan, are responsible for:

- I** - implementing the strategic plan and budget approved by the Board of Directors, using the Company's management system;
- II** - hiring and dismissing employees, and formalizing appointments to management positions and functions;
- III** - assigning employees for foreign missions;
- IV** - monitoring, controlling and reporting to the Executive Board the technical and operational activities of wholly owned subsidiaries and companies in which Petrobras has a stake or is associated with;
- V** - designating and instructing the Company's representatives at the General Shareholders' Meetings of wholly owned subsidiaries, controlled companies and affiliates, in accordance with the guidelines established by the Board of Directors, as well as applicable corporate guidelines;
- VI** - administering, supervising and evaluating the performance of the activities of units for which they are directly responsible, as defined in the Basic Organizational Plan, and carrying out management acts related to these activities and can secure value limits for delegation of the practice of such acts, in compliance with the corporate rules approved by the Executive Board;
- VII** - approving the rules and procedures for performing the activities of units for which they are directly responsible, as defined in the Basic Organizational Plan.



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Article 37 – The Executive Board will take its decisions by majority vote of the members present, and they will be recorded in the book of minutes.

Sole paragraph: In the event of a tie, the Chief Executive Officer will have the deciding vote.

Article 38 – The Executive Board will send the Board of Directors copies of the minutes of its meetings and it will provide information to make it possible to evaluate the performance of the Company's activities.

Sole paragraph: The members of the Executive Board will send the Board of Directors a report describing the acts practiced in exercising their individual duties.

Chapter V – General Shareholders' Meetings

Article 39 – Ordinary General Shareholders' Meetings will take place annually, within the timeframe stipulated in article 132 of Law 6,404 of 1976, at the location, date and time previously established by the Board of Directors, to decide on matters for which it is responsible, especially the following:

- I** - Analyze the management's accounts, and examine, discuss and vote on the financial statements;
- II** - Decide on the allocation of net earnings in the financial year and the distribution of dividends;
- III** - Elect members of the Board of Directors and Audit Council.

Article 40 – Extraordinary General Shareholders' Meetings, in addition to the cases established by law, will take place when convened by the Board of Directors, to decide on subjects of interest to the Company, especially the following:

- I** - Amendments to the Bylaws;
- II** - Changes to the capital stock;
- III** - Evaluations of the assets contributed by shareholders to increase the capital stock;
- IV** - The issuing of debentures convertible into shares or their sale when in the treasury;
- V** - The incorporation of the Company into another company, or its dissolution, transformation, division or merger;
- VI** - The Company's participation in groups of companies;
- VII** - Disposal of control of the capital of the Company's wholly owned subsidiaries;
- VIII** - Removal of members of the Board of Directors;
- IX** - The disposal of debentures convertible into shares that belong to the Company and were issued by its wholly owned subsidiaries and controlled companies;
- X** - Cancellation of the Company's registration as a publicly held company;
- XI** - The choice of a specialist company from among a three-company list presented by the Board of Directors to prepare an appraisal report for its shares according to their respective financial value, to be used in cases of the cancellation of the Company's registration as a publicly held Company or deviations from standard corporate governance rules defined by a stock exchange or over-the-counter market entity registered with the Brazilian Securities and Exchange Commission (CVM), in order to comply with the rules established in the pertinent regulations for differentiated corporate governance practices issued by such entities, and in accordance with any contracts between Petrobras and such entities;
- XII** - Waivers of the right to subscribe to shares or debentures convertible into shares of wholly owned subsidiaries, controlled companies or affiliates;
- XIII** - Approval of the requirements of the Appointment Policy in addition to those within the applicable legislation for the member of the Board of Directors and of the Audit Committee.



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Section 1 – Decisions on the subjects specified in part XI of this article must be taken by absolute majority vote of outstanding common shares, not counting blank votes.

Section 2 – In the event of a public share offer filed by the controlling shareholder, the latter will pay for the costs of producing the appraisal report.

Article 41 – Every year, the General Shareholders' Meeting will determine the overall or individual total for officers' remuneration, as well as their profit-sharing limits, in accordance with specific legislation, and for the members of the Board of Directors' Advisory Committees.

Article 42 – General Shareholders' Meetings will be chaired by the Company's Chief Executive Officer or the substitute he may designate, and in the absence of both, by a shareholder chosen by a majority vote of those present.

Sole paragraph: The chairman of a General Shareholders' Meeting will choose the secretary of the meeting from among the shareholders present.

Chapter VI – Audit Council

Article 43 – The Audit Board, of a permanent status, comprises up to five members and their respective deputies elected by the Regular General Meeting, all of whom residing in the country, in compliance with the requirements and impediments set forth in the Joint Stock Company Law, either shareholders or not, one of whom shall be elected by the holders of the minority common shares and another by the holders of the preferred shares in a separate voting procedure.

Section 1 – One of the members of the Audit Council will be appointed by the Finance Minister, as the representative of the National Treasury.

Section 2 – In the event of a vacancy, resignation, impediment or unjustified absence at two consecutive meetings, the member of the Audit Council in question will be replaced, until the end of his term, by the respective alternate member.

Section 3 – The members of the Audit Council will be installed in their offices by signing the declaration of acceptance of office in the book of minutes and opinions of the Audit Council. This declaration of acceptance of office will declare: (i) acceptance of contracts that may be entered into by Petrobras with stock exchanges or over-the-counter market entities registered with the Brazilian Securities and Exchange Commission, in order to adopt the corporate governance standards established by these entities, accepting responsibility for compliance with these contracts and the respective regulations for differentiated corporate governance practices, if applicable; and (ii) acceptance of the terms of the arbitration clause set forth in article 58 of these Bylaws.

Article 44 – The term of office of the members of the Audit Council is 1(one) year with two (2) consecutive re-elections allowed

Article 45 – The remuneration of members of the Audit Council, in addition to the mandatory reimbursement of travel and accommodation expenses necessary to perform their function, will be determined by the General Shareholders' Meeting that elects them, within the limit established in Law 9,292 of 1996.

Article 46 – Without prejudice to the other duties assigned through legal provisions or decisions of General Shareholders' Meetings, the Audit Council will:

- I** - inspect, by any of its members, the acts of managers and verify compliance with their legal and statutory duties;
- II** - express its opinion on the management's annual report and give its opinion on the complementary information it deems necessary or useful for General Shareholders' Meeting decision making;
- III** - express its opinion on the management's proposals, to be submitted to General Shareholders' Meetings, regarding changes to the capital stock, the issuing of debentures or subscription bonds, investment plans or capital budgets, the distribution of dividends, and the transformation, incorporation, merger or division of the Company;



IV - denounce mistakes, fraud or crimes that are uncovered by any of its members to the management bodies, and if the latter do not take the necessary measures to protect the Company's interests, to a General Shareholders' Meeting, and suggest useful measures to the Company;

V - convene an Ordinary General Shareholders' Meeting if the management are more than one month late in convening it, and an Extraordinary Meeting whenever serious or urgent facts occur, including subjects deemed necessary on the meeting agenda;

VI - analyze, at least quarterly, the balance sheet and other financial statements produced periodically by the Executive Board;

VII - examine the financial statements of the financial year and give its opinion on them;

VIII - perform these duties during liquidation.

Sole paragraph: The members of the Audit Council are obliged to participate in the meetings of the Board of Directors at which the subjects referred to in parts II, III and VII of this article will be examined.

Chapter VII – Company Employees

Article 47 – Petrobras employees are subject to labor legislation and the Company's internal rules, as well as the legal rules applicable to the employees of partially stated-owned companies.

Article 48 – The admission of employees by Petrobras and its wholly owned subsidiaries and controlled companies will follow the public selection process, under the terms approved by the Executive Board.

Article 49 – The functions of senior management and responsibilities of the respective incumbents will be defined in the Company's Basic Organizational Plan.

Section 1 – The functions referred to at the start of this article, reporting to the Board of Directors, may in exceptional cases, and at the discretion of the Board of Directors, be assigned to technicians or specialists who are not part of the Company's permanent staff, through contracts freely allowing appointment and dismissal.

Section 2 – The functions referred to at the start of this article, reporting to the Executive Board or its members, may in exceptional cases, if proposed and justified by the Executive Board and approved by the Board of Directors, be assigned to technicians or specialists who are not part of the Company's permanent staff, through contracts freely allowing appointment and dismissal.

Section 3 – The managerial duties that shall integrate the organizational structure of the Company at all other levels shall be vested with the responsibilities of the holders as defined in the rules of the respective bodies

Article 50 – Without prejudice to legal requirements, the loaning out of employees of Petrobras and its wholly owned subsidiaries or controlled companies will depend on authorization, in each case, from the Executive Board, and it will take place, whenever possible, through reimbursement of the corresponding costs.

Article 51 – The Company will assign a share of its annual earnings to be distributed among its employees, in line with the criteria approved by the Board of Directors and prevailing legislation.

Chapter VIII – General Provisions

Article 52 – The activities of Petrobras shall comply with the Basic Organizational Plan approved by the Board of Directors and shall have, among others, the organizational model and shall establish the nature and the assignments of each unit of the general structure and reporting relationships for the operation of Petrobras in accordance with this Bylaws



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Article 53 – The financial year will coincide with the calendar year, ending on December 31 of each year, when the balance sheet and other financial statements will be produced, in line with applicable legal provisions.

Sole paragraph: The Company may produce half-yearly financial statements, for the payment of dividends or additional payments on shareholders' equity, if so decided by the Board of Directors.

Article 54 – Regarding resources transferred by the Federal Government or deposited by minority shareholders in order to expand the Company's capital stock, financial charges equivalent to the SELIC benchmark interest rate will be added from the date of transfer until the date of capitalization.

Article 55 – From the net earnings posted in its annual financial statements, Petrobras will assign a minimum of 0.5% (five-tenth percent) of its paid-in capital stock to constitute a special reserve to cover the cost of the Company's technological research and development programs.

Sole paragraph: The accrued balance of the reserve provided for in this article may not exceed 5% (five percent) of the paid-in capital stock.

Article 56 – After the distribution of the minimum dividend provided for in article 8 of these Bylaws has been determined, the General Shareholders' Meeting may, in accordance with corporate law and specific federal regulations, award percentages or bonuses to the members of the Company's Executive Board as variable remuneration.

Article 57 – The Executive Board may authorize the practice of reasonable free acts to benefit employees or the community in which the company participates, including the donation of goods that are no longer of use, in light of its social responsibilities, as provided for in Section of article 154 of Law 6,404 of 1976.

Article 58 – Disputes or controversies involving the Company, its shareholders, managers and members of the Audit Council must be resolved through arbitration, according to the rules of the Market Arbitration Chamber, in order to apply the provisions contained in Law 6,404 of 1976, these Bylaws, and the rules issued by the National Monetary Council, Central Bank of Brazil and Brazilian Securities and Exchange Commission, as well as all other rules applicable to the operation of the capital markets in general, in addition to those contained in the contracts Petrobras may enter into with a stock exchange or over-the-counter market entity registered with the Brazilian Securities and Exchange Commission, to adopt corporate governance standards established by these entities and respective rules on differentiated corporate governance practices, if applicable.

Sole paragraph: The decisions taken by the Federal Government, through votes at General Shareholders' Meetings, aimed at guiding the Company's business, pursuant to article 238 of Law 6,404 of 1976, are considered forms of exercising indispensable rights and they will not be subject to the arbitration procedure provided for at the start of this article.

Article 59 – Contracts entered into by Petrobras to acquire goods and services will be preceded by a simplified bidding procedure, as defined in the regulations approved by Decree 2,745 of August 24, 1998.

Article 60 – In order to help prepare its proposals to participate in tenders that precede the concessions referred to in Law 9,478 of 1997, Petrobras may sign pre-contractual agreements, by issuing invitation letters, ensuring prices and commitments for the supply of goods and services.

Sole paragraph: These pre-contractual agreements will contain a termination clause by operation of law, to be exercised without penalty or compensation of any kind in the event that another bidder is declared the winner, and they will subsequently be submitted to external oversight and inspection bodies for examination.



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PETROBRAS 20F
FORM 20-F

Donnelley Financial

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Exhibit 2.90

EIGHTH SUPPLEMENTAL INDENTURE

EIGHTH SUPPLEMENTAL INDENTURE, dated as of July 13, 2016, by and among PETROBRAS GLOBAL FINANCE B.V., a private company incorporated with limited liability under the laws of The Netherlands (the “Company”), having its corporate seat at Rotterdam, The Netherlands and its principal office at Weena 762, 3014 DA Rotterdam, The Netherlands, PETRÓLEO BRASILEIRO S.A. – Petrobras, a mixed capital company (*sociedade de economia mista*) organized under the laws of Brazil, having its principal office at Avenida República do Chile, 65, 20035-900 Rio de Janeiro – RJ, Brazil (“Petrobras”), and THE BANK OF NEW YORK MELLON, a New York banking corporation, as Trustee hereunder (the “Trustee”).

WITNESSETH:

WHEREAS, Petrobras International Finance Company S.A. (“PifCo”) and the Trustee previously have entered into an indenture, dated as of July 19, 2002 (the “Base Indenture”);

WHEREAS, the Base Indenture was supplemented by each of (i) the amended and restated third supplemental indenture, dated as of March 25, 2013 (the “Amended and Restated Third Supplemental Indenture”) with respect to the U.S.\$750,000,000 8.375% Global Notes due 2018 (the “Notes”); (ii) the sixth supplemental indenture, dated as of February 10, 2012 (the “Sixth Supplemental Indenture”); and (iii) the seventh supplemental indenture, dated as of December 28, 2014 (the “Seventh Supplemental Indenture,” and together with the Amended and Restated Third Supplemental Indenture and the Sixth Supplemental Indenture, the “Supplemental Indentures,” and the Base Indenture as supplemented by the Supplemental Indentures, the “Indenture”), pursuant to which the Company assumed, as primary obligor, all of the obligations of PifCo under the Indenture;

WHEREAS, the Company has distributed an Offer to Purchase and Consent Solicitation Statement, dated as of May 17, 2016 (the “Statement”), with an accompanying Consent and Letter of Transmittal (“Consent and Letter of Transmittal”), to holders of the Notes in connection with the solicitation of such holders’ consent to certain proposed amendments to the Indenture;

WHEREAS, pursuant to Section 9.02 of the Base Indenture, the Company and the Trustee, with the consent of the Holders of not less than a majority in principal amount of the outstanding Notes, by Act of said Holders delivered to the Company and the Trustee, the Company, when authorized by a Board Resolution, and the Trustee may enter into indentures supplemental to the Indenture for the purpose of adding, changing or eliminating certain provisions of the Indenture;

WHEREAS, having obtained the consent of the Holders of not less than a majority in principal amount of the outstanding Notes, the Company and Petrobras desire to further supplement the Indenture by means of an eighth supplemental indenture dated the date hereof (this “Eighth Supplemental Indenture”) in order to delete certain provisions in the Base Indenture as such provisions apply to the Notes;



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WHEREAS, the Company and Petrobras confirm that any and all conditions and requirements necessary to make this Eighth Supplemental Indenture a valid and binding instrument in accordance with the terms of the Indenture have been performed and fulfilled and the execution and delivery of this Eighth Supplemental Indenture has been in all respects duly authorized; and

WHEREAS, the Company and Petrobras have requested that the Trustee execute and deliver this Eighth Supplemental Indenture.

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants contained herein and in the Indenture and for other good and valuable consideration, the receipt and sufficiency of which are herein acknowledged, the Company, Petrobras and the Trustee hereby agree, for the equal and ratable benefit of all Holders, as follows:

ARTICLE 1

DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION

Section 1.01. *Capitalized Terms*. All capitalized terms used but not defined herein shall have the meanings ascribed to such terms in the Indenture. All definitions in the Indenture shall be read in a manner consistent with the terms of this Eighth Supplemental Indenture.

Section 1.02. *Definition*. When used herein, "Tender Offer Completion Event" shall mean such time as each of the following events shall have occurred: (i) the Company shall have completed (and not terminated) the offer to purchase Notes in accordance with the terms and conditions set forth in the Statement and the Consent and Letter of Transmittal and (ii) each holder of Notes that has tendered its Notes pursuant to such offer to purchase shall have received payment for any Notes accepted for purchase pursuant to such offer to purchase.

ARTICLE 2

AMENDMENTS TO INDENTURE AND CONFORMING CHANGES

Section 2.01. *Amendments*. Effective upon the occurrence of the Tender Offer Completion Event and without any further action by any party hereto, the Indenture is hereby amended solely as it applies to the Notes as follows:

(a) the text of each of the following Sections of the Base Indenture (as each such section may have been amended or supplemented pursuant to the Supplemental Indentures), shall be deleted in its entirety and replaced, in each case, by the words "[Intentionally Omitted]":

- Section 10.02 (*Performance under this Indenture*);
- Section 10.04 (*Maintenance of Properties*);
- Section 10.05 (*Compliance with Laws*);



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- Section 10.06 (*Maintenance of Government Approvals*);
- Section 10.08 (*Maintenance of Insurance*);
- Section 10.09 (*Maintenance of Books and Records*);
- Section 10.15 (*Further Actions*);
- Section 10.20 (*Negative Pledge*); and
- Section 10.21 (*Transactions with Affiliates*);

(b) Section 1.01 of the Base Indenture (as such section may have been amended or supplemented pursuant to the Supplemental Indentures) shall be amended by deleting the definition of each term that is used in the Indenture only in the sections or subsections thereof that are deleted pursuant to Section 2.01(a) hereof.

(c) Any and all references in the Indenture to the sections in the Base Indenture (as such sections may have been amended or supplemented pursuant to the Supplemental Indentures) that are deleted pursuant to Section 2.01(a) hereof shall also be deleted in their entirety.

Section 2.02. Effective upon the occurrence of the Tender Offer Completion Event and without any further action by any party hereto, any provision contained in each Global Security representing the Notes that relates to the sections in the Base Indenture (as such sections may have been amended or supplemented pursuant to the Supplemental Indentures) that are deleted pursuant to Section 2.01(a) hereof shall likewise be deleted or amended so that any such provision contained in such Global Security will conform to and be consistent with the Indenture, as amended by this Eighth Supplemental Indenture.

ARTICLE 3

MISCELLANEOUS

Section 3.01. *Effect of the Eighth Supplemental Indenture.* This Eighth Supplemental Indenture supplements the Indenture and shall be a part, and subject to all the terms, thereof. The Indenture, as supplemented and amended by this Eighth Supplemental Indenture, is in all respects ratified and confirmed, and the Indenture and this Eighth Supplemental Indenture shall be read, taken and construed as one and the same instrument. All provisions included in this Eighth Supplemental Indenture supersede any conflicting provisions included in the Base Indenture and the Supplemental Indentures unless not permitted by law. The Trustee accepts the trusts created by the Indenture, as supplemented by this Eighth Supplemental Indenture, and agrees to perform the same upon the terms and conditions of the Indenture, as supplemented by this Eighth Supplemental Indenture.

Section 3.02. *Governing Law.* This Eighth Supplemental Indenture shall be governed by, and construed in accordance with, the laws of the State of New York.



Section 3.03. *Trustee Makes No Representation.* The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity, enforceability or sufficiency of this Eighth Supplemental Indenture or for or in respect of the recitals contained herein, all of which are made solely by the Company and Petrobras.

Section 3.04. *Effect of Headings.* The section headings herein are for convenience only and shall not affect the construction of this Eighth Supplemental Indenture.

Section 3.05. *Counterparts.* The parties may sign any number of copies of this Eighth Supplemental Indenture. Each signed copy shall be an original, but all of them shall represent the same agreement.

Section 3.06. Additional Trustee Provisions.

(a) The permissive rights of the Trustee enumerated herein shall not be construed as duties.

(b) In no event shall the Trustee be responsible or liable for special, indirect, punitive or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action.

(c) Notwithstanding anything herein to the contrary neither the Trustee nor any of its the agents shall incur any liability for not performing any act or fulfilling any duty, obligation or responsibility hereunder by reason of any occurrence beyond the control of the Trustee or its respective agent, as applicable, (including but not limited to any act or provision of any present or future law or regulation or governmental authority, any act of God or war, civil unrest, local or national disturbance or disaster, any act of terrorism, fire, riot, strikes or work stoppages for any reason, embargos, government action or the unavailability of the Federal Reserve Bank wire or facsimile or other wire or communication facility).

Section 3.07. *Waiver of Jury Trial.* EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THE INDENTURE, AS SUPPLEMENTED BY THIS EIGHTH SUPPLEMENTAL INDENTURE.

[SIGNATURES ON THE FOLLOWING PAGES]



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IN WITNESS WHEREOF, the parties have caused this Eighth Supplemental Indenture to be duly executed by their respective officers thereunto duly authorized as of the day and year first above written.

PETROBRAS GLOBAL FINANCE B.V.

By: /s/ Bianca Nasser Patrocínio

Name: Bianca Nasser Patrocínio

Title: Corporate Finance Manager

PETRÓLEO BRASILEIRO S.A. – PETROBRAS

By: /s/ Gustavo Tardin Barbosa

Name: Gustavo Tardin Barbosa

Title: Financial Executive Manager

WITNESSES:

1. /s/ Guilherme Rajime T.Saraiva

Name: Guilherme Rajime T.Saraiva

2. /s/ Renan Feuchard Pinto

Name: Renan Feuchard Pinto



THE BANK OF NEW YORK MELLON, as Trustee

By: /s/ Catherine F. Donohue
Name: Catherine F. Donohue
Title: Vice President

WITNESSES:

1. /s/ Elizabeth Stern
Name: Elizabeth Stern

2. /s/ James Briggs
Name: James Briggs



STATE OF NEW YORK)
) ss:
COUNTY OF NEW YORK)

On this 13 day of July 2016, before me, a notary public within and for said county, personally appeared Catherine F. Donohue, to me personally known, who being duly sworn, did say that she is a Vice President of The Bank of New York Mellon, one of the persons described in and which executed the foregoing instrument, and acknowledges said instrument to be the free act and deed of said entity.

On this 13 day of July 2016, before me personally came Elizabeth Stern and James Briggs to me personally known, who being duly sworn, did say that they signed their names to the foregoing instrument as witnesses.

[Notarial Seal]

/s/ Christopher J. Traina

Notary Public
COMMISSION EXPIRES



Exhibit 2.91

SECOND AMENDMENT TO THE GUARANTY

SECOND AMENDMENT, dated as of July 13, 2016 (the “Second Amendment”) to the Guaranty (as defined below), by and between PETRÓLEO BRASILEIRO S.A.—PETROBRAS (the “Guarantor”), a *sociedade de economia mista* organized and existing under the laws of the Federative Republic of Brazil (“Brazil”), and THE BANK OF NEW YORK MELLON, a New York banking corporation (the “Trustee”), as trustee for the holders of Notes (as defined below) issued by Petrobras Global Finance B.V., a private company incorporated with limited liability under the laws of The Netherlands (the “Issuer”), having its corporate seat at Rotterdam, The Netherlands and its principal office at Weena 762, 3014 DA Rotterdam, The Netherlands, pursuant an indenture, dated as of July 19, 2002 (as amended or supplemented as of the date hereof, the “Indenture”). Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to such terms in the Guaranty.

WITNESSETH:

WHEREAS, the Guarantor and the Trustee have entered into an amended and restated guaranty, dated as of February 10, 2012 (the “Original Guaranty”) with respect to the U.S.\$750,000,000 aggregate principal amount of 8.375% Global Notes due 2018 (the “Notes”);

WHEREAS, the Original Guaranty was amended by a first amendment to the guaranties, dated as of December 28, 2014 (the Original Guaranty as so amended, the “Guaranty”);

WHEREAS, the Issuer has distributed an Offer to Purchase and Consent Solicitation Statement, dated as of May 17, 2016 (the “Statement”), with an accompanying Consent and Letter of Transmittal (“Consent and Letter of Transmittal”), to holders of the Notes in connection with the solicitation of such holders’ consent to certain proposed amendments to the Original Guaranty;

WHEREAS, pursuant to Section 9 of the Original Guaranty and Section 9.02 of the Base Indenture, the Guarantor and the Trustee, with the consent of the Holders of not less than a majority in principal amount of the outstanding Notes, by Act of said Holders delivered to the Issuer and the Trustee, the Guarantor and the Trustee may enter into amendments to the Guaranty for the purpose of adding, changing or eliminating certain provisions of the Guaranty;

WHEREAS, having obtained the consent of the Holders of not less than a majority in principal amount of the outstanding Notes, the Guarantor desires to further amend the Guaranty by means of this Second Amendment in order to delete certain provisions in the Original Guaranty as such provisions apply to the Notes.

WHEREAS, the Guarantor confirms that any and all conditions and requirements necessary to make this Second Amendment a valid and binding instrument in accordance with the terms of the Guaranty have been performed and fulfilled and the execution and delivery of this Second Amendment has been in all respects duly authorized; and

WHEREAS, the Issuer and the Guarantor have requested that the Trustee execute and deliver this Second Amendment.



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NOW, THEREFORE, for and in consideration of the premises and the mutual covenants contained herein and in the Guaranty and for other good and valuable consideration, the receipt and sufficiency of which are herein acknowledged, the Guarantor and the Trustee hereby agree, for the equal and ratable benefit of all Holders, as follows:

ARTICLE 1

DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION

Section 1.01. *Capitalized Terms*. All capitalized terms used but not defined herein shall have the meanings ascribed to such terms in the Guaranty and, to the extent not defined in the Guaranty, such terms shall have the meanings ascribed to them in the Indenture. All definitions in the Guaranty shall be read in a manner consistent with the terms of this Second Amendment.

Section 1.02. *Definition*. When used herein, “Tender Offer Completion Event” shall mean such time as each of the following events shall have occurred: (i) the Issuer shall have completed (and not terminated) the offer to purchase Notes in accordance with the terms and conditions set forth in the Statement and the Consent and Letter of Transmittal, and (ii) each holder of Notes that has tendered its Notes pursuant to such offer to purchase shall have received payment for any Notes accepted for purchase pursuant to such offer to purchase.

ARTICLE 2

AMENDMENTS TO GUARANTY AND CONFORMING CHANGES

Section 2.01. *Amendments*. Effective upon the occurrence of the Tender Offer Completion Event and without any further action by any party hereto, the Guaranty is hereby amended solely as it applies to the Notes as follows:

(a) the text of each of the following Sections of the Original Guaranty (as each such Section may have been amended prior to the date hereof), shall be deleted in its entirety and replaced, in each case, by the words “[Intentionally Omitted]”:

- Section 8(a) (*Performance of Obligations*);
- Section 8(c) (*Maintenance of Properties*);
- Section 8(d) (*Compliance with Laws and Agreements*);
- Section 8(e) (*Maintenance of Government Approvals*);
- Section 8(h) (*Maintenance of Insurance*);
- Section 8(i) (*Maintenance of Books and Records*);
- Section 8(n) (*Negative Pledge*);
- Section 8(o) (*Transactions with Affiliates*); and
- Section 8(q) (*Further Actions*).



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(b) Section 1 of the Original Guaranty (as such section may have been amended prior to the date hereof) shall be amended by deleting the definition of each term that is used in the Guaranty only in the sections or subsections thereof that are deleted pursuant to Section 2.01(a) hereof.

(c) Any and all references in the Guaranty to the sections in the Original Guaranty (as such sections may have been amended prior to the date hereof) that are deleted pursuant to Section 2.01(a) hereof shall also be deleted in their entirety.

ARTICLE 3

MISCELLANEOUS

Section 3.01. *Effect of the Second Amendment.* This Second Amendment amends the Guaranty and shall be a part, and subject to all the terms, thereof. The Guaranty, as amended by this Second Amendment, is in all respects ratified and confirmed, and the Guaranty and this Second Amendment shall be read, taken and construed as one and the same instrument. All provisions included in this Second Amendment supersede any conflicting provisions included in the Guaranty unless not permitted by law. The Trustee accepts the obligations created by the Guaranty, as amended by this Second Amendment, and agrees to perform the same upon the terms and conditions of the Guaranty, as amended by this Second Amendment.

Section 3.02. *Governing Law.* This Second Amendment shall be governed by, and construed in accordance with, the laws of the State of New York.

Section 3.03. *Trustee Makes No Representation.* The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity, enforceability or sufficiency of this Second Amendment or for or in respect of the recitals contained herein, all of which are made solely by the Guarantor.

Section 3.04. *Effect of Headings.* The section headings herein are for convenience only and shall not affect the construction of this Second Amendment.

Section 3.05. *Counterparts.* The parties may sign any number of copies of this Second Amendment. Each signed copy shall be an original, but all of them shall represent the same agreement.

Section 3.06. *Additional Trustee Provisions.*

(a) The permissive rights of the Trustee enumerated herein shall not be construed as duties.

(b) In no event shall the Trustee be responsible or liable for special, indirect, punitive or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action.



(c) Notwithstanding anything herein to the contrary neither the Trustee nor any of its the agents shall incur any liability for not performing any act or fulfilling any duty, obligation or responsibility hereunder by reason of any occurrence beyond the control of the Trustee or its respective agent, as applicable, (including but not limited to any act or provision of any present or future law or regulation or governmental authority, any act of God or war, civil unrest, local or national disturbance or disaster, any act of terrorism, fire, riot, strikes or work stoppages for any reason, embargos, government action or the unavailability of the Federal Reserve Bank wire or facsimile or other wire or communication facility).

Section 3.07. *Waiver of Jury Trial.* EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THE GUARANTY, AS AMENDED BY THIS SECOND AMENDMENT.

[SIGNATURES ON THE FOLLOWING PAGES]



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IN WITNESS WHEREOF, the parties have caused this Second Amendment to be duly executed by their respective officers thereunto duly authorized as of the day and year first above written.

PETRÓLEO BRASILEIRO S.A. – PETROBRAS

By: /s/ Gustavo Tardin Barbosa

Name: Gustavo Tardin Barbosa

Title: Financial Executive Manager

WITNESSES:

1. /s/ Guilherme Rajime T. Saraiva

Name: Guilherme Rajime T. Saraiva

2. /s/ Renan Feuchard Pinto

Name: Renan Feuchard Pinto



THE BANK OF NEW YORK MELLON, as Trustee.

By: /s/ Catherine F. Donohue
Name: Catherine F. Donohue
Title: Vice President

WITNESSES:

1. /s/ Elizabeth Stern
Name: Elizabeth Stern

2. /s/ James Briggs
Name: James Briggs



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Exhibit 8.1

Subsidiaries	Total Capital	Voting Capital	Country of Incorporation	Activity
Petrobras Netherlands B.V.—PNBV (i)	100.00%	100.00%	Netherlands	E&P
Petrobras International Braspetro—PIB BV (i) (ii) (iii)	99.99%	99.99%	Netherlands	Several segments
Transportadora Associada de Gás S.A.—TAG	100.00%	100.00%	Brazil	Gas & Power
Petrobras Distribuidora S.A.—BR	100.00%	100.00%	Brazil	Distribution
Petrobras Logística de Exploração e Produção S.A.—PB-LOG	100.00%	100.00%	Brazil	E&P
Nova Transportadora do Sudeste S.A.—NTS	100.00%	100.00%	Brazil	Gas & Power
Petrobras Transporte S.A.—Transpetro	100.00%	100.00%	Brazil	RT&M
Petrobras Gás S.A.—Gaspetro	51.00%	51.00%	Brazil	Gas & Power
Petrobras Biocombustível S.A.	100.00%	100.00%	Brazil	Biofuels
Petrobras Logística de Gás—Logigás	100.00%	100.00%	Brazil	Gas & Power
Liquigás Distribuidora S.A.	100.00%	100.00%	Brazil	RT&M
Termomacaé Ltda.	99.99%	99.99%	Brazil	Gas & Power
Breitener Energética S.A.	93.66%	93.66%	Brazil	Gas & Power
Termobahia S.A.	98.85%	98.85%	Brazil	Gas & Power
Braspetro Oil Services Company—Brasoil (i)	100.00%	100.00%	Cayman Islands	Corporate
Baixada Santista Energia S.A.	100.00%	100.00%	Brazil	Gas & Power
Araucária Nitrogenados S.A.	100.00%	100.00%	Brazil	Gas & Power
Fundo de Investimento Imobiliário RB Logística—FII	99.20%	99.20%	Brazil	E&P
Petrobras Comercializadora de Energia Ltda.—PBEN	99.91%	99.91%	Brazil	Gas & Power
Petrobras Negócios Eletrônicos S.A.—E-Petro	99.95%	99.95%	Brazil	Corporate
Termomacaé Comercializadora de Energia Ltda	99.99%	99.99%	Brazil	Gas & Power
Downstream Participações Ltda.	99.99%	99.99%	Brazil	Corporate
5283 Participações Ltda.	100.00%	100.00%	Brazil	Corporate
Companhia Integrada Têxtil de Pernambuco S.A.—CITEPE	100.00%	100.00%	Brazil	RT&M
Companhia Petroquímica de Pernambuco S.A.—PetroquímicaSuape	100.00%	100.00%	Brazil	RT&M
Joint Operations	Total Capital	Voting Capital	Country of Incorporation	Activity
Fábrica Carioca de Catalizadores S.A.—FCC	50.00%	50.00%	Brazil	RT&M
Ibiritermo S.A.	50.00%	50.00%	Brazil	Gas & Power
Consolidated Structured Entities	Total Capital	Voting Capital	Country of Incorporation	Activity
Charter Development LLC – CDC (i)	0.00%	0.00%	U.S.A.	E&P
Companhia de Desenvolvimento e Modernização de Plantas Industriais – CDMPI	0.00%	0.00%	Brazil	RT&M
PDET Offshore S.A.	0.00%	0.00%	Brazil	E&P
Fundo de Investimento em Direitos Creditórios Não-padronizados do Sistema Petrobras	0.00%	0.00%	Brazil	Corporate
Fundo de Investimento em Direitos Creditórios Padronizados do Sistema Petrobras	0.00%	0.00%	Brazil	Corporate

(i) Companies abroad with financial statements prepared in foreign currencies.

(ii) 5283 Participações Ltda holds 0.0050% interest.

(iii) Cover activities abroad in E&P, RTM, Gas & Power and Distribution segments.



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Exhibit 12.1

**CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) AS ADOPTED
UNDER SECTION 302 OF THE SARBANES-OXLEY ACT**

I, Pedro Pullen Parente, certify that:

1. I have reviewed this annual report on Form 20-F of Petróleo Brasileiro S.A. – PETROBRAS (the “Company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The Company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of the Company’s board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: April 26, 2017

/s/ Pedro Pullen Parente

Pedro Pullen Parente
Chief Executive Officer



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**CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a) AS ADOPTED
UNDER SECTION 302 OF THE SARBANES-OXLEY ACT**

I, Ivan de Souza Monteiro, certify that:

1. I have reviewed this annual report on Form 20-F of Petróleo Brasileiro S.A. – PETROBRAS (the “Company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The Company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of the Company’s board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: April 26, 2017

/s/ Ivan de Souza Monteiro

Ivan de Souza Monteiro

Chief Financial Officer and Chief Investor Relations Officer



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Exhibit 13.1

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT**

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), the undersigned officer of Petróleo Brasileiro S.A.—PETROBRAS (the “Company”), does hereby certify, to such officer’s knowledge, that:

The Annual Report on Form 20-F for the year ended December 31, 2016 of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 20-F fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Pedro Pullen Parente

Date: April 26, 2017

Pedro Pullen Parente
Chief Executive Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.



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PETROBRAS 20F
FORM 20-F

Donnelley Financial

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**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT**

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), the undersigned officer of Petróleo Brasileiro S.A.—PETROBRAS (the “Company”), does hereby certify, to such officer’s knowledge, that:

The Annual Report on Form 20-F for the year ended December 31, 2016 of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 20-F fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Ivan de Souza Monteiro

Date: April 26, 2017

Ivan de Souza Monteiro

Chief Financial Officer and Chief Investor Relations Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.



Exhibit 15.1

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statement on Form F-3 (No. 333-206660) of Petróleo Brasileiro S.A.—Petrobras and Petrobras Global Finance B.V. (No. 333-206660-01) of our report dated April 26, 2017 relating to the financial statements and the effectiveness of internal control over financial reporting of Petrobras, which appears in this Annual Report on Form 20-F. We also consent to the reference to us under heading “Selected Financial Data” in such form 20-F.

/s/ PricewaterhouseCoopers Auditores Independentes
PricewaterhouseCoopers Auditores Independentes

Rio de Janeiro—Brazil
April 26, 2017



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PETROBRAS 20F
FORM 20-F

Donnelley Financial

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Exhibit 15.2**DeGolyer and MacNaughton**5001 Spring Valley Road
Suite 800 East
Dallas, Texas 75244

April 4, 2017

Petróleo Brasileiro S.A.
Av. República do Chile 330
9th Floor – Centro
CEP 20031-170
Rio de Janeiro – RJ – Brazil

Ladies and Gentlemen:

We hereby consent to the references to DeGolyer and MacNaughton as set forth under the headings “Glossary of Certain Terms Used in this Annual Report,” “Presentation of Information Concerning Reserves,” “Item 4. Information on the Company—Additional Reserves and Production Information—Internal Controls over Proved Reserves,” and “Item 19—Exhibits” in the Annual Report on Form 20-F of Petróleo Brasileiro S.A.—Petrobras (Petrobras) for the year ended December 31, 2016 (the Annual Report). We further consent to the inclusion of our two third-party letter reports dated March 6, 2017 (our Reports), as Exhibit 99.1 in the Annual Report. The first third-party letter report dated March 6, 2017, contains our opinions regarding a comparison of estimates prepared by us with those furnished to us by Petrobras of the net proved crude oil, condensate, natural gas, and oil equivalent reserves, as of December 31, 2016, of certain properties that Petrobras has represented that it owns onshore and offshore Brazil. The second third-party letter report dated March 6, 2017, contains our opinions regarding a comparison of estimates prepared by us with those furnished to us by Petrobras of the net proved crude oil, condensate, natural gas, and oil equivalent reserves as of December 31, 2016, of certain properties that Petrobras has represented that it owns in the United States Gulf of Mexico.

We further consent to the references to our firm as set forth in the Registration Statement on Form F-3, Registration Nos. 333-206660 and 333-206660-01, of Petróleo Brasileiro S.A.—Petrobras and Petrobras Global Finance B.V. under the heading “Experts,” and to the incorporation by reference to the other references to our firm contained in the Annual Report of Petrobras on Form 20-F for the year ended December 31, 2016, under the headings “Glossary of Certain Terms Used in this Annual Report,” “Presentation of Information Concerning Reserves,” “Item 4. Information on the Company—Additional Reserves and Production Information—Internal Controls over Proved Reserves,” and “Item 19—Exhibits,” and to the inclusion of our Reports as Exhibit 99.1 in the Annual Report.

Very truly yours,

/s/ DeGOLYER and MacNAUGHTON

DeGOLYER and MacNAUGHTON
Texas Registered Engineering Firm F-716



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PETROBRAS 20F
FORM 20-F

Donnelley Financial

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Exhibit 16.1**Letter Regarding Change in Certifying Accountant**

April 26, 2017

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Commissioners:

We have read the statements made by Petróleo Brasileiro S.A. (copy attached), which we understand will be filed with the Securities and Exchange Commission, pursuant to Item 16F of Form 20-F, as part of the Form 20-F of Petróleo Brasileiro S.A. dated April 26, 2017. We agree with the statements concerning our Firm in such Form 20-F.

Very truly yours,

/s/ PricewaterhouseCoopers Auditores Independentes
PricewaterhouseCoopers Auditores Independentes



Exhibit 99.1

DeGolyer and MacNaughton

5001 Spring Valley Road
Suite 800 East
Dallas, Texas 75244

March 6, 2017

Petróleo Brasileiro S.A.
Av. República do Chile 330
9th Floor – Centro
CEP 20031-170
Rio de Janeiro – RJ – Brazil

Ladies and Gentlemen:

Pursuant to your request, we have conducted a reserves audit of the net proved crude oil, condensate, and natural gas reserves, as of December 31, 2016, of certain properties in which Petróleo Brasileiro S.A. (Petrobras) has represented that it owns an interest. The properties are located in Brazil and offshore from Brazil. This audit was completed on March 6, 2017. Petrobras has represented that these properties account for 97 percent on a net equivalent barrel basis of Petrobras' net proved reserves as of December 31, 2016, and that the net proved reserves estimates have been prepared in accordance with the reserves definitions of Rules 4–10(a) (1)-(32) of Regulation S–X of the Securities and Exchange Commission (SEC) of the United States. We have reviewed information provided to us by Petrobras that it represents to be Petrobras' estimates of the net reserves, as of December 31, 2016, for the same properties as those which we audited. This report was prepared in accordance with guidelines specified in Item 1202 (a)(8) of Regulation S-K and is to be used for inclusion in certain SEC filings by Petrobras.

Reserves estimates included herein are expressed as net reserves as represented by Petrobras. Gross reserves are defined as the total estimated petroleum to be produced from these properties after December 31, 2016. Net reserves are defined as that portion of the gross reserves attributable to the interests owned by Petrobras after deducting all interests owned by others.

Estimates of oil, condensate, and natural gas reserves should be regarded only as estimates that may change as further production history and additional information become available. Not only are such reserves estimates based on that information which is currently available, but such estimates are also subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

Data used in this audit were obtained from reviews with Petrobras personnel, from Petrobras files, from records on file with the appropriate regulatory agencies, and from public sources. In the preparation of this report we have relied, without independent verification, upon such information furnished by Petrobras with respect to property interests, production from such properties, current costs of operation and development, current prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. A field examination of the properties was not considered necessary for the purposes of this report.

Methodology and Procedures

Estimates of reserves were prepared by the use of appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with practices generally recognized by the petroleum industry as presented in the publication of the Society of Petroleum Engineers entitled "Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (Revision as of February 19, 2007)." The method or combination of methods used in the analysis of each reservoir was tempered by experience with similar reservoirs, stage of development, quality and completeness of basic data, and production history.

Based on the current stage of field development, production performance, the development plans provided by Petrobras, and the analyses of areas offsetting existing wells with test or production data, reserves were classified as proved.

When applicable, the volumetric method was used to estimate the original oil in place (OOIP) and the original gas in place (OGIP). Structure and isopach maps were constructed to estimate reservoir volume. Electrical logs, radioactivity logs, core analyses, and other available data were used to prepare these maps as well as to estimate representative values for porosity and water saturation. When adequate data were available and when circumstances justified, material balance and other engineering methods were used to estimate OOIP or OGIP.



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DeGolyer and MacNaughton

Estimates of ultimate recovery were obtained after applying recovery factors to OOIP or OGIP. These recovery factors were based on consideration of the type of energy inherent in the reservoirs, analyses of the petroleum, the structural positions of the properties, and the production histories. When applicable, material balance and other engineering methods were used to estimate recovery factors. In such cases, an analysis of reservoir performance, including production rate, reservoir pressure, and gas-oil ratio behavior, was used in the estimation of reserves.

For depletion-type reservoirs or those whose performance disclosed a reliable decline in producing-rate trends or other diagnostic characteristics, reserves were estimated by the application of appropriate decline curves or other performance relationships. In the analyses of production-decline curves, reserves were estimated only to the limits of economic production or to the limit of the production licenses as appropriate.

Natural gas quantities estimated herein are marketable gas. Marketable gas is defined as the total gas to be produced from the reservoirs after reduction for injection, flare, and shrinkage resulting from field separation and processing. Gas reserves are expressed at a temperature base of 20 degrees Celsius and at a pressure base of 1 atmosphere. Oil and condensate reserves estimated herein are expressed in terms of 42 United States gallons per barrel and are to be recovered by normal field separation. For reporting purposes, oil and condensate reserves have been estimated separately and are presented herein as a summed quantity.

Definition of Reserves

Petroleum reserves estimated by Petrobras included in this report are classified as proved. Only proved reserves have been audited for this report. Reserves classifications used by Petrobras in this report are in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the SEC. Reserves are judged to be economically producible in future years from known reservoirs under existing economic and operating conditions and assuming continuation of current regulatory practices using conventional production methods and equipment. In the analyses of production-decline curves, reserves were estimated only to the limit of economic rates of production under existing economic and operating conditions using prices and costs consistent with the effective date of this report, including consideration of changes in existing prices provided only by contractual arrangements but not including escalations based upon future conditions. The petroleum reserves are classified as follows:

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

- (i) The area of the reservoir considered as proved includes:
 - (A) The area identified by drilling and limited by fluid contacts, if any, and (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.
- (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
- (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.
- (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
 - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and
 - (B) The project has been approved for development by all necessary parties and entities, including governmental entities.

DeGolyer and MacNaughton

- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be 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.

Developed oil and gas reserves – Developed oil and gas reserves are reserves of any category 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 by means not involving a well.

Undeveloped oil and gas reserves – Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

- (i) Reserves on undrilled acreage shall be 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.
- (ii) Undrilled locations can be 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.
- (iii) Under no circumstances shall estimates for undeveloped reserves be 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, as defined in section 210.4–10 (a) Definitions, or by other evidence using reliable technology establishing reasonable certainty.

Primary Economic Assumptions

The following economic assumptions were used for estimating existing and future prices and costs:

Oil and Condensate Prices

Petrobras has represented that the oil and condensate prices were based on a reference price, 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. Petrobras supplied differentials by field to a Brent reference price of U.S.\$43.61 per barrel and the prices were held constant thereafter. The volume-weighted average adjusted price attributable to estimated proved reserves for the fields that were audited was U.S.\$39.44 per barrel. These prices were not escalated for inflation.

Natural Gas Prices

Petrobras has represented that the natural gas prices were based on a 12-month average price, 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, unless prices are defined by contractual arrangements. The volume-weighted average adjusted price for the fields that were audited was U.S.\$6.97 per thousand cubic feet (Mcf). This price was based on contract prices and a 12-month average regulation price from the Brazilian National Petroleum Agency (ANP) of U.S.\$6.50 per Mcf. The ANP regulation prices were provided by Petrobras and are the prices disclosed by the ANP to upstream operators for payment of royalties and taxes. These prices were not escalated for inflation.

Operating Expenses, Capital Costs, and Abandonment Costs

Operating expenses and capital costs, based on information provided by Petrobras, were used in estimating future costs required to operate the properties. In certain cases, future costs, either higher or lower than existing costs, may have been used because of anticipated changes in operating conditions. These costs were not escalated for inflation. Abandonment costs were provided by Petrobras.

While the oil and gas industry may be subject to regulatory changes from time to time that could affect an industry participant's ability to recover its oil and gas reserves, we are not aware of any such governmental actions which would restrict the recovery of the December 31, 2016, estimated oil and gas reserves.

DeGolyer and MacNaughton

Petrobras has represented that its estimated net proved reserves attributable to the reviewed properties were based on the definitions of proved reserves of the SEC. Petrobras has represented that its estimates of the net proved reserves attributable to these properties, which represent 97 percent of Petrobras' reserves on a net equivalent basis, are summarized as follows, expressed in millions of barrels (MMbbl), billions of cubic feet (Bcf), and millions of barrels of oil equivalent (MMboe):

	Estimated by Petrobras Net Proved Reserves as of December 31, 2016		
	Oil and Condensate (MMbbl)	Natural Gas (Bcf)	Oil Equivalent (MMboe)
Reviewed by DeGolyer and MacNaughton Brazil			
Total Proved	7,882.8	7,514.4	9,221.0

Note: Gas is converted to oil equivalent using an energy equivalent factor of 5,615 cubic feet of gas per 1 barrel of oil equivalent.

In our opinion, the information relating to estimated proved reserves of oil, condensate, and gas contained in this report has been prepared in accordance with Paragraphs 932-235-50-7 and 932-235-50-9 of the Accounting Standards Update 932-235-50, *Extractive Industries – Oil and Gas (Topic 932): Oil and Gas Reserve Estimation and Disclosures* (January 2010) of the Financial Accounting Standards Board and Rules 4-10(a) (1)–(32) of Regulation S-X and Rules 302(b), 1201, and 1202 (3), (4), (8) of Regulation S-K of the Securities and Exchange Commission.

To the extent the above-enumerated rules, regulations, and statements require determinations of an accounting or legal nature, we, as engineers, are necessarily unable to express an opinion as to whether the above-described information is in accordance therewith or sufficient therefor.

In comparing the detailed net proved reserves estimates prepared by us and by Petrobras, we have found differences, both positive and negative, resulting in an aggregate difference of 2.0 percent when compared on the basis of net equivalent barrels. It is our opinion that the net proved reserves estimates prepared by Petrobras on the properties reviewed by us and referred to above, when compared on the basis of net equivalent barrels, in aggregate, do not differ materially from those prepared by us.

DeGolyer and MacNaughton is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1936. DeGolyer and MacNaughton does not have any financial interest, including stock ownership, in Petrobras. Our fees were not contingent on the results of our audit. This letter report has been prepared at the request of Petrobras. DeGolyer and MacNaughton has used all assumptions, data, procedures, and methods that it considers necessary and appropriate to prepare this report.

Submitted,

/s/ DeGOLYER and MacNAUGHTON

DeGOLYER and MacNAUGHTON
Texas Registered Engineering Firm F-716

/s/ Thomas C. Pence, P.E.

Thomas C. Pence, P.E.
Senior Vice President
DeGolyer and MacNaughton



DeGolyer and MacNaughton

CERTIFICATE of QUALIFICATION

I, Thomas C. Pence, Petroleum Engineer with DeGolyer and MacNaughton, 5001 Spring Valley Road, Suite 800 East, Dallas, Texas, 75244 U.S.A., hereby certify:

- 1. That I am a Senior Vice President of DeGolyer and MacNaughton, which company did prepare the letter report addressed to Petrobras dated March 6, 2017, and that I, as Senior Vice President, was responsible for the preparation of this letter report.
- 2. That I attended Texas A&M University, and that I graduated with a degree in Petroleum Engineering in the year 1982; that I am a Registered Professional Engineer in the State of Texas; that I am a member of the International Society of Petroleum Engineers; and that I have in excess of 34 years of experience in the oil and gas reservoir studies and reserves evaluations.

/s/ Thomas C. Pence, P.E.

Thomas C. Pence, P.E.
Senior Vice President
DeGolyer and MacNaughton



DeGolyer and MacNaughton

5001 Spring Valley Road
Suite 800 East
Dallas, Texas 75244

March 6, 2017

Petróleo Brasileiro S.A.
Av. República do Chile 330
9th Floor – Centro
CEP 20031-170
Rio de Janeiro – RJ – Brazil

Ladies and Gentlemen:

Pursuant to your request, we have conducted a reserves audit of the net proved crude oil, condensate, and natural gas reserves, as of December 31, 2016, of certain properties in which Petróleo Brasileiro S.A. (Petrobras) has represented that it owns an interest. The properties are located in the United States Gulf of Mexico. This audit was completed on March 6, 2017. Petrobras has represented that these properties account for 100 percent on a net equivalent barrel basis of Petrobras' net proved reserves in fields operated by Petrobras in the United States Gulf of Mexico as of December 31, 2016, and that the net proved reserves estimates have been prepared in accordance with the reserves definitions of Rules 4–10(a) (1)-(32) of Regulation S–X of the Securities and Exchange Commission (SEC) of the United States. We have reviewed information provided to us by Petrobras that it represents to be Petrobras' estimates of the net reserves, as of December 31, 2016, for the same properties as those which we audited. This report was prepared in accordance with guidelines specified in Item 1202 (a)(8) of Regulation S-K and is to be used for inclusion in certain SEC filings by Petrobras.

Reserves estimates included herein are expressed as working interest and net reserves as represented by Petrobras. Gross reserves are defined as the total estimated petroleum to be produced from these properties after December 31, 2016. Working interest reserves are defined as that portion of the gross reserves attributable to the interests of Petrobras after deducting all interests owned by others. Net reserves are defined as working interest reserves after deductions for royalties.

Estimates of oil, condensate, and natural gas reserves should be regarded only as estimates that may change as further production history and additional information become available. Not only are such reserves estimates based on that information which is currently available, but such estimates are also subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

Data used in this audit were obtained from reviews with Petrobras personnel, from Petrobras files, from records on file with the appropriate regulatory agencies, and from public sources. Additionally, this information includes data supplied by IHS Global Inc.; Copyright 2015 IHS Global Inc. In the preparation of this report we have relied, without independent verification, upon such information furnished by Petrobras with respect to property interests, production from such properties, current costs of operation and development, current prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. A field examination of the properties was not considered necessary for the purposes of this report.

Methodology and Procedures

Estimates of reserves were prepared by the use of appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with practices generally recognized by the petroleum industry as presented in the publication of the Society of Petroleum Engineers entitled "Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (Revision as of February 19, 2007)." The method or combination of methods used in the analysis of each reservoir was tempered by experience with similar reservoirs, stage of development, quality and completeness of basic data, and production history.

Based on the current stage of field development, production performance, the development plans provided by Petrobras, and the analyses of areas offsetting existing wells with test or production data, reserves were classified as proved.

When applicable, the volumetric method was used to estimate the original oil in place (OOIP) and the original gas in place (OGIP). Structure and isopach maps were constructed to estimate reservoir volume. Electrical logs, radioactivity logs, core analyses, and other available data were used to prepare these maps as well as to estimate representative values for porosity and water saturation. When adequate data were available and when circumstances justified, material balance and other engineering methods were used to estimate OOIP or OGIP.



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DeGolyer and MacNaughton

Estimates of ultimate recovery were obtained after applying recovery factors to OOIP or OGIP. These recovery factors were based on consideration of the type of energy inherent in the reservoirs, analyses of the petroleum, the structural positions of the properties, and the production histories. When applicable, material balance and other engineering methods were used to estimate recovery factors. In such cases, an analysis of reservoir performance, including production rate, reservoir pressure, and gas-oil ratio behavior, was used in the estimation of reserves.

For depletion-type reservoirs or those whose performance disclosed a reliable decline in producing-rate trends or other diagnostic characteristics, reserves were estimated by the application of appropriate decline curves or other performance relationships. In the analyses of production-decline curves, reserves were estimated only to the limits of economic production or to the limit of the production licenses as appropriate.

Natural gas quantities estimated herein are marketable gas. Marketable gas is defined as the total gas to be produced from the reservoirs after reduction for injection, flare, and shrinkage resulting from field separation and processing. Gas reserves are expressed at a temperature base of 60 degrees Fahrenheit (°F) and at the legal pressure base of the state or area in which the interest is located. Oil and condensate reserves estimated herein are expressed in terms of 42 United States gallons per barrel and are to be recovered by conventional lease separation. For reporting purposes, oil and condensate reserves have been estimated separately and are presented herein as a summed quantity.

Definition of Reserves

Petroleum reserves estimated by Petrobras included in this report are classified as proved. Only proved reserves have been audited for this report. Reserves classifications used by Petrobras in this report are in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the SEC. Reserves are judged to be economically producible in future years from known reservoirs under existing economic and operating conditions and assuming continuation of current regulatory practices using conventional production methods and equipment. In the analyses of production-decline curves, reserves were estimated only to the limit of economic rates of production under existing economic and operating conditions using prices and costs consistent with the effective date of this report, including consideration of changes in existing prices provided only by contractual arrangements but not including escalations based upon future conditions. The petroleum reserves are classified as follows:

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

- (i) The area of the reservoir considered as proved includes:
 - (A) The area identified by drilling and limited by fluid contacts, if any, and (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.
 - (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
 - (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.
 - (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
 - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and
 - (B) The project has been approved for development by all necessary parties and entities, including governmental entities.



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DeGolyer and MacNaughton

- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be 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.

Developed oil and gas reserves – Developed oil and gas reserves are reserves of any category 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 by means not involving a well.

Undeveloped oil and gas reserves – Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

- (i) Reserves on undrilled acreage shall be 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.
- (ii) Undrilled locations can be 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.
- (iii) Under no circumstances shall estimates for undeveloped reserves be 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, as defined in section 210.4–10 (a) Definitions, or by other evidence using reliable technology establishing reasonable certainty.

Primary Economic Assumptions

The following economic assumptions were used for estimating existing and future prices and costs:

Oil and Condensate Prices

Petrobras has represented that the oil and condensate prices were based on a reference price, 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. Petrobras provided differentials by field to a 12-month average Brent reference price of U.S.\$43.61 per barrel for the Cascade and Chinook fields and the prices were held constant thereafter. The volume-weighted average adjusted product price attributable to estimated proved reserves audited herein was U.S.\$38.54 per barrel. These prices were not escalated for inflation.

Natural Gas Prices

Petrobras has represented that the natural gas prices were based on a reference price, 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, unless prices are defined by contractual arrangements. The gas prices were calculated for each property using differentials to the Henry Hub reference price of U.S.\$2.47 million British thermal units (MMBtu). The volume-weighted average adjusted product price attributable to estimated proved reserves was U.S.\$3.51 per thousand cubic feet. These prices were not escalated for inflation.

Operating Expenses, Capital Costs, and Abandonment Costs

Operating expenses and capital costs, based on information provided by Petrobras, were used in estimating future costs required to operate the properties. In certain cases, future costs, either higher or lower than existing costs, may have been used because of anticipated changes in operating conditions. These costs were not escalated for inflation. Abandonment costs were provided by Petrobras.

While the oil and gas industry may be subject to regulatory changes from time to time that could affect an industry participant's ability to recover its oil and gas reserves, we are not aware of any such governmental actions which would restrict the recovery of the December 31, 2016, estimated oil and gas reserves.



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Petrobras has represented that its estimated working interest and net proved reserves attributable to the reviewed properties were based on the definition of proved reserves of the SEC. Petrobras has represented that its estimates of the working interest and net proved reserves attributable to these properties, which represent 100 percent of Petrobras' United States Gulf of Mexico operated reserves on a net equivalent basis, are summarized as follows, expressed in thousands of barrels (Mbbl), millions of cubic feet (MMcf), and thousands of barrels of oil equivalent (Mboe):

	Estimated by Petrobras Proved Reserves as of December 31, 2016		
	Oil and Condensate (Mbbl)	Natural Gas (MMcf)	Oil Equivalent (Mboe)
Reviewed by DeGolyer and MacNaughton			
United States Gulf of Mexico			
Working Interest Reserves (before royalties)			
Total Proved	26,645	4,416	27,381
Net Reserves (working interest reserves after royalties)			
Total Proved	25,508	4,228	26,213

Note: Gas is converted to oil equivalent using an energy equivalent factor of 6,000 cubic feet of gas per 1 barrel of oil equivalent.

In our opinion, the information relating to estimated proved reserves of oil, condensate, and gas contained in this report has been prepared in accordance with Paragraphs 932-235-50-7 and 932-235-50-9 of the Accounting Standards Update 932-235-50, *Extractive Industries – Oil and Gas (Topic 932): Oil and Gas Reserve Estimation and Disclosures* (January 2010) of the Financial Accounting Standards Board and Rules 4-10(a) (1)–(32) of Regulation S-X and Rules 302(b), 1201, and 1202 (3), (4), (8) of Regulation S-K of the Securities and Exchange Commission.

To the extent the above-enumerated rules, regulations, and statements require determinations of an accounting or legal nature, we, as engineers, are necessarily unable to express an opinion as to whether the above-described information is in accordance therewith or sufficient therefor.

In comparing the detailed net proved reserves estimates prepared by us and by Petrobras, we have found differences, both positive and negative, resulting in an aggregate difference of 1.2 percent when compared on the basis of net equivalent barrels. It is our opinion that the net proved reserves estimates prepared by Petrobras on the properties reviewed by us and referred to above, when compared on the basis of net equivalent barrels, in aggregate, do not differ materially from those prepared by us.

DeGolyer and MacNaughton is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1936. DeGolyer and MacNaughton does not have any financial interest, including stock ownership, in Petrobras. Our fees were not contingent on the results of our audit. This letter report has been prepared at the request of Petrobras. DeGolyer and MacNaughton has used all assumptions, data, procedures, and methods that it considers necessary and appropriate to prepare this report.

Submitted,

/s/ DeGOLYER and MacNAUGHTON

DeGOLYER and MacNAUGHTON
Texas Registered Engineering Firm F-716

/s/ Thomas C. Pence, P.E.

Thomas C. Pence, P.E.
Senior Vice President
DeGolyer and MacNaughton



DeGolyer and MacNaughton

CERTIFICATE of QUALIFICATION

I, Thomas C. Pence, Petroleum Engineer with DeGolyer and MacNaughton, 5001 Spring Valley Road, Suite 800 East, Dallas, Texas, 75244 U.S.A., hereby certify:

1. That I am a Senior Vice President of DeGolyer and MacNaughton, which company did prepare the letter report addressed to Petrobras dated March 6, 2017, and that I, as Senior Vice President, was responsible for the preparation of this letter report.
2. That I attended Texas A&M University, and that I graduated with a degree in Petroleum Engineering in the year 1982; that I am a Registered Professional Engineer in the State of Texas; that I am a member of the International Society of Petroleum Engineers; and that I have in excess of 34 years of experience in the oil and gas reservoir studies and reserves evaluations.

/s/ Thomas C. Pence, P.E.

Thomas C. Pence, P.E.

Senior Vice President

DeGolyer and MacNaughton