

# ***FINANCIAL STATEMENTS***

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*December 31, 2017, 2016 and  
2015 with report of independent  
registered public accounting firm*

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## Report of Independent Registered Public Accounting Firm

The Shareholders and Board of Directors of  
Petróleo Brasileiro S.A. – Petrobras  
Rio de Janeiro – RJ

### ***Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting***

We have audited the accompanying consolidated statement of financial position of Petróleo Brasileiro S.A. – Petrobras and subsidiaries (“the Company”) as of December 31, 2017, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and the related notes (collectively, the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and the results of its operations and its cash flows for the year then ended, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

### ***Estimates related to overpayments on the acquisition of property plant and equipment***

As discussed in Note 3 to the financial statements, on September 30, 2014, the Company 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. The note also describes that no additional information has been identified through this date which could materially impact the estimation methodology adopted for the write off previously recorded.

### ***Basis for Opinion***

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s consolidated financial statements and an opinion on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.



Our audit of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

***Definition and Limitations of Internal Control Over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG Auditores Independentes

We have served as the Company's auditor since 2017.

Rio de Janeiro

March 14, 2018



## Report of Independent Registered Public Accounting Firm

The Shareholders and Board of Directors of  
Petróleo Brasileiro S.A. - Petrobras

In our opinion, the accompanying consolidated statement of financial position as of December 31, 2016 and the related consolidated statements of income, comprehensive income, cash flows and changes in shareholders' equity for each of the two years in the period ended December 31, 2016 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 the results of their operations and their cash flows for each of the two years in the period ended December 31, 2016, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes 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. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 3 to the financial statements, in 2014, the Company 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.

/s/PricewaterhouseCoopers  
Auditores Independentes

Rio de Janeiro, Brazil  
April 26, 2017

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## 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 assurance regarding the reliability of financial reporting and of the preparation of our consolidated financial statements for external purposes, in accordance with IFRS, as issued by the IASB.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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, 2017, 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 effective as of December 31, 2017.

### Remediation activities related to material weaknesses in internal control over financial reporting as of December 31, 2016

During our management's assessment of internal control over financial reporting as of December 31, 2016, our management identified certain material weaknesses. 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.

We took significant measures to successfully remediate the material weaknesses reported in our Management Report on Internal Control over Financial Reporting for prior fiscal years, as described below. As a result, our management's assessment of internal control over financial reporting as of December 31, 2017 did not identify any material weaknesses.

### Remediation activities related to Property, Plant and Equipment

During 2017, we improved our procedures to analyze on a timely basis possible situations of contractors and suppliers in default, or facing adverse economic and financial conditions, in particular with respect to advances granted to suppliers. Furthermore, we reviewed our internal control over financial reporting to enhance our procedures and strengthen controls related to the dissolution of contracts in service with suppliers.

Based upon the measures adopted and tests performed on internal control over financial reporting, our management concluded that this deficiency was remediated as of December 31, 2017.

### Remediation activities related to System Access Management and Segregation of Duties in Business and Information Technology Processes

In 2017, in addition to the actions and controls implemented in prior years, we performed measures to remedy control deficiencies, including improvement of procedures and automation in the management of access to users in the ERP environment. Our remediation actions included the following:

- Review of our risk evaluation methodology related to the ERP access control environment, intending to implement a process of risk assessment of segregation of duties and critical access to systems, which were evaluated by the respective managers regarding transactions, authorization objects and values. This review included our Risk Management, Compliance, IT Security and Business areas. We put in place rules for risk classification (critical, high, medium or low) that consider probability of occurrence and possible impacts. With this new process, such evaluation is carried out continuously, throughout the year, in order to detect any new risks and possible changes in our business environment;
- Reduction of the number of conflicting profiles associated with critical risks of segregation of duties. As a result of this effort, we achieved relevant reductions in conflicts, and significantly reduced our exposure to these risks;
- Redesign of the monitoring controls in order to analyze the reason for the materializations of segregation of duties throughout the entire year;
- Implementation of interfaces between ERP and the access control systems for some non-ERP critical systems;
- Redesign of preventive controls in order to improve the rules of different levels of approval to grant critical access and conflicting systems profiles; and
- Continuous improvement in the quality of guidance, training and assistance to those responsible for monitoring and reviewing risks associated with the segregation of duties and critical access.

Our management recognized 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. Due to the changes implemented, our management concluded that our environment has reached the maturity required to conclude that the material weakness was remedied as of December 31, 2017.

### Remediation activities related to Calculation of Net Actuarial Liabilities

In 2017, in response to material weaknesses related to actuarial liabilities, we improved our internal control over the healthcare plan (AMS) and pension plan (Petros) databases as follows:

- Enhancement of internal controls, focusing on analysis and revision of information stored in the database;
- Implementation of procedures to improve the reliability of information arising from the AMS and Petros systems; and
- Re-registration of AMS participants that are manually billed.

In our supervisory role with respect to the pension plan assets managed by Fundação Petros, we accessed information from them and periodically evaluated it, through the Petros Executive Committee, analyzing matters related to the supervision process of Fundação Petros. These actions improved the control environment of Fundação Petros, with the objective of preserving our interests as a sponsor.

Based upon the measures adopted, our management concluded that the actions implemented represented an improvement in the mitigation of risks in the control environment over this process and concluded that this deficiency was remediated as of December 31, 2017.

### Audit of the Effectiveness of Internal Control over Financial Reporting

Our independent registered public accounting firm, KPMG Auditores Independentes, has audited the effectiveness of our internal control over financial reporting, as stated in their report as of December 31, 2017, which is included herein.

Pedro Pullen Parente  
Chief Executive Officer

Ivan de Souza Monteiro  
Chief Financial Officer and Chief Investor Relations Officer

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Financial Position

December 31, 2017 and 2016

(Expressed in millions of US Dollars, unless otherwise indicated)



Assets	Note	12.31.2017	12.31.2016	Liabilities	Note	12.31.2017	12.31.2016
<b>Current assets</b>				<b>Current liabilities</b>			
Cash and cash equivalents	7	22,519	21,205	Trade payables	16	5,767	5,762
Marketable securities	7	1,885	784	Finance debt	17	7,001	9,755
Trade and other receivables, net	8	4,972	4,769	Finance lease obligations	18.1	25	18
Inventories, net	9	8,489	8,475	Income taxes payable	21.1	299	127
Recoverable income taxes	21.1	479	602	Other taxes payable	21.1	4,548	3,628
Other recoverable taxes	21.1	1,958	1,900	Payroll and related charges		1,309	2,197
Advances to suppliers		78	166	Pension and medical benefits	22	844	820
Others		1,433	1,140	Provisions for legal proceedings	30.1	2,256	-
		41,813	39,041	Others		2,508	2,104
Assets classified as held for sale	10.2	5,318	5,728	Liabilities related to assets classified as held for sale	10.2	391	492
		47,131	44,769			24,948	24,903
<b>Non-current assets</b>				<b>Non-current liabilities</b>			
Long-term receivables				Finance debt	17	102,045	108,371
Trade and other receivables, net	8	5,175	4,551	Finance lease obligations	18.1	204	226
Marketable securities	7	64	90	Income taxes payable	21.1	671	-
Judicial deposits	30.2	5,582	3,999	Deferred income taxes	21.5	1,196	263
Deferred income taxes	21.5	3,438	4,307	Pension and medical benefits	22	20,986	21,477
Other tax assets	21.1	3,075	3,141	Provisions for legal proceedings	30.1	4,770	3,391
Advances to suppliers		1,032	1,148	Provision for decommissioning costs	20	14,143	10,252
Others		3,084	3,184	Others		901	550
		21,450	20,420	Total liabilities		144,916	144,530
						169,864	169,433
Investments	11	3,795	3,052	<b>Equity</b>			
Property, plant and equipment	12	176,650	175,470	Share capital (net of share issuance costs)	23.1	107,101	107,101
Intangible assets	13	2,340	3,272	Capital transactions	23.2	1,067	628
		204,235	202,214	Profit reserves	23.3	53,056	53,143
				Accumulated other comprehensive (deficit)	23.4	(81,422)	(84,093)
				Attributable to the shareholders of Petrobras		79,802	76,779
				Non-controlling interests		1,700	771
						81,502	77,550
<b>Total assets</b>		<b>251,366</b>	<b>246,983</b>	<b>Total liabilities and equity</b>		<b>251,366</b>	<b>246,983</b>

The notes form an integral part of these financial statements.

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Income

December 31, 2017, 2016 and 2015

(Expressed in millions of US Dollars, unless otherwise indicated)



	Note	2017	2016	2015
Sales revenues	24	88,827	81,405	97,314
Cost of sales		(60,147)	(55,417)	(67,485)
Gross profit		28,680	25,988	29,829
Income (expenses)				
Selling expenses		(4,538)	(3,963)	(4,627)
General and administrative expenses		(2,918)	(3,319)	(3,351)
Exploration costs	15	(800)	(1,761)	(1,911)
Research and development expenses		(572)	(523)	(630)
Other taxes		(1,843)	(714)	(2,796)
Impairment of assets	14	(1,191)	(6,193)	(12,299)
Other income and expenses	25	(5,599)	(5,207)	(5,345)
		(17,461)	(21,680)	(30,959)
Income before finance income (expense), results in equity-accounted investments and income taxes		11,219	4,308	(1,130)
Finance income		1,047	1,053	1,412
Finance expenses		(7,395)	(6,958)	(6,437)
Foreign exchange gains (losses) and inflation indexation charges		(3,547)	(1,850)	(3,416)
Net finance income (expense)	27	(9,895)	(7,755)	(8,441)
Results in equity-accounted investments	11.2	673	(218)	(177)
Net income/(loss) before income taxes		1,997	(3,665)	(9,748)
Income taxes	21.7	(1,828)	(684)	1,137
Net income/(loss) for the year		169	(4,349)	(8,611)
Net income/(loss) attributable to:				
Shareholders of Petrobras		(91)	(4,838)	(8,450)
Non-controlling interests		260	489	(161)
Net income/(loss) for the year		169	(4,349)	(8,611)
Basic and diluted earning (loss) per weighted-average of common and preferred share - in U.S. dollars	23.6	(0.01)	(0.37)	(0.65)

The notes form an integral part of these financial statements.

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Comprehensive Income

December 31, 2017, 2016 and 2015

(Expressed in millions of US Dollars, unless otherwise indicated)



	2017	2016	2015
Net income/(loss) for the year	169	(4,349)	(8,611)
Items that will not be reclassified to the statement of income:			
Actuarial gains (losses) on defined benefit pension plans	1,908	(5,296)	(53)
Deferred income tax	(273)	1,058	(14)
	1,635	(4,238)	(67)
Share of other comprehensive income (losses) in equity-accounted investments	(1)	(3)	(1)
Items that may be reclassified subsequently to the statement of income:			
Unrealized gains / (losses) on available-for-sale securities			
Recognized in equity	15	-	-
Deferred income tax	(4)	-	-
	11	-	-
Unrealized gains / (losses) on cash flow hedge - highly probable future exports			
Recognized in equity	(543)	10,779	(21,132)
Reclassified to the statement of income	3,154	2,841	2,057
Deferred income tax	(887)	(4,629)	6,486
	1,724	8,991	(12,589)
Unrealized gains on cash flow hedge - others			
Recognized in equity	(5)	8	10
	(5)	8	10
Cumulative translation adjustments (*)			
Recognized in equity	(851)	9,529	(29,248)
Reclassified to the statement of income	37	1,457	-
	(814)	10,986	(29,248)
Share of other comprehensive income in equity-accounted investments			
Recognized in equity	134	344	(860)
Reclassified to the statement of income	22	-	-
	156	344	(860)
<b>Total other comprehensive income/(loss):</b>	<b>2,706</b>	<b>16,088</b>	<b>(42,755)</b>
<b>Total comprehensive income/(loss)</b>	<b>2,875</b>	<b>11,739</b>	<b>(51,366)</b>
Comprehensive income/(loss) attributable to:			
Shareholders of Petrobras	2,584	11,236	(51,209)
Non-controlling interests	291	503	(157)
<b>Total comprehensive income/(loss)</b>	<b>2,875</b>	<b>11,739</b>	<b>(51,366)</b>

(\*) Includes a loss of US\$ 49 (loss of US\$ 413 in 2016) 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, 2017 and 2016

(Expressed in millions of US Dollars, unless otherwise indicated)



	2017	2016	2015
<b>Cash flows from Operating activities</b>			
Net income/(loss) for the year	169	(4,349)	(8,611)
Adjustments for:			
Pension and medical benefits (actuarial expense)	2,726	2,304	1,960
Results in equity-accounted investments	(673)	218	177
Depreciation, depletion and amortization	13,307	13,965	11,591
Impairment of assets (reversal)	1,191	6,193	12,299
Exploratory expenditures write-offs	279	1,281	1,441
Gains and losses on disposals/write-offs of assets	(1,498)	(293)	758
Foreign exchange, indexation and finance charges	9,602	7,962	9,172
Deferred income taxes, net	467	(913)	(2,043)
Allowance (reversals) for impairment of trade and others receivables	708	1,131	941
Inventory write-down to net realizable value	66	343	431
Reclassification of cumulative translation adjustment and other comprehensive income	59	1,457	-
Revision and unwinding of discount on the provision for decommissioning costs	425	(836)	382
Gain on remeasurement of investment retained with loss of control	(217)	-	-
Provision for the class action agreement	3,449	-	-
Decrease (Increase) in assets			
Trade and other receivables, net	(978)	(39)	(396)
Inventories	(336)	(518)	291
Judicial deposits	(1,671)	(986)	(789)
Other assets	(223)	(319)	(819)
Increase (Decrease) in liabilities			
Trade payables	(62)	(1,060)	(1,226)
Other taxes payable	2,952	1,047	1,628
Pension and medical benefits	(919)	(766)	(709)
Other liabilities	(912)	664	76
Income taxes paid	(799)	(372)	(567)
<b>Net cash provided by operating activities</b>	<b>27,112</b>	<b>26,114</b>	<b>25,987</b>
<b>Cash flows from Investing activities</b>			
Capital expenditures	(13,639)	(14,085)	(21,653)
Investments in investees	(75)	(125)	(108)
Proceeds from disposal of assets - Divestment	3,091	2,205	224
Divestment (Investment) in marketable securities	(861)	229	7,982
Dividends received	452	473	259
<b>Net cash used in investing activities</b>	<b>(11,032)</b>	<b>(11,303)</b>	<b>(13,296)</b>
<b>Cash flows from Financing activities</b>			
Investments by non-controlling interest	19	29	100
Proceeds from financing	27,075	18,897	17,420
Repayment of principal	(36,095)	(30,660)	(14,809)
Repayment of interest	(6,981)	(7,308)	(6,305)
Dividends paid to non-controlling interests	(167)	(72)	(74)
Proceeds from sale of interest without loss of control	1,511	-	503
<b>Net cash used in financing activities</b>	<b>(14,638)</b>	<b>(19,114)</b>	<b>(3,165)</b>
Effect of exchange rate changes on cash and cash equivalents	(128)	450	(1,123)
<b>Net decrease in cash and cash equivalents</b>	<b>1,314</b>	<b>(3,853)</b>	<b>8,403</b>
<b>Cash and cash equivalents at the beginning of the year</b>	<b>21,205</b>	<b>25,058</b>	<b>16,655</b>
<b>Cash and cash equivalents at the end of the year</b>	<b>22,519</b>	<b>21,205</b>	<b>25,058</b>

The notes form an integral part of these financial statements.

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Changes in Shareholders' Equity

December 31, 2017, 2016 and 2015

(Expressed in millions of US Dollars, unless otherwise indicated)



	Share capital (net of share issuance costs)			Accumulated other comprehensive income (deficit) and deemed cost				Profit Reserves						Total consolidated equity	
	Share Capital	Share issuance costs	Capital Transactions	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	Equity attributable to shareholders of Petrobras		Non-controlling interests
	107,380	(279)	148	(41,968)	(7,699)	(7,295)	(438)	7,919	2,182	720	55,602	-	116,272	706	116,978
<b>Balance at December 31, 2014</b>		107,101	148				(57,400)				66,423	-	116,272	706	116,978
Realization of deemed cost	-	-	-	-	-	-	(4)	-	-	-	-	4	-	-	-
Capital transactions	-	-	173	-	-	-	-	-	-	-	-	-	173	338	511
Loss	-	-	-	-	-	-	-	-	-	-	-	(8,450)	(8,450)	(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	-	-	-
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	(68)	(68)
	107,380	(279)	321	(71,220)	(20,288)	(7,362)	(1,293)	7,919	2,182	720	47,156	-	65,236	819	66,055
<b>Balance at December 31, 2015</b>		107,101	321				(100,163)				57,977	-	65,236	819	66,055
Realization of deemed cost	-	-	-	-	-	-	(4)	-	-	-	-	4	-	-	-
Capital transactions	-	-	307	-	-	-	-	-	-	-	-	-	307	(427)	(120)
Net income (loss)	-	-	-	-	-	-	-	-	-	-	-	(4,838)	(4,838)	489	(4,349)
Other comprehensive income	-	-	-	10,972	8,991	(4,238)	349	-	-	-	-	-	16,074	14	16,088
Appropriations:															
Transfer to reserves	-	-	-	-	-	-	-	-	-	-	(4,834)	4,834	-	-	-
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	(124)	(124)
	107,380	(279)	628	(60,248)	(11,297)	(11,600)	(948)	7,919	2,182	720	42,322	-	76,779	771	77,550
<b>Balance at December 31, 2016</b>		107,101	628				(84,093)				53,143	-	76,779	771	77,550
Realization of deemed cost	-	-	-	-	-	-	(4)	-	-	-	-	4	-	-	-
Capital transactions	-	-	439	-	-	-	-	-	-	-	-	-	439	792	1,231
Net income (loss)	-	-	-	-	-	-	-	-	-	-	-	(91)	(91)	260	169
Other comprehensive income	-	-	-	(795)	1,724	1,585	161	-	-	-	-	-	2,675	31	2,706
Appropriations:															
Transfer to reserves	-	-	-	-	-	-	-	-	-	-	(87)	87	-	-	-
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	(154)	(154)
	107,380	(279)	1,067	(61,043)	(9,573)	(10,015)	(791)	7,919	2,182	720	42,235	-	79,802	1,700	81,502
<b>Balance at December 31, 2017</b>		107,101	1,067				(81,422)				53,056	-	79,802	1,700	81,502

The notes form an integral part of these financial statements.

## **1. The Company and its operations**

Petróleo Brasileiro S.A. (Petrobras), hereinafter referred to as “Petrobras” or “Company,” is a partially state-owned enterprise, controlled by the Brazilian Federal Government, of indefinite duration, governed by the terms and conditions under the Brazilian Corporate Law (Law 6,404 of December 15, 1976) and its Bylaws.

The Company is dedicated to prospecting, drilling, refining, processing, trading and transporting crude oil from producing onshore and offshore oil fields and from shale or other rocks, as well as oil products, natural gas and other liquid hydrocarbons. In addition, Petrobras carries out energy related activities, such as research, development, production, transport, distribution and trading of all forms of energy, as well as other related or similar activities.

Petrobras may perform any of the activities related to its corporate purpose, directly, through its wholly owned subsidiaries, controlled companies, alone or through joint venture with third parties, in Brazil or abroad.

Petrobras may have its activities, provided they are in compliance with its corporate purpose, guided by the Brazilian Federal Government to contribute to the public interest that justified its creation, aiming at meeting the objective of the national energy policy.

The Brazilian Federal Government may only guide the Company to assume obligations or responsibilities, including the implementation of investment projects and the assumption of specific operating costs/results, such as those relating to the sale of fuels, as well as any other related activities, under conditions different from those of any other private sector company operating in the same market, when:

I – established by law or regulation, as well as under provisions of agreements with a public entity that is competent to establish such obligation, abiding by the broad publicity of such instruments; and

II – the cost and revenues thereof have been broken down and disseminated in a transparent manner, including in the accounting plan.

Moreover, in the event of the Brazilian Federal Government guide the Company to meet the public interest under conditions different from market conditions, the Company’s Finance Committee and Minority Shareholders Committee, exercising their advisory role to the Board of Directors, shall assess and measure the difference between such market conditions and the operating result or economic return of the transaction, based on technical and economic criteria for investment valuation and specific operating costs and results under the Company’s operations, In this case, for every financial year, the Federal Government shall compensate the Company.

## **2. Basis of preparation**

### **2.1. Statement of compliance and authorization of financial statements**

The consolidated financial statements have been prepared and are presented in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The consolidated financial statements have been prepared under the historical cost convention, except 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 preparation of the financial statements requires the use of estimates and assumptions for certain transactions and their impacts in assets, liabilities revenues and expenses. Although our management uses assumptions and judgments that are periodically reviewed, the actual results could differ from these estimates. For further information on accounting estimates, see note 5.

The annual consolidated financial statements were approved and authorized for issue by the Company's Board of Directors in a meeting held on March 14, 2018.

## 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 to facilitate a more direct comparison to other oil and gas companies. The financial statements have been translated from the functional currency (Brazilian Real) into the presentation currency (U.S. Dollar). All assets and liabilities are translated into U.S. dollars at the closing exchange rate at the date of the financial statements; income and expenses, as well as cash flows are translated into U.S. dollars using the average exchange rates prevailing during the period. All exchange differences arising from the translation of the consolidated financial statements from the functional currency into the presentation currency are recognized as cumulative translation adjustments (CTA) within accumulated other comprehensive income in the consolidated statements of changes in shareholders' equity.

<b>Brazilian Real x U.S. Dollar</b>	<b>Dec 2017</b>	<b>Sep 2017</b>	<b>Jun 2017</b>	<b>Mar 2017</b>	<b>Dec 2016</b>	<b>Sep 2016</b>	<b>Jun 2016</b>	<b>Mar 2016</b>
Quarterly average exchange rate	3.25	3.16	3.22	3.15	3.29	3.25	3.51	3.91
Period-end exchange rate	3.31	3.17	3.31	3.17	3.26	3.25	3.21	3.56

## 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 in certain cases charged for 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.

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.

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 below should be adjusted, Petrobras will evaluate whether the adjustment is material and, if so, recognize it.

### **3.1. 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.

(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.

Petrobras has continuously monitored the progress of both the investigation by Brazilian authorities and the independent law firm. As a result, on the preparation of the financial statements for the year ended December 31, 2017, the Company has not identified any additional information that would impact the adopted calculation methodology and consequently require additional write-offs. The Company will continue to monitor these investigations for additional information and will review their potential impact on the adjustment made.

### **3.2. 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 (*Polícia Federal*), the Brazilian Public Prosecutor's Office (*Ministério Público Federal*), Federal Auditor's Office (*Tribunal de Contas da União – TCU*), the Ministry of Transparency (*Ministério da Transparência*) and the General Federal Inspector's Office (*Controladoria Geral da União*) 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 45 criminal proceedings as an assistant to the prosecutor. In addition, we have entered into four 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, since 2015, 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 part of the process of strengthening integrity procedures to prevent and detect frauds or any illegal act, the Company has taken continuous measures aiming at enhancing its corporate governance and compliance systems, thereby applying corporate governance best practices aligned with new corporate governance requirements.

In this respect, among other measures, 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. In 2017, the Company created the position of Deputy Officer for Governance and Compliance, reviewed its Code of Best Practices, released the Annual Letter of Public Policies and Corporate Governance, implemented the Manager Training Program and continued to conduct integrity due diligence procedures of suppliers of goods and providers of services (conducted nearly 17,000 through 2017), as well as integrity background checks as part of the decision making for appointing personnel to key positions. By reviewing its Bylaws, the Company also extended the Minority Committee duties in order to enhance transparency of related party transactions, indications to key management personnel and determination of investment thresholds under the public policies scope.

The continuous process of strengthening corporate governance practices resulted in the certification of Petrobras in the State Governance Highlight (*Destaque em Governança das Estatais*) program. Petrobras also obtained the maximum score in the IG-SEST governance index for state-owned companies of the Ministry of Planning and enabled the Company to request adherence to a governance level 2 at the Brazilian stock exchange (B3), a market tier for companies with high level of corporate governance standards.

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.

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 15 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.

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 2017, the Company recognized US\$ 252 as other income and expenses with respect to compensation for damages resulting from leniency agreements (US\$ 131 in 2016 and US\$ 72 in 2015). The total funds collected through December 31, 2017 amount to US\$ 455.

### **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 with respect to, among other things, the Lava Jato investigation and any allegations regarding a violation of the U.S. Foreign Corrupt Practices Act. The U.S. Department of Justice (DoJ) is conducting a similar inquiry, and the Company is cooperating with both investigations 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.

The internal investigation and related government inquiries concerning these matters remain ongoing, and to date it is not possible to estimate the duration, scope or results of the internal investigation or related inquiries by relevant authorities. As a result, the Company is unable to make a reliable estimate about amounts and probability of penalties that may be required or if other financial relief may be provided in connection with any SEC or DoJ 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.

### **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, not including investments structured through a separate vehicle.

Investments structured through a separate vehicle are conceived so that the voting rights, or similar rights, are not the dominant factor to determine who controls the entity.

At December 31, 2017, Petrobras controls and consolidates the following structured entities:

<b>Structured Entities</b>	<b>Country</b>	<b>Main segment</b>
Charter Development LLC – CDC	U.S.A	E&P
Companhia de Desenvolvimento e Modernização de Plantas Industriais – CDMPI	Brazil	RT&M
Fundo de Investimento em Direitos Creditórios Não-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.

## 4.2. Reportable segments

The information related to the Company's operating segments is prepared based on available financial information directly attributable to each segment, or items that can be allocated to each segment on a reasonable basis. This information is presented by business activity, as used by the Company's Board of Executive Officers (Chief Operating Decision Maker – CODM) on the decision-making process of resource allocation and performance evaluation.

The measurement of segment results includes transactions carried out with third parties 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.

### **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.

#### **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 method, less any impairment loss on 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 presented in the statement of income within 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.

When a debt instrument is replaced by another one, between the same parties, but containing substantially different terms, the original financial instrument is derecognized and a new one is recognized. Similarly, substantial changes to the terms of the existing financial instrument, or part of it, are accounted as extinction of the original financial liability and recognition of a new financial liability.

The terms of the financial instrument are considered substantially modified if the present value of their cash flows under the new terms, including any commissions paid (net of any commissions received) and discounted using the original effective interest rate method, is at least 10% different from the present value of the remaining cash flows of the original financial instrument.

Changes in the terms of the financial instrument that are not considered substantial do not affect the statement of income at the moment they occur. In this case, the effective interest rate of the instrument is recalculated and applied prospectively.

#### **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.

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.

In addition, when a financial instrument designated as a hedging instrument expires or settled, the Company may replace it with another financial instrument in a manner such that the hedge relationship continues to occur. Likewise, whenever a hedged transaction effectively occurs, its financial instrument previously designated as a hedging instrument may be designate for a new hedge relationship.

### **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, adjusted to the net realizable value when it is lower than its carrying amount.

Net realizable value is the estimated selling price of inventory in the ordinary course of business, less estimated cost of completion and estimated expenses to complete its sale.

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.

The amounts presented in the categories above include imports in transit, which are stated at their cost of purchase.

#### **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. Certain of the Company's activities in the E&P segment are conducted through joint operations.

Profit or loss, assets and liabilities related to joint ventures and associates are accounted for by the equity method. In a joint operation the Company recognizes the amount of its assets, liabilities and related income and expenses.

Accounting policies of joint ventures and associates have been adjusted, where necessary, to ensure consistency with the policies adopted by Petrobras. Distributions received from an investee reduce the carrying amount of the investment.

#### **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 accounted for at cost.

The acquisition method requires that the identifiable assets acquired and the liabilities assumed be measured at the acquisition-date fair value, with limited exceptions.

Goodwill is measured as the excess of the aggregate amount of: (i) the consideration transferred; (ii) the amount of any non-controlling interest in the acquiree; and (iii) in a business combination achieved in stages, the fair value of the acquirer's previously held equity interest in the acquiree at the acquisition-date; over the net of the amounts of the identifiable assets acquired and the liabilities assumed. When this aggregate amount is lower than the net of the amounts of the identifiable assets acquired and the liabilities assumed, a gain on a bargain purchase is recognized in the statement of income.

Changes in ownership interest in subsidiaries that do not result in loss of control of the subsidiary are equity transactions. Any excess of the amounts paid/received, including directly attributable costs, over the carrying value of the ownership interest acquired/disposed 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 once the technical and commercial feasibility can be demonstrated.
- Costs directly attributable to exploratory wells, including their equipment and installations, pending determination of proved reserves are capitalized within property, plant and equipment. In some cases, exploratory wells have discovered oil and gas reserves, but at the moment the drilling is completed they are not yet able to be classified as proved. In such cases, the expenses continue to be capitalized if the well has found a sufficient quantity of reserves to justify its completion as a producing well and progress on assessing the reserves and the economic and operating viability of the project is under way. An internal commission of technical executives of the Company reviews these conditions monthly for each well, by analysis of geoscience and engineering data, existing economic conditions, operating methods and government regulations. For additional information on proved reserves estimates, see note 5.1.
- Costs related to exploratory wells drilled in areas of unproved reserves are charged to expense when determined to be dry or uneconomic by the aforementioned internal commission.
- Costs related to the construction, installation and completion of infrastructure facilities, such as drilling of development wells, construction of platforms and natural gas processing units, construction of equipment and facilities for the extraction, handling, storing, processing or treating crude oil and natural gas, pipelines, storage facilities, waste disposal facilities and other related costs incurred in connection with the development of proved reserve areas are capitalized within property, plant and equipment.

#### **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.

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. The useful life is reviewed at each year end.

#### **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 concessions and production sharing agreements for exploration and production of oil and natural gas (capitalized acquisition costs), public service concessions, trademarks, patents, software and goodwill.

Signature bonuses paid for obtaining concessions for exploration of crude oil and natural gas are initially capitalized within intangible assets and are transferred to property, plant and equipment when the technical and commercial feasibility can be demonstrated. 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. In the event a signature bonus encompasses an area in which exploration activities occur in different locations, whenever the technical and commercial feasibility can be demonstrated for a specific location, a portion of the signature bonus is transferred to property, plant and equipment based on the ratio between the oil in place at this location and total reservoir volume of the area.

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.

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 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.

#### **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 active 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.

#### **4.16. Income taxes**

Income tax expense for the period includes current and deferred taxes.

##### **a) Current income taxes**

Current income taxes are computed based on taxable profit for the year, determined in accordance with the rules established by the taxation authorities, using tax rates that have been enacted or substantively enacted at the end of the reporting period.

Current income taxes are offset when they relate to income taxes levied on the same taxable entity and by the same tax authority, when there is a legal right and the entity has the intention to set off current tax assets and current tax liabilities, simultaneously, and they are recognized in the statement of income of the period, except to the extent that the tax arises from a transaction or event which is recognized directly in equity.

**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.

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, excluding amounts included in net interest on the net defined benefit liability (asset).

The Company also contributes amounts to defined contribution plans, that are expensed when incurred and are computed based on a percentage of salaries.

**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**

Revenue from the sale of goods, including, among others, crude oil, oil products, natural gas, biofuels, electric energy, is recognized when all the following conditions are satisfied:

(a) the Company has transferred to the buyer the significant risks and rewards of ownership of the goods, which usually happens at the delivery, in accordance with the terms of the sales contract;

(b) the Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold. The amount of revenue can be measured reliably, consisting of 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;

(c) it is probable that the economic benefits associated with the transaction will flow to the Company; and

(d) the costs incurred or to be incurred in respect of the transaction can be measured reliably.

Revenue is measured at the fair value of the consideration received or receivable for sales of products or services rendered, net of discounts, sales taxes and returns.

### **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 significant judgment or involve a higher degree of complexity in the application of the accounting policies and that could materially affect the Company's financial condition and results of operations is set out as follows:

#### **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.

According to the definitions prescribed by the SEC, proved oil and gas reserves are those quantities of oil and gas which, by analysis of geoscientific and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs and under existing economic conditions, operating methods, and government regulation. Proved reserves are subdivided into developed and undeveloped reserves.

Proved developed oil and gas reserves are those that can be expected to be recovered through: (i) existing wells with existing equipment and operating methods; (ii) extraction technology installed and operational at the time of the reserves estimate, extracting oil and gas in other ways than using wells.

Although the Company is reasonably certain that proved reserves will be produced, the timing and amount recovered can be affected by a number of factors including completion of development projects, reservoir performance, regulatory aspects and significant changes in long-term oil and gas price levels.

Detailed information on reserves is presented as unaudited supplementary information.

**a) Impacts of oil and gas reserves on depreciation, depletion and amortization**

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.

**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 operating segments and a significant number of interdependent variables are derived from these key assumptions and there is a high degree of complexity in their application in determining value in use for impairment tests.

The markets for crude oil and natural gas have a history of significant price volatility and although prices can drop precipitously, industry prices over the long term tends to continue being driven by market supply and demand fundamentals.

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.

### 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 due to a review of investment, strategic or operational factors result in changes in the interdependencies between those assets and, consequently, alter the aggregation or breakdown of assets into CGUs. The assumptions set out below have been consistently applied by the Company:

#### a) 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. At December 31, 2017, the Guriatã and Guriatã Sul fields were grouped as one CGU, the Guriatã group, since both fields share the same reservoir. Based on the same reason, Canário da Terra and Canário da Terra Sul fields were also grouped in a single CGU, so named Canário da Terra group. In addition, on November 30, 2017, the company submitted to the ANP the declaration of commerciality of the Mero field and it has been regarded as a single CGU. Accordingly, E&P CGUs include 40 groups of fields comprising 179 fields.

The drilling rigs are not part of any grouping of assets and are assessed for impairment separately.

#### b) Refining, transportation and marketing CGUs:

i) Downstream CGU: comprises refineries and associated assets, terminals and pipelines, as well as logistics assets operated by Transpetro, with a combined and centralized operation of logistical and refining assets in Brazil. These assets are managed with a common goal of achieving efficiency, profitability and strategic value long term on a nationwide basis. They are not operated for the generation of profit by asset/location. The operational planning is made in a centralized manner and these assets are not managed, measured or evaluated by their individual results. The refineries do not have autonomy to choose the oil to be processed, the mix of oil products to produce, the markets in which these products will be traded, which amounts will be exported, which intermediaries will be received and to decide the 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;

iii) CGU Second Refining Unit of RNEST – comprises assets under construction of the 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 *PetroquímicaSuape* and *Citepe* petrochemical plants until November 2016. Since December 2016, these assets have not been aggregated as a CGU following their reclassification to assets held for sale.

v) Transportation CGU: comprises assets relating to Transpetro's fleet of vessels. In December 2017, Transpetro's management decided to postpone the completion of three vessels under construction that were PANAMAX class (EI-512, EI-513 and EI-514) for an indefinite period of time and, thus, these assets are no longer part of Transportation CGU and were reviewed and tested for impairment separately;

vi) Hidrovia CGU: comprises the fleet of vessels of the Hidrovia project (transportation of ethanol along the Tietê River) that are under construction. In 2016, they were removed from the Transportation CGU since the project was delayed for an extended period of time;

vii) SIX CGU: shale processing plant; and

viii) Other operations abroad defined as the smallest group of assets that generates independent cash flows.

**c) Gas & Power CGUs:**

i) Natural gas CGU: comprises natural gas pipelines and natural gas processing plants. Reflecting the Business and Management Plan – BMP 2018-2022 approved in December 2017 that foresees the entire withdrawal from petrochemical interests, along with the lower expectation of a successful sale of fertilizers and nitrogen products plants, all of the nitrogen products plants that were still grouped into this CGU started to be assessed for impairment separately.

ii) CGU UFN III: comprises assets under construction of the fertilizer plant Unidade de Fertilizantes e Nitrogenados III (UFN III). Since 2014, the Company has decided to postpone this project for an extended period of time;

iii) Power CGU: comprises the thermoelectric power generation plants; and

iv) Other CGUs: operations abroad defined as the smallest group of assets that generates largely independent cash flows.

**d) Distribution CGU:**

Mainly comprises the distribution assets related to the operations of Petrobras Distribuidora S.A.

**e) Biofuels CGUs:**

i) Biodiesel CGU: An integrated unit of biodiesel plants defined based on the production planning and operation process, that takes into consideration domestic market conditions, the production capacity of each plant, as well as the results of biofuels auctions and raw materials supply.

ii) Quixadá CGU: comprises the assets of Quixadá Biofuel Plant. In September 2016, it was removed from the Biodiesel CGU following the decision to discontinue its operations.

Investments in associates and joint ventures, including goodwill, are assessed for impairment separately.

Further information on impairment testing is set out in notes 4.10, and 14.

**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 defendant in arbitrations and in legal and administrative proceedings involving civil, tax, labor and environmental issues arising from the normal course of its business, and makes use of estimates to recognize the amounts and the probability of outflow of resources, based on reports and technical assessments from legal advisors and on the management's assessment.

These estimates are performed individually, or aggregated if there are cases with similar characteristics, primarily considering factors such as assessment of the plaintiff's demands, consistency of the existing evidence, jurisprudence on similar cases and doctrine on the subject. Specifically for actions of outsourced employees, the Company estimates the expected loss based on a statistical procedure, due to the amount of actions with similar characteristics.

Arbitral, legal and administrative decisions against the Company, new jurisprudence and changes to the existing evidences can result in changes regarding the probability of outflow of resources and on the estimated amounts, according to the assessment of the legal basis.

Note 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.

## **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 21.5.

## **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, limited to a threshold based on a historical percentage of the oil production that is usually sold abroad. Future exports forecasts are reviewed whenever the Company reviews its 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**

Allowance for impairment of trade receivables is recognized when there is objective evidence that trade receivables are impaired. 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.

## **6. New standards and interpretations**

### **6.1. International Accounting Standards Board (IASB)**

#### **IFRS 9 – Financial Instruments**

The International Financial Reporting Standard 9 - Financial Instruments (IFRS 9), issued by the IASB, is mandatorily effective for annual periods beginning on or after January 1, 2018 and supersedes IAS 39 – Financial Instruments: Recognition and Measurement (IAS 39).

IFRS 9 sets out, among others, new requirements for: classification and measurement of financial assets, measurement and recognition of expected credit losses on financial assets, changes in the terms of financial assets and financial liabilities, hedge accounting and related disclosures.

As permitted by IFRS 9, the company does not intend to restate prior periods with respect to classification and measurement (including impairment and modification of financial assets and liabilities) changes. Differences in the carrying amounts of financial assets and financial liabilities resulting from the adoption of IFRS 9 will be recognized in retained earnings at January 1, 2018. New hedge accounting requirements should generally be applied prospectively.

The impacts arising from IFRS 9 on the Company's equity at January 1, 2018 are immaterial. The principal impacts that IFRS 9 will have on the Company's financial statements are shown below:

#### **Classification and measurement**

IFRS 9 establishes a new classification approach for financial assets that reflects the business model in which assets are managed and their contractual cash flow characteristics.

#### **Modification of contractual cash flow of financial assets and liabilities**

IFRS 9 establishes that if a financial asset or liability measured at amortized cost has its terms modified and this change is not substantial, its gross carrying amount should reflect the discounted present value of its cash flows under the new terms using the original effective interest rate.

#### **Impairment of Financial Assets**

IFRS 9 replaces the 'incurred loss' model in IAS 39 with an 'expected credit loss' model.

The Company will apply the practical expedient of calculating the expected credit losses on short-term trade receivables using a provision matrix.

#### **Hedge Accounting**

IFRS 9 provides for new requirements with respect to hedge accounting such as the prohibition of voluntary discontinuation of the hedge accounting, changes in the measurement of hedge effectiveness that must take into account the time value of money, as well as the expansion of certain disclosure requirements.

All cash flow hedging relationships of highly probable future exports designated under IAS 39 also qualify for hedge accounting under IFRS 9 and are regarded as continuing hedging relationships.

IFRS 9 does not change the criteria for accounting for cash flow hedge.

**IFRS 15 – Revenue from Contracts with Customers**

On January 1, 2018, the International Financial Reporting Standard 15 - Revenue from Contracts with Customers (IFRS 15) became effective. This Standard, issued by the IASB, supersedes a number of Standards and Interpretations, including IAS 18 - Revenue.

The objective of this Standard is to establish the principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from a contract with a customer. This Standard should be applied to all contracts with customers, except to non-monetary exchanges between entities in the same line of business to facilitate sales to customers or potential customers, or when the transaction is within the scope of another Standard.

The requirements of IFRS 15 establish a comprehensive approach to determine when and in what amount of revenue from a contract with a customer that should be recognized. To achieve this, the newly enacted standard uses the following five step approach: 1) identify the contract with a customer; 2) identify the separate performance obligations in the contract; 3) determine the transaction price; 4) allocate the transaction price to the separate performance obligations in the contract, 5) recognize revenue when the entity satisfies a performance obligation. A performance obligation is satisfied when the customer obtains control of that good or service.

For the purposes of the transition requirements an entity shall apply this Standard using one of the following two methods: (i) retrospectively to each prior reporting period presented in accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, subject to the practical expedients; or (ii) retrospectively with the cumulative effect of initially applying this Standard recognized at the date of initial application. The company intends to apply the second method as of January 1, 2018, and so far no cumulative effects have been identified to be recognized.

The changes in the Company's accounting policies arising from IFRS 15 only affect the way certain revenues from contracts with customers are disclosed within the statement of income and do not impact net income. In 2017, it would be equivalent to a 1.7% reduction in revenues. The main changes are the following:

**The Company acting as an agent**

In accordance with accounting policies at December 31, 2017, the Company is regarded as the principal in certain transactions. Therefore, the revenues from these sales, cost of the product sold and sales expenses are presented separately in the statement of income. However, under the new standard's requirements, the company acts as an agent because it does not obtain control of goods or services provided by another party before it is transferred to the customer. From January 1, 2018, revenues from these sales will be presented in the statement of income net of their cost of sales and sales expenses.

**Non-exercised right Income (breakage)**

In accordance with accounting policies at December 31, 2017, the Company regards the income from rights not exercised by customers in certain take or pay and ship or pay contracts as penalties revenue and presents it as other income and expenses in the statement of income. However, according to the new standard's requirements, the Company will account for and present its income from rights not exercised by customers as sales revenues in the statement of income, as from January 1, 2018.

**IFRIC 22 – Foreign Currency Transactions and Advance Consideration**

As of January 1, 2018, the IFRIC Interpretation 22 - Foreign Currency Transactions and Advance Consideration (IFRIC 22), issued by the IASB, became mandatorily applicable.

IFRIC 22 applies to a foreign currency transaction (or part of it) when an entity recognizes a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration before the entity recognizes the related asset, expense or income (or part of it). IFRIC 22 clarifies that the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

Based on the transition provisions of IFRIC 22, the Company will apply the new requirements prospectively from the effective date of the interpretation and did not identify any material impact on its financial statements.

### **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 the following standards and related interpretations: IAS 17 - Leases; IFRIC 4 - Determining whether an Arrangement contains a Lease; SIC-15 - Operating Leases – Incentives; and SIC-27 - Evaluating the Substance of Transactions Involving the Legal Form of a Lease.

IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases, from the lessees and lessors’ perspectives. This Standard shall be applied to all leases, except for:

- Leases to explore for or use minerals, oil, natural gas and similar non-regenerative resources;
- Leases of biological assets within the scope of IAS 41 Agriculture held by a lessee;
- Service concession arrangements within the scope of IFRIC 12 Service Concession Arrangements;
- Licenses of intellectual property granted by a lessor within the scope of IFRS 15 Revenue from Contracts with Customers; and
- Rights held by a lessee under licensing agreements within the scope of IAS 38 Intangible Assets for such items as motion picture films, video recordings, plays, manuscripts, patents and copyrights.

Among the changes for lessees, IFRS 16 eliminates the classification of leases as either operating leases or finance leases as is required by IAS 17. Instead, it introduces a single lessee accounting model, in which all leases result in the recognition of a right to use an asset at the start of the lease. If lease payments are made over time, a financial liability will also be recognized. Accordingly, the adoption of IFRS 16 may cause a significant increase in assets and liabilities presented in statement of financial position.

Following the adoption of IFRS 16, lease payments under operating leases will not be charged to results on accrual basis. Instead, depreciation of the right to use a leased asset, as well as the finance expenses and foreign exchange gains or losses over the finance liability will affect the results. Finance expenses may qualify for borrowing costs capitalization in accordance with IAS 23 and foreign exchange gains and losses may be first recognized within equity if designated as hedge instrument, as set out in IFRS9.

For lessors, IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17. Accordingly, a lessor continues to classify its leases as operating leases or finance leases, and to account for those two types of leases differently.

The Company is assessing the impacts that IFRS 16 will have on its financial statements, is unable to make a reasonable estimation of those impacts at this stage of the implementation process. Once the estimated impact can be evaluated with sufficient reliability, it may result in the need to renegotiate the terms of certain debt instrument with BNDES (Brazilian Development Bank) and other financial institutions, especially regarding the covenants clauses related to debt level.

## 7. Cash and cash equivalents and Marketable securities

### Cash and cash equivalents

	12.31.2017	12.31.2016
Cash at bank and in hand	1,570	591
Short-term financial investments		
- In Brazil		
Brazilian interbank deposit rate investment funds and other short-term deposits	1,176	1,180
Other investment funds	17	131
	1,193	1,311
- Abroad		
Time deposits	6,237	3,085
Automatic investing accounts and interest checking accounts	11,287	9,780
U.S. Treasury bills	-	5,217
Other financial investments	2,232	1,221
	19,756	19,303
Total short-term financial investments	20,949	20,614
<b>Total cash and cash equivalents</b>	<b>22,519</b>	<b>21,205</b>

The principal uses of funds in 2017 were for debt service obligations (US\$ 43,076) including pre-payment of debts, and capital expenditures (US\$ 13,639) and they were principally provided by operating activities (US\$ 27,708), proceeds from financing (US\$ 27,112) and disposal of assets (US\$ 3,091).

Short-term financial investments in Brazil primarily consist of investments in funds holding Brazilian Federal Government Bonds and related repo investments that mature within three months as of the date of their acquisition. Short-term financial investments abroad comprise time deposits that mature in three months or less from the date of their acquisition, highly-liquid automatic investment accounts, interest checking accounts and other short-term fixed income instruments.

### Marketable securities

			12.31.2017	12.31.2016
	In Brazil	Abroad	Total	In Brazil
Trading securities	1,067	-	1,067	784
Available-for-sale securities	153	609	762	-
Held-to-maturity securities	120	-	120	90
<b>Total</b>	<b>1,340</b>	<b>609</b>	<b>1,949</b>	<b>874</b>
Current	1,276	609	1,885	784
Non-current	64	-	64	90

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.

Available-for-sale securities in Brazil refer substantially to São Martinho's common shares granted to the wholly-owned subsidiary Petrobras Biocombustível S.A. - PBIO (24 million shares) as consideration for PBIO's shares in Nova Fronteira. For further information on this transaction see note 10.3. Available-for-sale securities abroad refer to UK government bonds amounting to GBP 475 million and maturing in March 2018.

## 8. Trade and other receivables

### 8.1. Trade and other receivables, net

	12.31.2017	12.31.2016
Trade receivables - Third parties	6,995	6,128
Related parties		
Investees (note 19.1)	530	555
Receivables from the electricity sector (note 8.4) (*)	5,247	4,922
Petroleum and alcohol accounts - receivables from Brazilian Government (19.2)	251	268
Finance lease receivables	550	1,223
Receivables from divestments in the Nova Transportadora do Sudeste (note 10.1)	872	-
Other receivables	1,647	1,650
	16,092	14,746
Allowance for impairment of trade and other receivables	(5,945)	(5,426)
<b>Total</b>	<b>10,147</b>	<b>9,320</b>
Current	4,972	4,769
Non-current	5,175	4,551

(\*) Includes the amount of US\$ 239 at December 31, 2017 (US\$ 251 at December 31, 2016) regarding finance lease receivable from Amazonas Distribuidora de Energia.

### 8.2. Trade receivables overdue - Third parties

	12.31.2017	12.31.2016
Up to 3 months	596	403
From 3 to 6 months	52	67
From 6 to 12 months	83	411
More than 12 months	3,573	2,650
<b>Total</b>	<b>4,304</b>	<b>3,531</b>

### 8.3. Changes in the allowance for impairment of trade and other receivables

	12.31.2017	12.31.2016
Opening balance	5,426	3,656
Additions	843	1,325
Write-offs	(110)	(9)
Reversals	(135)	(171)
Cumulative translation adjustment	(79)	625
<b>Closing balance</b>	<b>5,945</b>	<b>5,426</b>
Current	2,068	2,010
Non-current	3,877	3,416

As established in IFRS 9, from 2018 onwards, impairment of trade receivables will be based on the expected credit loss model, no longer on the incurred loss, as set out in note 6.

On May, 22 2017, the Company terminated a finance lease agreement relating to the *Vitória* 10,000 drilling rig, owned by the indirect wholly-owned subsidiary Drill Ship International BV – DSI BV and leased to the Deep Black Drilling LLP – DBD, an entity from Schahin group. On July 19, 2017, a court ruling confirmed this contract termination and, shortly after, Schahin filed a request to suspend its effects, which was denied by the court on July 28, 2017.

Due to the finance lease agreement termination, the Company assessed the value in use of the drilling rig based on the cash flows projected to arise from its commitment to certain Petrobras Group projects, and compared it to the carrying amount of the finance lease receivable at June 30, 2017. As result, the Company wrote-down US\$ 254 as other income and expenses in the second quarter of 2017.

In addition, on August 9, 2017, measures were adopted to obtain possession of this drilling rig, which effectively occurred on August 16, 2017. As a result of this matter, in the third quarter of 2017 the Company added US\$ 24 to the allowance for impairment due to additions to the finance lease receivable and contractual fine, as well as derecognized the finance lease receivable and recognized the drilling rig as equipment within Property, plant and equipment in the amount of US\$ 387.

#### 8.4. Trade receivables – electricity sector (isolated electricity system in the northern region of Brazil)

	As of 12.31.2016	Sales	Amounts received	Transfers (*)	Write-offs	Recognition allowance for impairment, net of reversals	Inflation indexation	CTA	As of 12.31.2017
<b>Related parties (Eletrobras Group)</b>									
Eletrobras Distribuição Amazonas - AME-D	2,475	248	(549)	405	-	(277)	303	(42)	2,563
Centrais Elétricas de Rondônia - CERON	369	-	(21)	-	-	-	34	(7)	375
Others	95	47	(50)	-	(18)	27	12	(1)	112
<b>Subtotal</b>	<b>2,939</b>	<b>295</b>	<b>(620)</b>	<b>405</b>	<b>(18)</b>	<b>(250)</b>	<b>349</b>	<b>(50)</b>	<b>3,050</b>
<b>Third parties</b>									
Cia de Gás do Amazonas - Cigás	143	793	(395)	(405)	-	(3)	8	-	141
Centrais Elétricas do Pará - Celpa	-	104	(129)	-	(8)	35	-	-	2
Others	4	210	(195)	-	(19)	8	2	(1)	9
<b>Subtotal</b>	<b>147</b>	<b>1,107</b>	<b>(719)</b>	<b>(405)</b>	<b>(27)</b>	<b>40</b>	<b>10</b>	<b>(1)</b>	<b>152</b>
<b>Trade receivables, net</b>	<b>3,086</b>	<b>1,402</b>	<b>(1,339)</b>	<b>-</b>	<b>(45)</b>	<b>(210)</b>	<b>359</b>	<b>(51)</b>	<b>3,202</b>
<b>Trade receivables - Eletrobras Group</b>	<b>4,922</b>	<b>295</b>	<b>(620)</b>	<b>405</b>	<b>(18)</b>	<b>-</b>	<b>349</b>	<b>(86)</b>	<b>5,247</b>
(-) Allowance for impairment	(1,983)	-	-	-	-	(250)	-	36	(2,197)
<b>Subtotal</b>	<b>2,939</b>	<b>295</b>	<b>(620)</b>	<b>405</b>	<b>(18)</b>	<b>(250)</b>	<b>349</b>	<b>(50)</b>	<b>3,050</b>
<b>Trade receivables - Third parties</b>	<b>515</b>	<b>1,107</b>	<b>(719)</b>	<b>(405)</b>	<b>(27)</b>	<b>-</b>	<b>10</b>	<b>(5)</b>	<b>476</b>
(-) Allowance for impairment	(368)	-	-	-	-	40	-	4	(324)
<b>Subtotal</b>	<b>147</b>	<b>1,107</b>	<b>(719)</b>	<b>(405)</b>	<b>(27)</b>	<b>40</b>	<b>10</b>	<b>(1)</b>	<b>152</b>
<b>Trade receivables - Total</b>	<b>5,437</b>	<b>1,402</b>	<b>(1,339)</b>	<b>-</b>	<b>(45)</b>	<b>-</b>	<b>359</b>	<b>(91)</b>	<b>5,723</b>
(-) Allowance for impairment	(2,351)	-	-	-	-	(210)	-	40	(2,521)
<b>Trade receivables, net</b>	<b>3,086</b>	<b>1,402</b>	<b>(1,339)</b>	<b>-</b>	<b>(45)</b>	<b>(210)</b>	<b>359</b>	<b>(51)</b>	<b>3,202</b>

(\*) 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.

The Company supplies fuel oil, natural gas, and other products to entities that operate in the city of Manaus and 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.

The total cost of power generation to Manaus and the isolated electricity system includes the costs to products supplied by the Company. Local consumers partially cover these costs based on a threshold comprising the average cost of the energy and potency traded in the Regulated Procurement Environment (*Ambiente de Contratação Regulada* – ACR). Most of the funds for the payment for these costs comes from the Fuel Consumption Account (*Conta de Consumo de Combustível* – CCC), a component of the Brazilian Energy Development Account (*Conta de Desenvolvimento Energético* - CDE).

The regulation of CCC and CDE underwent some changes in the last few years, notably the ones arising from Provisional Measure 579/2012, signed into Law No. 12,783/2013, and to Provisional Measure 735/2016, signed into Law No. 13,360/2016.

These changes, along with supervision procedures carried out run by the Brazilian National Electricity Agency (*Agência Nacional de Energia Elétrica - ANEEL*) over these accounts and its beneficiaries (power plants controlled by Eletrobras) caused instability and decrease in amount of funds transferred from CCC since 2013, which increased the default rate of those customers to the Company, notably relating to Eletrobras Distribuição Amazonas (AME-D).

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 debt acknowledgement agreements 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 CDE to the CCC. This amount has been adjusted by the Selic interest rate (Brazilian short-term interest rate) on a monthly basis and the first of 120 monthly installments was paid in February 2015.

The contractual amortization clauses in the debt acknowledgement agreements establish 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, which did not occur until December 31, 2017 due to the characteristics of its initial amortizations along with its indexation. Despite some periodic delays, these payments have continued.

Considering the restructuring of the electricity sector and the expected effects arising from the Normative Instruction 679/2015 enacted by ANEEL, the Company expected a decrease on these defaults rates, which actually did not occur.

Accordingly, the Company has adopted measures to reduce the default rate, mainly:

- Judicial collection of overdue receivables from companies of Eletrobras Group, with respect to fuel oil, natural gas and other liquid fuels;
- Suspension of fuels supply on credit;
- Register of entities controlled by Eletrobras as delinquent companies in the Brazilian public sector records of overdue receivables; and
- Register of AME as a delinquent company in ANEEL records from April 2016 to May 2017. In May 2017, ANEEL canceled this registration alleging fuel purchases are non intra sector debt. The Company appealed the ANEEL decision.

In 2017, the Company accounted for allowances for impairment of trade receivables, net of reversals, totaling US\$ 210 (US\$ 345 in 2016) primarily due to partial defaults relating to supplies of natural gas, partially offset by overdue receivables paid by CELPA.

Moreover, the Company has negotiated with Eletrobras the settlement of the receivables relating to Eletrobras Group. The Company is assessing the provisions approved at Eletrobras' Shareholder's General Meeting, held on February 8, 2018, primarily the segregation of operating segments and the privatization of companies controlled by Eletrobras.

## 9. Inventories

	12.31.2017	12.31.2016
Crude oil	3,647	3,524
Oil products	2,814	2,649
Intermediate products	613	700
Natural gas and LNG (*)	67	134
Biofuels	173	211
Fertilizers	25	26
<b>Total products</b>	<b>7,339</b>	<b>7,244</b>
<b>Materials, supplies and others</b>	<b>1,150</b>	<b>1,243</b>
<b>Total</b>	<b>8,489</b>	<b>8,487</b>
Current	8,489	8,475
Non-current	-	12

(\*) Liquefied Natural Gas

In 2017, the Company recognized as cost of sales US\$ 66 reducing inventories to net realizable value (US\$ 343 in 2016).

In 2017, the Company had pledged crude oil and oil products volumes as collateral for the Terms of Financial Commitment (TFC) signed by Petrobras and Petros in 2008, in the amount of US\$ 4,067 (US\$ 1,979 as of December 31, 2016), as set out in note 22. In the third quarter of 2017, the amount of collateral was revised and updated in order to reflect the increase in commitments undertaken under the TCF.

## 10. Disposal of Assets and other changes in organizational structure

The Company has an active partnership and divestment program which takes into account opportunities for divestments in several areas in which it operates. The divestment portfolio is dynamic, meaning that market conditions, legal matters and negotiations may affect the Company's evaluation of ongoing and potential transactions. This program is an essential initiative in the Company's 2018-2022 Business and Management Plan (2018-2022 BMP) which, along with other initiatives, will enable the Company to reduce and improve its indebtedness and debt profile, respectively. For the 2017-2018 period, the target of proceeds from divestments is US\$ 21 billion.

On December 7, 2016, the Brazilian Federal Auditor's Office (*Tribunal de Contas da União – TCU*) filed a civil action prohibiting the Company from commencing additional divestment projects and entering into sales agreements, except for transactions in their final stages at that time.

After the TCU's assessment of the divestments decision-making methodology and the Company's review of its divestment policies, the TCU's civil action was dismissed, allowing the partnership and divestment program to continue based on the Company's revised methodology.

Accordingly, the Company's Executive Board approved the new divestment portfolio on March 30, 2017, consisting of projects that follow the revised divestment methodology in compliance with the TCU's decision.

### 10.1. Disposal of assets

#### 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), a group entity from the distribution business segment, held through Petrobras Caribe Ltda.

This transaction was concluded on January 4, 2017 and the net proceeds from this sale were US\$ 470, of which US\$ 90 was received via distribution of dividends after taxes on December 9, 2016 and the remaining US\$ 380 was paid by Southern Cross Group at the transaction closing. Accordingly, the Company recognized a gain of US\$ 0.8 as other income and expenses, in the first quarter of 2017, taking into account the impairment of US\$ 82 at December 31, 2016.

In addition, a US\$ 79 loss was recycled from shareholders' equity to other income and expenses within the income statement, reflecting the reclassification of cumulative translation adjustments resulting from the depreciation of the Chilean Peso against the U.S Dollar from the time of the acquisition of this investment to its disposal (see note 23.4).

#### **Disposal of interest in Nova Transportadora do Sudeste (NTS) and related changes in organizational structure**

On September 22, 2016, the Company's Board of Directors approved the sale of a 90% interest in Nova Transportadora do Sudeste - NTS, a group entity from the gas and power business segment, 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 disposal occurred after a corporate restructuring intended to concentrate the transportation assets of the southeastern region in NTS.

The corporate restructuring of NTS comprised an increase in its share capital in the amount of US\$ 711, through net assets of the Company's subsidiary Transportadora Associada de Gás S.A. – TAG. Subsequently TAG had a reduction in its share capital, in the amount of its investment in NTS (US\$ 800), which was transferred to Petrobras. This restructuring maintained the same terms of the Firm Gas Transportation Agreements associated to the assets involved on the transaction.

On April 4, 2017, after performing all conditions precedent and adjustments provided for in the purchase and sale agreement, this transaction was completed in the amount of US\$ 5.08 billion upon the payment of US\$ 4.23 billion on this date, made up of: US\$ 2.59 billion from the sale of shares, of which US\$ 109 was allocated to an escrow account pledged as collateral for charges associated with the repair of pipelines; and US\$ 1.64 billion relates to the issuance of convertible debentures by NTS, maturing in 10 years, as a replacement of the debt to PGT. The remaining balance (US\$ 850, also relating to the sale of shares) will be paid in the fifth year, bearing annual interests at a fixed rate, as established in the purchase and sale agreement.

At the transaction closing, the Company recognized a gain on this transaction in the amount of US\$ 2,169 accounted for as other income and expenses, which includes a US\$ 217 gain on the remeasurement at fair value of the remaining 10% interest in NTS.

On October 10, 2017, the final price adjustment was settled in the amount of US\$ 20, totaling a gain of US\$ 2,189 on this transaction.

#### **Disposal of Guarani**

On December 28, 2016, the Company's wholly-owned subsidiary in the biofuels business segment - 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.

On February 3, 2017, this transaction was concluded pursuant to the payment of US\$ 203, after all conditions precedent were performed by Tereos Participations S.A. In 2016, impairment losses amounting to US\$ 118 were accounted for as results in equity-accounted investments with respect to Guarani.

Additionally, a gain of US\$ 42 was recycled from shareholders' equity to other income and expenses within the income statement, reflecting the reclassification of cumulative translation adjustment resulting from the appreciation of Mozambican Metical against the Brazilian Real from the acquisition of this investment to its disposal (see note 23.4). This gain was partially offset by a US\$ 22 loss also recycled from shareholders' equity to other income and expenses reflecting cumulative losses relating to cash flow hedge accounting.

**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, a group entity from the RT&M business segment (Refining, Transportation and Marketing), to Companhia Ultragaz S.A., a subsidiary of Ultrapar Participações S.A. In January 2017, this sale was approved at Ultrapar's and Petrobras' Shareholders' Meetings in the amount of US\$ 828.

According to an official statement released by the General Superintendence of CADE (SG) on June 30, 2017, additional diligence was required in order to make a decision regarding on market concentration aspects of this sale. On August 28, 2017, the SG reported some concerns about market concentration that may result from this transaction and submitted its opinion to the CADE court.

Based on pending conditions precedent to the transaction, including CADE approval, the related assets and liabilities remained classified as held for sale as of December 31, 2017.

On February 28, 2018, the CADE court ruled on this matter and dismissed this sale. This decision is subject to a termination clause within the sales and purchase agreement that provides for compensation to the Company, amounting to US\$ 88, which were received on March 13, 2018.

**Disposal of Suape and Citepe petrochemical plants**

On December 28, 2016, the Company's Board of Directors approved the disposal of the interests in the wholly-owned subsidiaries Companhia Petroquímica de Pernambuco (PetroquímicaSuape) and Companhia Integrada Têxtil de Pernambuco (Citepe), both from the RT&M business segment, to Grupo Petrotex S.A. de C.V. and to 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 fully disbursed at the transaction closing. This amount remains subject to adjustments relating to working capital, net debt and recoverable taxes.

On February 21, 2017, the transaction was approved at the Grupo Alfa's Board of Directors Meeting and, on March 27, 2017, at Petrobras' Shareholders' Meeting.

According to an official statement released by the General Superintendence of CADE (SG) on October 10, 2017, additional diligence was required in order to conclude on market concentration aspects of this sale. On December 15, 2017, the SG concluded its opinion, recommending to the CADE Court the approval of this transaction subject to the execution of an Agreement on Concentration of Control (*Acordo de Controle de Concentração – ACC*).

Due to some customary conditions precedent to its closing, including the CADE approval, the related assets and liabilities remained classified as held for sale at December 31, 2017.

On February 7, 2018, the CADE approved this transaction, however, other customary conditions precedent are still pending to date.

**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 E&P 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 lara, comprising Sururu, Berbigão and West of Atapu fields, which are subject to unitization agreements with Entorno de lara (an area under the Assignment Agreement in which the Company holds 100% and is located in the Block BM-S-11). The Company will continue to operate the block;
- 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 retain a 10% interest in this area; and
- Transfer of the Company's 50% interests in Termobahia S.A, including the power plants Celso Furtado and Rômulo Almeida. In 2016, the Company recognized an impairment loss on this transaction in the amount of US\$ 47.

On February 28, 2017, the Company and Total signed purchase and sale agreements with respect to the aforementioned assets. Total will pay to the Company the amount of US\$ 1,675 in cash for assets and services, subject to price adjustments, as well as contingent payments in the amount of US\$ 150, associated with the production volume in Lapa field. In addition, a long-term line of credit in the amount of US\$ 400 will be provided by Total, which may be used to fund the Company's investments in the lara fields.

The aforementioned agreements supplement the ones already executed on December 21, 2016, such as: (i) the Company's preemptive right to purchase a 20% interest in block 2 of the Perdido Foldbelt area, in the Mexican sector of the Gulf of Mexico, (ii) the joint exploration studies in the exploratory areas of Equatorial Margin and in Santos Basin; and (iii) the Technological partnership agreement in the areas of digital petrophysics, geological processing and subsea production systems.

At December 31, 2017, these transactions were still subject to approval by the relevant authorities, the potential exercise of preemptive rights by current lara partners, and other customary conditions precedent. Accordingly, the related assets and liabilities were classified as held for sale at December 31, 2017.

On January 15, 2018, Petrobras and Total closed the aforementioned transfers of interests of lara and Lapa fields, after performing all conditions precedent to this transaction.

This transaction totaled US\$ 1.95 billion, including price adjustments, but not including the long-term line of credit and the contingent payments.

The closing of the power plants deal is still subject to approval by the relevant authorities and other customary conditions precedent.

#### **Initial public offering (IPO) of Petrobras Distribuidora (BR)**

On July 11, 2017, the Company's Board of Directors approved an IPO of its subsidiary Petrobras Distribuidora (BR) through a secondary public offering of common shares, aiming at joining the market tier in the Brazilian stock exchange that requires the highest level of corporate governance, so named New Market (*Novo Mercado*).

Accordingly, on September 5, 2017, the Extraordinary General Shareholder's Meeting of BR approved the changes in its bylaws taking into account relevant rules governing the requirements needed to join the New Market tier (Law 13.303/2016 and Decree 8.945/2016).

On December 14, 2017, the Brazilian Securities and Exchange Commission (CVM) accepted the registration of the public offering of secondary distribution of common shares for Petrobras Distribuidora (BR), held the following day in Brazil, in the non-organized over-the-counter market, pursuant to applicable rules.

The Final Prospectus of the Offering reported the sale of 291,250,000 common shares ("Base Lot") at the price of US\$ 4.50 dollars per share. This offering was increased by an additional lot of 43,687,500 shares, as allowed for in the Final Prospectus, under the same conditions and at the same price of issue as initially offered ("Additional Lot").

The offering was closed on December 22, 2017, with a total distribution of 334,937,500 shares, in the total amount of US\$ 1,507, representing a 28.75% stake of BR equity. Considering the book value of the investment, in the proportion of the disposed shares, and the transaction costs, the final gain totaled US\$ 719, US\$ 479 net of taxes, accounted for within equity, since the Company has kept the control of BR, as set out in note 23.2.

	Basis Lot	Additional Lot	Total
% of disposed stake	25.00%	3.75%	28.75%
Number of shares	291,250,000	43,687,500	334,937,500
Offering price of common shares (in U.S. dollars)	4.50	4.50	4.50
Value of the offering	1,310	197	1,507
Book value of the disposed shares	(654)	(98)	(752)
Transaction costs	(31)	(5)	(36)
Gain accounted for in equity	625	94	719

### Sale of Azulão field

On November 22, 2017, the Company entered into an agreement with Parnaíba Gás Natural S.A., a subsidiary of Eneva S.A, concerning the assignment of its entire participation in the Azulão Field (Concession BA-3), located in the state of Amazonas. The total amount of the operation is US\$ 54.5 and will be paid at the transaction closing.

The completion of this deal is subject to the fulfillment of usual conditions precedent, including approval by ANP. Accordingly, the related assets and liabilities were classified as held for sale at December 31, 2017.

### Strategic alliance with Statoil

On December 18, 2017, the Company entered into agreements with the Norwegian company Statoil relating to the assets of the strategic partnership, in continuity with the Heads of Agreement ("HoA") signed and disclosed on September 29, 2017. The main signed contracts are:

- (i) Strategic Alliance Agreement ("SAA") - agreement describing all documents related to the strategic partnership, covering all negotiated initiatives.
- (ii) Sale and Purchase Agreement ("SPA") - sale of 25% of Petrobras' interest in the Roncador field to Statoil.
- (iii) Strategic Technical Alliance Agreement ("STAA") - strategic agreement for technical cooperation aiming at maximizing the value of the asset and focusing on increasing the recoverable oil volume (recovery factor), including the extension of the useful life of the field;
- (iv) Gas Term Sheet - Statoil may hire a certain processing capacity of natural gas at the Cabiúnas Terminal (TECAB) for the development of the BM-C-33 area, where the companies already are partners and Statoil is the operator.

The strategic alliance, among other goals, aims at applying the Statoil's expertise in mature fields in the North Sea towards increasing the recovery factor of Roncador field. Accordingly, the parties signed the STAA for technical cooperation and the joint development of projects.

The SPA has a total amount of US\$ 2.9 billion, made up of US\$ 118 paid at the execution date of the agreement, contingent payments relating to investments in projects to increase the recovery factor of the field, limited to US\$ 550, and the remaining amount will be paid at the transaction closing. Accordingly, the related assets and liabilities remained classified as held for sale at December 31, 2017 and, as a result, an impairment charge was recognized, as set out in note 14.1.

On March 13, 2018, the CADE approved this transaction. However, its closing still depends on the fulfillment of other conditions precedent, such as the approval of ANP.

## 10.2. Assets classified as held for sale

The major classes of assets and liabilities classified as held for sale are shown in the following table:

					12.31.2017	12.31.2016
	E&P	Distribution	RT&M	Gas & Power	Total	Total
<b>Assets classified as held for sale</b>						
Cash and Cash Equivalents	-	-	8	-	8	109
Trade receivables	-	-	117	-	117	205
Inventories	-	-	128	-	128	172
Investments	-	-	5	-	5	378
Property, plant and equipment	4,370	1	285	95	4,751	4,420
Others	-	-	309	-	309	444
<b>Total</b>	<b>4,370</b>	<b>1</b>	<b>852</b>	<b>95</b>	<b>5,318</b>	<b>5,728</b>
<b>Liabilities on assets classified as held for sale</b>						
Trade Payables	29	-	73	-	102	135
Finance debt	-	-	-	-	-	14
Provision for decommissioning costs	170	-	-	-	170	52
Others	-	-	119	-	119	291
<b>Total</b>	<b>199</b>	<b>-</b>	<b>192</b>	<b>-</b>	<b>391</b>	<b>492</b>

As of December 31, 2017, the amounts mainly refer to assets and liabilities transferred following the approvals of the disposal of Liquigás, Petroquímica Suape and Citepe, interest in the concession areas named as lara and Lapa, as well as interests in the thermoelectric power generation plants Rômulo Almeida and Celso Furtado, 25% Roncador field and entire shareholding Azulão field. At December 31, 2016, the amounts also comprise assets and liabilities transferred following the approvals of the disposals of NTS, PCD, Guarani and Nova Fronteira.

## 10.3. Other changes in organizational structure

### Corporate restructuring in Petrobras Distribuidora (BR)

In preparation for the IPO of BR, on August 25, 2017, the Company's Board of Directors approved the corporate restructuring of BR through the following transactions:

- On August 31, 2017, Petrobras Parent Company increased the share capital of BR by US\$ 2,006 in order to prepay borrowings owned by BR and unconditionally guaranteed by Petrobras; and
- Partial split-off of BR into the wholly-owned subsidiary Downstream Participações Ltda. ("Downstream"). The split-off relates to the collateralized receivables held by BR resulting from debt acknowledgement agreement with the Eletrobras group and other receivables from other entities of Petrobras Group also held by BR, totaling the same amount of the aforementioned capital increase. These assets were incorporated by Downstream on August 31, 2017.

### Sale and merger of Nova Fronteira Bioenergia

On December 15, 2016, the Company's wholly-owned subsidiary P BIO (biofuels business segment) entered into an agreement with the São Martinho group to merge P BIO's interests in Nova Fronteira Bioenergia S.A. (49%) into São Martinho.

On February 23, 2017, São Martinho granted to P BIO additional 24 million of its common shares, corresponding to 6.593% of its total capital. These shares were accounted for as available-for-sale securities, as set out in note 7.

On December 27, 2017, the Extraordinary General Shareholder's Meeting of PBIO approved the sale of these shares through a block trade.

On February 16, 2018, PBIO disposed, through a public auction held in the Brazilian stock exchange, these 24 million of shares, at the share price of US\$ 5.72 dollars. The settlement of the transaction occurred on February 21, 2018, closing the complete disposal of PBIO's interests in São Martinho's capital.

#### **10.4. Cash flows from sales of interest with loss of control**

As shown in note 10.1, among other transactions in the scope of the Divestment and Venture Plan, in 2017 the Company disposed of its interest in certain subsidiaries over which control was lost. The following table summarizes cash flows arising from losing control in subsidiaries:

	<b>Cash received</b>	<b>Cash in subsidiary before losing control</b>	<b>Net Proceeds</b>
NTS	2,481	(88)	2,393
Petrobras Chile Distribución	470	(104)	366
<b>Total</b>	<b>2,951</b>	<b>(192)</b>	<b>2,759</b>

## 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
<b>Subsidiaries</b>						
Petrobras Netherlands B.V. - PNBV (i)	E&P	100.00	100.00	27,120	2,568	Netherlands
Petrobras Distribuidora S.A. - BR	Distribution	71.25	71.25	2,668	360	Brazil
Petrobras International Braspetro - PIB BV (i) (ii)	Several	100.00	100.00	8,197	(1,700)	Netherlands
Petrobras Transporte S.A. - Transpetro	RT&M	100.00	100.00	1,278	38	Brazil
Petrobras Logística de Exploração e Produção S.A. - PB-LOG	E&P	100.00	100.00	1,189	247	Brazil
Transportadora Associada de Gás S.A. - TAG	Gas & Power	100.00	100.00	3,766	731	Brazil
Petrobras Gás S.A. - Gaspetro	Gas & Power	51.00	51.00	590	81	Brazil
Petrobras Biocombustível S.A.	Biofuels	100.00	100.00	451	50	Brazil
Petrobras Logística de Gás - Loqiqás	Gas & Power	100.00	100.00	188	98	Brazil
Liquigás Distribuidora S.A.	RT&M	100.00	100.00	294	33	Brazil
Araucária Nitrogenados S.A.	Gas & Power	100.00	100.00	53	(152)	Brazil
Termomacaé Ltda.	Gas & Power	100.00	100.00	26	(188)	Brazil
Braspetro Oil Services Company - Brasoil (i)	Corporate	100.00	100.00	176	9	Cayman Islands
Breitener Energética S.A.	Gas & Power	93.66	93.66	219	14	Brazil
Companhia Integrada Têxtil de Pernambuco S.A. - CITEPE	RT&M	100.00	100.00	81	(56)	Brazil
Termobahia S.A.	Gas & Power	98.85	98.85	185	19	Brazil
Companhia Petroquímica de Pernambuco S.A. - PetroquímicaSuape	RT&M	100.00	100.00	(3)	(26)	Brazil
Baixada Santista Energia S.A.	Gas & Power	100.00	100.00	98	30	Brazil
Petrobras Comercializadora de Energia Ltda. - PBEN	Gas & Power	99.91	99.91	28	4	Brazil
Fundo de Investimento Imobiliário RB Logística - FII	E&P	99.20	99.20	45	14	Brazil
Petrobras Negócios Eletrônicos S.A. - E-Petro	Corporate	100.00	100.00	11	1	Brazil
Termomacaé Comercializadora de Energia Ltda	Gas & Power	99.99	99.99	3	-	Brazil
5283 Participações Ltda.	Corporate	100.00	100.00	-	-	Brazil
PDET Offshore S.A.	Corporate	100.00	100.00	(51)	(53)	Brazil
<b>Joint operations</b>						
Fábrica Carioca de Catalizadores S.A. - FCC	RT&M	50.00	50.00	77	22	Brazil
Ibiritermo S.A.	Gas & Power	50.00	50.00	56	12	Brazil
<b>Joint ventures</b>						
Loquim Logística S.A.	RT&M	17.14	17.14	315	(47)	Brazil
Cia Energética Manauara S.A.	Gas & Power	40.00	40.00	39	2	Brazil
Petrocoque S.A. Indústria e Comércio	RT&M	50.00	50.00	56	19	Brazil
Refinaria de Petróleo Rio-grandense S.A.	RT&M	33.20	33.20	54	33	Brazil
Brasympe Energia S.A.	Gas & Power	20.00	20.00	25	2	Brazil
Brentech Energia S.A.	Gas & Power	30.00	30.00	26	1	Brazil
Metanol do Nordeste S.A. - Metanor	RT&M	34.54	34.54	8	1	Brazil
Eólica Mangue Seco 4 - Geradora e Comercializadora de Energia	Gas & Power	49.00	49.00	13	2	Brazil
Eólica Manque Seco 3 - Geradora e Comercializadora de Energia	Gas & Power	49.00	49.00	13	1	Brazil
Eólica Manque Seco 1 - Geradora e Comercializadora de Energia	Gas & Power	49.00	49.00	12	1	Brazil
Eólica Manque Seco 2 - Geradora e Comercializadora de Energia	Gas & Power	51.00	51.00	12	1	Brazil
Companhia de Coque Calcinado de Petróleo S.A. - Coquepar	RT&M	45.00	45.00	(2)	(3)	Brazil
Participações em Complexos Bioenergéticos S.A. - PCBIOS	Biofuels	50.00	50.00	-	-	Brazil
<b>Associates</b>						
Sete Brasil Participações S.A. (iv)	E&P	5.00	5.00	(6,789)	(81)	Brazil
Fundo de Investimento em Participações de Sondas - FIP Sondas	E&P	4.59	4.59	-	(1)	Brazil
Braskem S.A. (v)	RT&M	36.20	47.03	2,352	1,158	Brazil
UEG Araucária Ltda.	Gas & Power	20.00	20.00	158	(16)	Brazil
Deten Química S.A.	RT&M	27.88	27.88	119	19	Brazil
Energética SUAPE II	Gas & Power	20.00	20.00	98	38	Brazil
Termoelétrica Potiquar S.A. - TEP	Gas & Power	20.00	20.00	33	-	Brazil
Nitroclor Ltda.	RT&M	38.80	38.80	-	-	Brazil
Bioenergética Britarumã S.A.	Gas & Power	30.00	30.00	-	-	Brazil
Nova Transportadora do Sudeste - NTS	Gas & Power	10.00	10.00	1,192	433	Brazil

(i) Companies abroad with financial statements prepared in foreign

(ii) 5283 Participações Ltda holds 0.0034% interest.

(iii) Cover segments abroad in E&P, RTM, Gas & Power and Distribution segments.

(iv) Despite the negative amount of net assets, allowance for losses was not recognized as the Company's obligations with Sete Brasil are limited to the investments made in this associate.

(v) Equity and net income at September 30, 2017.

The main investees of PNBV are: Tupi BV (65%), Guará BV (45%), Agri Development BV (90%), Libra (40%), Papa Terra BV (62.5%). They are dedicated to construction and lease of equipment and platforms for Brazilian E&P consortiums and are incorporated under the law of The Netherlands. PNBV's interests in these entities comprise the voting rights. In addition, Tupi BV and Guará BV have 100% interest in Iara BV and Lapa BV, respectively.

The main investees of PIB BV are the wholly-owned subsidiaries Petrobras Global Trading B.V. – PGT, Petrobras Global Finance B.V. – PGF ; Petrobras America Inc. – PAI. PGT is incorporated under the law of The Netherlands and is dedicated to the trade of oil, oil products, biofuels and LNG (liquefied natural gas), as well as to the funding of its activities in light of Petrobras Group. PGF also is incorporated under the law of The Netherlands and is the finance subsidiary of Petrobras Group, raising funds through bonds issued in the international market. PAI is incorporated under the law of United States and is dedicated to E&P and refining activities (Pasadena). In addition, Petrobras Oil & Gas B.V. – PO&G is a joint venture incorporated under the law of The Netherlands dedicated to E&P business in Africa, of which PIB BV has 50% stake.

Gaspetro holds interests in several state distributors of natural gas in Brazil that carry out, by means of concessions, public service of distribution of piped natural gas.

## 11.2. Investments in associates and joint ventures

	Balance at 12.31.2016	Investments	Restructuring, capital decrease and others	Results in equity- accounted investments	CTA	OCI	Dividends	Balance at 12.31.2017
<b>Joint Ventures</b>								
Petrobras Oil & Gas B.V. – PO&G	1,428	-	-	133	-	-	(151)	1,410
State-controlled natural gas distributors	330	-	-	80	(5)	-	(60)	345
Compañía Mega S.A. – MEGA	36	-	-	25	(1)	-	(11)	49
Petrochemical joint ventures	25	-	-	9	(1)	-	(4)	29
Other joint ventures	103	100	(5)	(81)	-	3	(16)	104
<b>Associates</b>								
Nova Transportadora do Sudeste	-	-	357	43	(8)	-	(61)	331
Petrochemical associates	1,064	-	(55)	464	(32)	131	(111)	1,461
Other associates	50	-	(3)	13	(1)	-	(11)	48
<b>Other investments</b>	16	4	(1)	-	(1)	-	-	18
<b>Total</b>	<b>3,052</b>	<b>104</b>	<b>293</b>	<b>686</b>	<b>(49)</b>	<b>134</b>	<b>(425)</b>	<b>3,795</b>

Results in investees transferred to assets held for sale (13)

Results in equity-accounted investments 673

## 11.3. Investments in non-consolidated listed companies

	Thousand-share lot		Type	Quoted stock exchange prices (US\$ per share)		Market value	
	12.31.2017	12.31.2016		12.31.2017	12.31.2016	12.31.2017	12.31.2016
<b>Associate</b>							
Braskem S.A.	212,427	212,427	Common	13.15	9.20	2,794	1,955
Braskem S.A.	75,762	75,762	Preferred A	12.96	10.51	982	796
						3,776	2,751

Since July 2017, the Company has begun negotiations with Odebrecht S.A. to revise the terms and conditions of the Braskem S.A. Shareholder's Agreement, signed on February 8, 2010. This revision aims to improve Braskem's corporate governance and the corporate relationship between the parties, with the purpose of creating value for all Braskem shareholders. The negotiations are in still in their preliminary stages and they aim at a corporate restructuring with a unification of Braskem's shares classes.

The market value of these shares does not necessarily reflect the realizable value upon sale of a large block of shares.

The main estimates used in the cash flow projections to determine the value in use of Braskem are set out in Note 14 to the Financial Statements as of December 31, 2017.

#### 11.4. Non-controlling interest

The total amount of non-controlling interest at December 31, 2017 is US\$ 1,700 (US\$ 771 in 2016) primarily comprising US\$ 792 of Petrobras Distribuidora, US\$ 289 of Gaspetro (US\$ 281 in 2016), US\$ 76 of Transportadora Brasileira Gasoduto Brasil-Bolívia – TBG (US\$ 99 in 2016), and US\$ 284 refer to Consolidated Structured Entities (US\$ 175 in 2016).

Condensed financial information is set out as follows:

	Gaspetro		Consolidated Structured entities (*)		TBG		BR Distribuidora
	2017	2016	2017	2016	2017	2016	2017
Current assets	80	83	728	745	140	329	3,235
Long-term receivables	74	84	1,106	1,673	1	1	2,042
Investments	406	392	-	-	-	-	11
Property, plant and equipment	1	1	-	85	594	640	1,758
Other non-current assets	89	93	-	-	2	3	137
	650	653	1,834	2,503	737	973	7,183
Current liabilities	24	46	226	508	248	394	1,334
Non-current liabilities	36	33	1,322	1,820	335	377	3,181
Shareholders' equity	590	574	286	175	154	202	2,668
	650	653	1,834	2,503	737	973	7,183
Sales revenues	111	96	-	-	462	423	26,483
Net income	75	72	106	287	265	243	330
Increase (decrease) in cash and cash equivalents	15	1	57	11	204	187	(49)

(\*) Comprises Charter Development LLC - CDC and Companhia de Desenvolvimento e Modernização de Plantas Industriais - CDMPI S.A. At December 31, 2016 also includes PDET Offshore S.A., which became a subsidiary in 2017.

Petrobras Distribuidora (BR) is a company which has as its corporate purpose the distribution, transportation, trade and industrialization of oil products, other fuels and several forms of energy, and is controlled by Petrobras, which holds a 71.25% interest. See note 10.1 for information on the public offering of BR in December 2017.

Gaspetro, a Petrobras' subsidiary, holds interests in several state distributors of natural gas in Brazil. The Company holds 51% of interests in this indirect subsidiary.

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.

## 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:

	2017				2016			
	Joint ventures			Associates	Joint ventures			Associates
	In Brazil	PO&G	Other companies abroad	Other companies in Brazil	In Brazil	PO&G	Other companies abroad	Other companies in Brazil
Current assets	938	625	72	5,729	1,016	835	152	5,214
Non-current assets	502	71	1	1,454	558	35	21	1,647
Property, plant and equipment	897	3,706	8	9,342	867	3,304	19	9,344
Other non-current assets	725	-	-	980	720	1	-	957
	<b>3,062</b>	<b>4,402</b>	<b>81</b>	<b>17,505</b>	<b>3,161</b>	<b>4,175</b>	<b>192</b>	<b>17,162</b>
Current liabilities	1,005	276	29	5,973	1,226	391	84	4,296
Non-current liabilities	639	2,197	1	16,172	499	1,819	1	18,613
Shareholders' equity	1,418	1,929	51	(4,390)	1,436	1,965	107	(4,789)
Non-controlling interest	-	-	-	(250)	-	-	-	(958)
	<b>3,062</b>	<b>4,402</b>	<b>81</b>	<b>17,505</b>	<b>3,161</b>	<b>4,175</b>	<b>192</b>	<b>17,162</b>
Sales revenues	3,208	557	145	15,790	2,696	770	331	14,156
Net Income (loss) for the year	160	272	26	1,338	185	63	68	(1,292)
Ownership interest - %	20 to 83%	50%	34 to 50%	5 to 49%	20 to 83%	50%	34 to 50%	5 to 49%

## 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, 2016	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
Additions	2	1,167	11,031	31	12,231
Additions to / review of estimates of decommissioning costs	-	-	-	4,503	4,503
Capitalized borrowing costs	-	-	1,972	-	1,972
Write-offs	(14)	(6)	(545)	(35)	(600)
Transfers	316	3,296	(7,631)	3,079	(940)
Depreciation, amortization and depletion	(437)	(7,320)	-	(5,366)	(13,123)
Impairment recognition	(145)	(937)	(568)	(892)	(2,542)
Impairment reversal	52	831	165	692	1,740
Cumulative translation adjustment	(91)	(753)	(472)	(745)	(2,061)
Balance at December 31, 2017	6,665	75,002	42,521	52,462	176,650
Cost	9,914	128,603	42,521	86,491	267,529
Accumulated depreciation, amortization and depletion	(3,249)	(53,601)	-	(34,029)	(90,879)
Balance at December 31, 2017	6,665	75,002	42,521	52,462	176,650
Weighted average useful life in years	40 (25 to 50) (except land)	20 (3 to 31) (****)		Units of production method	

(\*) It is composed of platforms, refineries, thermoelectric power plants, natural gas processing plants, pipelines, rights of use and other operating, storage and production plants, also including exploration and production assets depreciated based on the units of production method.

(\*\*) See note 29 for assets under construction by business area.

(\*\*\*) It is composed of exploration and production assets related to wells, abandonment and dismantling of areas, signature bonuses associated to proved reserves and other costs directly associated to the exploration and production of oil and gas.

(\*\*\*\*) In 2016 it includes transfers to assets held for sale.

In 2017, additions to property, plant and equipment primarily relate to E&P projects in pre-salt fields of Santos basin, such as *Búzios*, *Lula* and *Atapu* as well as *Libra* block. The Company also made investments aiming at maintaining the production in mature fields and at improving operational efficiency of the production, especially in Campos basin, and in projects relating to the infrastructure for transporting and processing natural gas from the pre-salt layer in the Santos Basin (Route 1, 2 and 3).

Moreover, important platforms started operating in 2017, such as the FPSOs *Libra Pioneer*, in Mero field, and *P-66*, in South of *Lula* field, as well as the interconnection of new wells to FPSOs *Cidade de Saquarema*, *Cidade de Maricá* and *Cidade de Itaguaí*, in pre-salt fields of Santos basin.

In addition to the capital commitments previously reported and in line with the investments foreseen in the Strategic Plan and the 2017-2021 Business and Management Plan, in 2017, the Company entered into agreements for the acquisition and construction of property, plant and equipment, especially the contract for the conclusion of the hull conversion of FPSO P-76, in the amount of US\$ 497, and the contract for the supply of flexible pipelines for the production, gas lifting and water injection in many pre-salt projects, in the total amount of US\$ 596, expiring in March 2018 and May 2022, respectively.

At December 31, 2017, property, plant and equipment include assets under finance leases of US\$ 118 (US\$ 125 as of December 31, 2016).

## 12.2. Estimated useful life

Estimated useful life	Buildings and improvements, equipment and other assets		
	Cost	Accumulated depreciation	Balance at 2017
5 years or less	4,017	(2,897)	1,120
6 - 10 years	11,592	(6,841)	4,751
11 - 15 years	1,379	(708)	671
16 - 20 years	38,961	(14,561)	24,400
21 - 25 years	18,879	(6,138)	12,741
25 - 30 years	13,984	(3,896)	10,088
30 years or more	24,030	(6,636)	17,394
Units of production method	25,326	(15,173)	10,153
<b>Total</b>	<b>138,168</b>	<b>(56,850)</b>	<b>81,318</b>
Buildings and improvements	9,565	(3,249)	6,316
Equipment and other assets	128,603	(53,601)	75,002

## 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 prospecting and drilling activities for oil, natural gas and other liquid hydrocarbons located in the pre-salt area, subject to a maximum production of five billion barrels of oil equivalent. The agreement has a term of forty years and is renewable for a further five years subject to certain conditions. As of December 31, 2017, the Company’s property, plant and equipment include the amount of US\$ 22,614 related to the Assignment Agreement (US\$ 22,954 as of December 31, 2016).

Petrobras has already declared commerciality in fields of all six blocks under 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 its review procedures will commence immediately after the declaration of commerciality for each area and must be based on reports by independent experts engaged by Petrobras and the ANP.

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 in order to match with the amount originally paid. 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.

The information gathered after drilling over 50 exploratory wells and performing extended well tests in this area, as well as the extensive knowledge acquired on the pre-salt layer of Santos Basin, made possible the identification of volumes exceeding five million barrels of oil equivalent.

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 renegotiation of: (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.

In November 2017, the Company set up an internal commission responsible for the negotiation with the Brazilian Federal Government, composed of representatives of the Chief Exploration and Production Officer and the Chief Financial Officer.

In January 2018, the Brazilian Federal Government established, through the Interministerial Ordinance No. 15/2018, the Interministerial Commission responsible to negotiate and conclude the terms of this review, within 60 days, extendable for the same period.

The negotiations are ongoing and have taken into account appraisals by independent experts engaged by both parties and their respective reports. As at the date of issue of these financial statements, the final amount to be established for this agreement is not defined.

The Company considers that this surplus provides an opportunity to enter into an agreement concerning the compensation to the Company arising from this review. Therefore, aiming to support an eventual negotiation where this compensation would be paid through the right over exceeding volume, the Company is complementing its assessment based on reports issued by the independent experts it has engaged.

This review process of the Assignment Agreement has been monitored by the Minority Shareholders Committee, which is composed of two board members elected by the minority shareholders and by a third independent member with knowledge in technical-financial analysis of investment projects. This Committee will provide support to the board's decisions through opinions about related matters.

#### **12.4. Oil and Gas fields operated by Petrobras returned to ANP**

In 2017 the following oil and gas fields were returned to ANP: Mosquito, Siri and Saíra. These fields were returned to ANP mainly due to their economic unfeasibility. However, due to impairment losses recorded for these assets in prior years, these write-offs amounted to US\$ 0.1.

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 income and expenses, in addition to impairments recognized in prior years.

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 income and expenses.

## 13. Intangible assets

### 13.1. By class of assets

	Rights and Concessions	Software		Goodwill	Total
		Acquired	Developed in-house		
Balance at January 1, 2016	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
Addition	935	16	61	-	1,012
Capitalized borrowing costs	-	-	4	-	4
Write-offs	(81)	-	(2)	-	(83)
Transfers	(1,656)	2	-	-	(1,654)
Amortization	(20)	(29)	(101)	-	(150)
Impairment recognition	(33)	-	-	-	(33)
Cumulative translation adjustment	(22)	-	(4)	(2)	(28)
Balance at December 31, 2017	1,801	57	264	218	2,340
Cost	2,006	496	1,225	218	3,945
Accumulated amortization	(205)	(439)	(961)	-	(1,605)
Balance at December 31, 2017	1,801	57	264	218	2,340
Estimated useful life in years	(*)	5	5	Indefinite	

(\*) Mainly composed of assets with indefinite useful lives, which are reviewed annually to determine whether events and circumstances continue to support an indefinite useful life assessment.

During 2017, the Company participated on bids conducted by the ANP with the following accomplishments:

- On September 27, 2017, the Company acquired seven blocks in the fourteenth round of bids under the concession regime, six of which are offshore and one of which is onshore. The Company will be the operator in all blocks. In the offshore blocks, Petrobras will hold a 50% interest in partnership with ExxonMobil. In the onshore blocks, the Company will hold the entire interest. The total amount of signature bonus paid by the Company was US\$ 567. The contracts were signed on January 29, 2018.
- On October 27, 2017, the Company acquired three offshore blocks in the second and third rounds of bids under the production sharing regime, in partnership with Shell, British Petroleum (BP), Repsol and CNODC Brasil Petróleo e Gás. The total amount of signature bonus paid by the Company was US\$ 351. The contracts were signed on January 31, 2018.

Following the determination of economic feasibility of the Northwest area of Libra block, which resulted in declarations of commerciality such as the one relating to Mero field (see note 13.3), a portion of signature bonus thereof, in the amount of US\$ 1,614, was transferred from intangible assets to property, plant and equipment.

At December 31, 2017, no impairment was identified on goodwill.

### 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 2017, totaling US\$ 3 (US\$ 8 in 2016) are set out below:

Area	Exploratory phase	
	Exclusive	Partnership
Sergipe-Alagoas Basin	1	
Jequitinhonha Basin		1

### 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 Libra P1 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 km<sup>2</sup>, 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.

The signature bonus (acquisition cost) of US\$ 6,589 was paid by the consortium. The Company paid US\$ 2,636 relating to its 40% share of the acquisition cost paid by the consortium, initially recognized in its intangible assets as Rights and Concessions.

Within the initial stage of the exploration phase (4 years), the minimum work program was concluded in 2017, when the extended well test (EWT) was performed. In addition to EWT, the minimum work program also includes a 3D seismic acquisition for the whole block, and the drilling of two exploratory wells.

The EWT was performed by the FPSO Libra Pioneer, which continues to produce on the same well after the declaration of commerciality, through an early production system. In January 2018, the Company performed the first loading of oil from Libra. In the second half of 2018, this FPSO is expected to move to another location and to produce on another well.

On November 30, 2017, ANP was informed about the declaration of commerciality of the Northwest area of Libra, confirming the potential of the area and its economic viability. In total, twelve wells were drilled in Libra block, of which nine in the Northwest area. Following the declaration of commerciality, the Northwest area of Libra is now named Mero field (*Campo de Mero*). The results confirmed oil reservoirs at thickness of up to 410 meters with high porosity and permeability. The production tests confirmed the high productivity and oil quality of these reservoirs. Following this declaration of commerciality, US\$ 1,614 was transferred to property, plant and equipment with respect to a portion signature bonus relating to the Northwest area of Libra.

In December 2017, the Company chartered the FPSO of Mero 1 for the Northwest area, with expected start-up in 2021 and capacity of producing 180 thousands of barrels per day and processing 12 million cubic meters of gas.

The consortium was granted by the Ministry of Mines and Energy with an extension of the exploration phase by 27 months to the Central and Southeast areas of the block, where new assessments will be performed to evaluate the economic viability of these areas.

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### **13.4. Service concession agreement - Distribution of piped natural gas**

As of December 31, 2017, intangible assets include service concession agreements related to piped natural gas distribution in Brazil, in the amount of US\$ 171 (US\$ 177 in 2016), 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. The law states that a bidding process is required for this concession, or the establishment of a state-run company to provide this service, which would receive compensation pursuant to this law, which was appealed by the Company.

Accordingly, the Company entered into an agreement with the State of Espírito Santo, through a Memorandum of Understanding signed on August 12, 2016, aiming to evaluate the establishment of a state-run company of that state, to provide the public service of distributing piped natural gas. The evaluation is ongoing.

This concession is accounted for as intangible assets totaling US\$ 82 as of December 31, 2017 (US\$ 84 as of December 31, 2016) and the Company has not recognized any provision on this matter based on the indemnity established by law.

## 14. Impairment

The Company annually tests its assets for impairment on December 31 or when there is an indication that their carrying amount may not be recoverable. In 2017, impairment losses and reversals were primarily recognized in the last quarter reflecting the Company's plan to optimize investment portfolio and updates of mid and long-term assumptions used in the recent Company's Business and Management Plan (BMP 2018-2022) concluded and approved in December 2017.

The enhanced risk perception of Brazilian market (Brazil's risk premium) decreased the discount rates applied for impairment testing purposes, and along with the better operational efficiency of certain E&P fields, resulted in reversals of impairment previously recognized following the 2017 annual review, mainly for the North Group CGU in Campos basin.

The Company accounted for impairment losses for certain assets in the scope of the partnership and divestment program, mainly with respect to oil and gas production and drilling equipment in Brazil and to the sale of a portion of Roncador field in Campos basin. The higher costs of raw materials and the lower refining margin, as set forth in BMP 2018-2022, were the main reasons for impairment losses on Second refining unit in RNEST.

The work in progress relating to the infrastructure shared by Comperj's first refining unit and the natural gas processing plant (UPGN), as well as the decision of hibernating the hulls construction of 3 vessels of PANAMAX project, that triggered their separate impairment testing from the Transportation, also resulted in impairment losses in 2017. In addition, the Company's plan to withdrawal its entire interest in petrochemical business, as set forth in BMP 2018-2022, along with the lower expectation of a successful sale of fertilizers and nitrogen products plants, triggered an impairment testing for these assets separately from the Natural Gas CGU in the last quarter of 2017, thereby accounting for impairment losses with respect to them.

The table below shows the impairment losses, net of reversals, recognized within the statement of income in 2017, 2016 and 2015:

# Petróleo Brasileiro S.A. – Petrobras

## Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



Assets or CGU by nature (*)	Carrying amount	Recoverable amount (**)	Impairment (***)	Business segment	Comments
					2017
<b>Property, plant and equipment and intangible assets</b>					
Producing properties relating to oil and gas activities in					
Brazil (several CGUs)	11,826	16,070	(870)	E&P - Brazil	item (a1)
Second refining unit in RNEST	1,716	1,261	464	RTM - Brazil	item (b1)
Fertilizer Plants	412	-	412	Gas & Power - Brazil	item (c)
Oil and gas production and drilling equipment in Brazil					
	360	4	363	E&P - Brazil	item (d1)
Producing properties relating to oil and gas activities					
Abroad (several CGUs)	215	89	128	E&P - Abroad	item (e)
Panamax vessels - Transpetro	112	-	112	RTM - Brazil	item (f)
Araucária	70	-	70	Gas & Power - Brazil	item (g1)
Comperj	51	-	51	RTM - Brazil	item (h1)
Conecta and DGM	38	-	38	Distribution- Abroad	item (i)
Others	1,863	1,797	68	Several Segments	
			836		
<b>Assets classified as held for sale</b>					
Producing properties relating to oil and gas activities in					
Roncador	3,164	2,766	405	E&P - Brazil	item 14.2
Others	317	366	(50)	Several Segments	
<b>Total</b>			<b>1,191</b>		
<b>2016</b>					
Producing properties relating to oil and gas activities in					
Brazil (several CGUs)	12,788	10,718	2,268	E&P - Brazil	item (a2)
Oil and gas production and drilling equipment in Brazil					
	918	64	854	E&P - Brazil	item (d2)
Second refining unit in RNEST	2,488	1,708	780	RTM - Brazil	item (b2)
Suaape Petrochemical Complex	1,099	480	619	RTM - Brazil	item (j)
Comperj	403	-	403	RTM - Brazil	item (h2)
Transpetro's fleet of vessels	1,793	1,549	244	RTM - Brazil	item (k)
Fertilizer Plant - UFN III	523	370	153	Gas & Power - Brazil	item (l)
Araucária (fertilizers plant)	197	57	140	Gas & Power - Brazil	item (g2)
Quixada Power plant	28	-	28	Biofuel, Brazil	
Others	614	424	148	Several Segments	
			5,637		
<b>Assets classified as held for sale</b>					
Suaape Petrochemical Complex	816	381	435	RTM - Brazil	item 14.2
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		
<b>Total</b>			<b>6,193</b>		
<b>2015</b>					
Producing properties relating to oil and gas activities in					
Brazil (several CGUs)	21,251	12,139	8,653	E&P - Brazil	item (a3)
Comperj	1,586	234	1,352	RTM - Brazil	item (h3)
Oil and gas producing properties abroad					
	1,548	918	637	E&P - Abroad	item (e1)
Oil and gas production and drilling equipment in Brazil					
	750	243	507	E&P - Brazil	item (d3)
Fertilizer Plant - UFN III	935	434	501	Gas & Power - Brazil	item (l1)
Suaape Petrochemical Complex	1,143	943	200	RTM - Brazil	item (j1)
Nitrogen Fertilizer Plant - UFN-V	190	-	190	Gas & Power - Brazil	
Biodiesel plants	134	88	46	Biofuel - Brazil	
Others	341	156	213	Several segments	
			12,299		

(\*) It only includes carrying amounts and recoverable amounts of impaired assets or asses for which reversals were recognized.

(\*\*) The recoverable amounts of assets for impairment computation were their value in use, except for oil and gas production and drilling equipment that were based on their fair value.

(\*\*\*) Reversals are presented in brackets.

## 14.1. Impairment of property, plant and equipment and intangible assets

For impairment testing purposes, the Company bases its cash flow projections on:

- The estimated useful life of the asset or assets grouped into the CGU, based on the expected use of those assets, considering the Company's maintenance policy;
- Assumptions and financial budgets/forecasts approved by management for the period corresponding to the expected life cycle of each different business; and
- A pre-tax discount rate 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 2017 were mainly based on the following estimates of key assumptions for impairment testing:

### 2017

	2018	2019	2020	2021	2022	Long term Average
Average Brent (US\$/bbl)	53	58	66	70	73	71
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	3.44	3.47	3.47	3.46	3.49	3.4

For comparative purposes, estimates of key assumptions for impairment testing in 2016 and 2015 are shown below:

### 2016

	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

### 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	3.6	3.60	3.06

Information on the main impairment losses and reversals of property, plant and equipment and intangible assets are described below:

#### a1) Producing properties in Brazil – 2017

Impairment assessment for producing properties in Brazil under the concession regime for oil and gas resulted in a net reversal of impairment losses of US\$ 870. 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 7.6% p.a. at December 31, 2017. This amount comprises:

- Reversals of impairment totaling US\$ 1,733 primarily from North group (US\$ 912), *Espadarte and Papa-Terra* fields (US\$ 125 and US\$ 122), *Uruguá* group (US\$ 100), *Pampo* field (US\$ 91), *Fazenda Alegre* group (US\$ 45), *Cidade de São Mateus* group (US\$ 44), *Riachuelo* field (US\$ 40), *Fazenda Imbé* group (US\$ 28), *Fazenda*

*Bálsamo* field (US\$ 26), *Peroá* group (US\$ 25), *São Mateus* group (US\$ 19) and *Riacho da Forquilha* field (US\$ 18). These reversals substantially reflected the lower post-tax real discount rate, the approval of investments in enhancing recovery of mature fields and the lower tax burden set forth in the new tax rules applicable to the oil and gas industry (see note 21.4).

- Impairment losses totaling US\$ 863 mainly related to CGUs *Piranema* (US\$ 227), *Salgo* (US\$ 104) *Ceara Mar* group (US\$ 95), *Cvit* group (US\$ 63), *Miranga* group (US\$59), *Fazenda Belém* group (US\$ 49), *Frade* (US\$ 40) *Dom João* (US\$ 27) and *Candeias* (US\$ 18). These losses were substantially driven by an expected acceleration of production cessation reflecting an optimization of investment portfolio, as well as by a lower risk-adjusted discount rate for decommissioning costs, which also increased the costs of assets related to the abandonment and dismantling of these areas.

### **a2) 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 December 31, 2016. 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 Bálsamo* (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.

### **a3) 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.

### **b1) Second refining unit in RNEST - 2017**

An impairment loss of US\$ 464 was recognized for the second refining unit in RNEST. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 7.7% p.a. 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) higher costs of raw materials and ii) lower refining margin, as set forth in BMP 2018-2022.

**b2) 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.

**c) Fertilizer Plants**

Following the Company's plan to withdrawal its entire interest in petrochemical business, as set forth in BMP 2018-2022 approved in December 2017, along with the lower expectation of a successful sale of fertilizers and nitrogen products plants, triggered an impairment testing for these assets separately from the Natural Gas CGU in the last quarter of 2017. As a result, impairment losses amounting to US\$ 412 were recognized.

**d1) Oil and gas production and drilling equipment in Brazil – 2017**

In 2017, impairment losses for oil and gas production and drilling equipment in Brazil that were not directly related to oil and gas producing properties amounted to US\$ 363, as a result of: i) lower fair value of certain equipment related to the FPSO P-72 and P-73 that could not be committed to other projects, when compared to their carrying amount (US\$ 127); ii) decommissioning of a crane and launch ferry (US\$ 114) and iii) hibernation of equipment of Inhaúma Shipyard excluded from the initial scope of Inhauma logistic center (US\$ 125).

**d2) 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.

**d3) 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.

**e) Producing properties abroad – 2017**

In 2017, impairment losses of US\$ 128 were recognized for E&P assets located in the United States, principally reflecting the expected cessation of production and definitive abandonment of operation in Hadrian South field. Cash flow projection were based on: financial budgets/forecasts approved by Management; 5.7% p.a. post-tax real discount rate (5.5% p.a. in 2016) derived from the WACC for the E&P business in United States.

**e1) 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.

**f) Panamax vessels – Transpetro**

In December 2017, the decision to hibernate the construction of three vessels of PANAMAX project (EI-512, EI-513 and EI-514) triggered their removal from the Transpetro's fleet of vessels CGU. These assets were assessed for impairment separately and, as a result, the Company accounted for an impairment loss for the total carrying amounts of these assets (US\$ 112).

**g1) Araucária - 2017**

Indications of impairment were identified during this period, such as lower sales volume and prices, as well as higher production costs. Therefore, the Company assessed the related assets for impairment and, as a result, an impairment charge of US\$ 70 was recognized primarily in the second quarter of 2017 due to negative cash flow projections that were based on financial budget and forecasts approved by the management and a post-tax real discount rate of 6.6% p.a. derived for the weighted average cost of capital (WACC) for the fertilizer business.

**g2) Araucária - 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.

**h1) Comperj - 2017**

As set out in BMP 2018-2022, the resumption of the Comperj project still depends on new partnerships. However, the construction of Comperj's first refining unit facilities that will also support the natural gas processing plant (UPGN) are 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\$ 51 in 2017.

**h2) 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.

**h3) 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.

**i) Conecta and DGM – 2017**

Following prices forecast and current agreements of natural gas supply in Uruguay, the Company recognized impairment losses for intangible assets and property, plant and equipment, in the amount of US\$ 38, with respect to concession agreements for natural gas distribution carried out by the subsidiaries Conecta and DGM.

**j) 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. – PetroquímicaSuape* 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.

**j1) 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.

**k) 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.

**l) 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 the Brazilian Real against the US Dollar.

## 11) 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.

### 14.1.1. Assets most sensitive to future impairment

As set out in note 4.10, whenever the recoverable amount of an asset or CGU falls below the carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount. The following table presents the assets and CGU most sensitive to future impairment losses as their recoverable amounts were close to their current carrying amount. Changes in material assumptions for impairment testing may result in the recognition of additional impairment charges on such assets in future periods.

	12.31.2017			
	Business segment	Carrying amount	Recoverable amount	Sensitivity (*)
Producing properties relating to oil and gas activities in Brazil (3 CGUs)	E&P	168	180	(10)

(\*) It is based on a 10% reduction in the recoverable amount of CGUs.

For information on the main assumptions for impairment testing, see note 5.2.

### 14.2. Assets classified as held for sale

Following the Company's Board of Director approvals of disposal of certain assets in 2017, as described in note 10, impairment losses amounting to US\$ 355 for assets held for sale were recognized, primarily attributable to the sale of 25% interest in Roncador field.

This transaction is aligned with the Company's business and management plan and is part of the Strategic Alliance with Statoil for sharing technology and increasing the recovery factor of the field. Impairment loss of US\$ 405 was recognized on this transaction, as its sales price was lower than carrying amount thereof.

In 2016, the Company recognized impairment losses amounting to US\$ 556 due to certain sales of interests in investees approved by the Board of Directors, mainly related to Suape Petrochemical Complex (US\$ 435), Petrobras Chile Distribución (US\$ 82) and Power plants *Romulo Almeida and Celso Furtado* (US\$ 47).

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.

### 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, 2017 are set out below:

Investment	Segment	% Post-tax discount rate (excluding inflation)	Value in use	Carrying Amount
		p.a.		
Braskem S.A. (*)	RTM	9.6	5,712	1,448
Natural Gas Distributors	Gas & Power	5.9	518	285

(\*) The discount rate of Braskem is CAPM of petrochemical segment, as the value in use considers the cash flow projections via dividends.

### 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, 2017 the quoted market value of the Company's investment in Braskem was US\$ 3,775 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\$ 3.44 to U.S.\$1.00 in 2018 (converging to R\$ 3.4 in the long run);
- Average Brent crude oil price at US\$ 53 in 2018, converging to US\$ 71 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

For 2017, the Company accounted for US\$ 20 as results in equity-accounted investments, substantially attributable to the investees Logum, Belém Bioenergia Brasil and Refinaria de Petróleo Riograndense.

In 2016, impairment losses on equity-method investments in the amount of US\$ 182 were as results in equity-accounted investments, substantially attributable to investees of biofuels segment, notably the former associate Guarani (US\$ 178) and the former joint venture Nova Fronteira (US\$ 30).

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).

#### **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 and 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.

Based on management evaluation, in 2016 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, in 2016, 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 FPSOs constructions have progressed significantly after restructuring the contracts and accessing the hull. The start -ups of P-67 to P-69 and P-74 to P-76 are expected to occur in 2018, while the start -ups of P-70 and P-77 are expected in the first semester of 2019. The P-66 have been in operation since May 2017. This scenario shows the effectiveness of the strategy to enable the continuity of the work in progress of these FPSOs with no impacts in the Company's future production curve.

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.

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. In 2017, after reassessing the use of certain acquired equipment for P-72 and 73, the Company wrote-off additional US\$ 127 as described in note 14.1.

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 2016, 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. In 2017, following a review in the scope of this logistic center implementation, impairment losses of US\$ 125 were recognized as shown in note 14.1.

## **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:

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<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs (*)</b>	<b>12.31.2017</b>	<b>12.31.2016</b>
Property plant and equipment		
Opening Balance	5,133	5,201
Additions to capitalized costs pending determination of proved reserves	797	1,009
Capitalized exploratory costs charged to expense	(107)	(1,054)
Transfers upon recognition of proved reserves	(1,227)	(966)
Cumulative translation adjustment	(74)	943
Closing Balance	4,522	5,133
Intangible Assets	1,390	2,236
<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs</b>	<b>5,912</b>	<b>7,369</b>

(\*) Amounts capitalized and subsequently expensed in the same period have been excluded from this table.

See note 13.1 for information on signatures bonuses paid and declarations of commerciality during 2017.

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:

<b>Exploration costs recognized in the statement of income</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Geological and geophysical expenses	361	371	416
Exploration expenditures written off (includes dry wells and signature bonuses)	279	1,281	1,441
Contractual penalties	152	46	-
Other exploration expenses	8	63	54
<b>Total expenses</b>	<b>800</b>	<b>1,761</b>	<b>1,911</b>

<b>Cash used in:</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Operating activities	371	435	470
Investment activities	1,794	1,075	2,736
<b>Total cash used</b>	<b>2,165</b>	<b>1,510</b>	<b>3,206</b>

In 2017, the Company recognized a provision in the amount of US\$ 152 (US\$ 46 in 2016), arising from potential contractual penalties for non-compliance with minimum percentages of local content in 118 blocks for which the exploratory phases were concluded.

### 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):

#### Aging of capitalized exploratory well costs (\*)

	<b>2017</b>	<b>2016</b>
Exploratory well costs capitalized for a period of one year	111	806
Exploratory well costs capitalized for a period greater than one year	4,411	4,327
<b>Total capitalized exploratory well costs</b>	<b>4,522</b>	<b>5,133</b>

Number of projects relating to exploratory well costs capitalized for a period greater than one year	54	57
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	Capitalized costs (2017)	Number of wells
2016	316	4
2015	887	19
2014	1,154	19
2013	596	11
2012 and previous years	1,458	27
Exploratory well costs that have been capitalized for a period greater than one year	4,411	80

(\*) 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\$ 4,411. Those costs relate to 54 projects comprising (i) US\$ 4,163 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\$ 248 relate to costs incurred to evaluate the reserves and their potential development.

## 16. Trade payables

	12.31.2017	12.31.2016
Third parties in Brazil	3,671	3,280
Third parties abroad	1,380	2,019
Related parties	716	463
Balance in current liabilities	5,767	5,762

## 17. Finance debt

In line with the Company’s Business and Management Plan and following its liability management strategy, recent funds have been raised in order to settle older debts, as well as aiming at improving the debt repayment profile taking into account its alignment with investments returns over the long run. These factors have enabled the use of cash flows from operating activities and from divestments and partnerships as the main source of funds for the investments portfolio.

The Company has covenants that were not in default at December 31, 2017 in its loan agreements and notes issued in the capital markets requiring, among other obligations i) the presentation of interim financial statements within 90 days of the end of each quarter (not reviewed by Independent Registered Public Accounting Firm) and audited financial statements within 120 days of the end of each fiscal year, with a grace period ranging from 30 to 60 days, depending on the agreement; ii) Negative Pledge / Permitted Liens clause; iii) clauses of compliance with the laws, rules and regulations applicable to the conduct of its business including (but not limited to) environmental laws; (iv) clauses in financing agreements that require both the borrower and the guarantor to conduct their business in compliance with anti-corruption laws and anti-money laundering laws and to institute and maintain policies necessary for such compliance; (v) clauses in financing agreements that restrict relations with entities or even countries sanctioned primarily by the United States (including, but not limited to, the Office of Foreign Assets Control (OFAC), Department of State and Department of Commerce), the European Union and United Nations; and vi) covenants with respect to debt level in some of its loan agreements with the Brazilian Development Bank (*Banco Nacional de Desenvolvimento Econômico e Social - BNDES*).

### **17.1. Prepayment of debts and new financings**

In 2017, proceeds from financing amounted to US\$ 27,075, principally reflecting: (i) global notes issued in the capital market in the amount of US\$ 10,218 and maturing in 2022, 2025, 2027, 2028 and 2044; (ii) debentures issued in the domestic market amounting to US\$ 1,577 and maturing in 2022 and 2024; and (iii) funds raised from the domestic and international banking market in the amount of US\$ 12,988 with average term of five years.

In addition, the Company used US\$ 43,076 for repayment of principal and interest, mainly attributable to: (i) US\$ 7,569 relating to repurchase of global bonds previously issued by the Company in the capital market maturing from 2018 to 2021, with premium paid to bond holders amounting to US\$ 339; (ii) pre-payment of banking loans in the domestic and international market totaling US\$ 16,012; (iii) pre-payment of finance debt with export credit agencies, in the amount of US\$ 913; and (iv) pre-payment of US\$ 2,980 with respect to financings with BNDES.

During this period, the Company also rolled over some debts through non-cash transactions, including: (i) exchange of US\$ 6,768 old notes previously issued in the international capital market, maturing from 2019 to 2021, to new notes with maturities in 2025 and 2028 in the amount of US\$ 7,597; (ii) exchange of some debts in the domestic and international banking market maturing from 2018 to 2020, to new similar financings amounting to US\$ 4,257 with maturities ranging from 2020 to 2024.

### **17.2. Changes in current and non-current debt**

A roll-forward schedule of current and non-current debt is set out as follows:

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	Export Credit Agencies	Banking Market	Capital Market	Others	Total
<b>Current and Non-current</b>					
In Brazil					
Opening balance at January 1, 2016	-	27,379	1,963	19	29,361
Principal amortization	-	(1,408)	(152)	(2)	(1,562)
Interest amortization	-	(2,887)	(231)	(2)	(3,120)
Additions (new funding obtained)	-	475	-	-	475
Transaction costs during the period (*)	-	3,041	188	16	3,245
Foreign exchange/inflation indexation charges	-	(1,169)	108	1	(1,060)
Pre-payments	-	(6,820)	-	-	(6,820)
Transfer to liabilities associated with assets classified as held for sale	-	(14)	-	-	(14)
Cumulative translation adjustment (CTA)	-	5,020	391	5	5,416
Balance as of December 31, 2016	-	23,617	2,267	37	25,921
Abroad					
Opening balance at January 1, 2016	5,832	34,645	55,666	661	96,804
Principal amortization	(824)	(5,353)	(5,784)	(115)	(12,076)
Interest amortization	(124)	(969)	(3,037)	(26)	(4,156)
Additions (new funding obtained)	298	8,506	9,759	-	18,563
Transaction costs during the period (*)	160	1,109	2,974	20	4,263
Foreign exchange/inflation indexation charges	(206)	(1,081)	(569)	(23)	(1,879)
Pre-payments	-	(780)	(9,443)	-	(10,223)
Transfer to liabilities associated with assets classified as held for sale	-	(2)	(310)	-	(312)
Cumulative translation adjustment (CTA)	217	1,068	(89)	25	1,221
Balance as of December 31, 2016	5,353	37,143	49,167	542	92,205
<b>Total Balance as of December 31, 2016</b>	<b>5,353</b>	<b>60,760</b>	<b>51,434</b>	<b>579</b>	<b>118,126</b>
<b>Current</b>					9,755
<b>Non-current</b>					108,371
<b>Current and Non-current</b>					
In Brazil					
Opening balance at January 1, 2017	-	23,617	2,267	37	25,921
Principal amortization	-	(2,059)	(166)	(2)	(2,227)
Interest amortization	-	(2,084)	(200)	(2)	(2,286)
Additions (new funding obtained)	-	5,224	1,577	-	6,801
Transaction costs during the period (*)	-	2,106	185	5	2,296
Foreign exchange/inflation indexation charges	-	27	87	-	114
Pre-payments	-	(8,414)	-	-	(8,414)
Cumulative translation adjustment (CTA)	-	(174)	(101)	-	(275)
Balance as of December 31, 2017	-	18,243	3,649	38	21,930
Abroad					
Opening balance at January 1, 2017	5,353	37,143	49,167	542	92,205
Principal amortization	(914)	(3,210)	(973)	(47)	(5,144)
Interest amortization	(125)	(1,281)	(2,831)	(14)	(4,251)
Additions (new funding obtained)	226	8,192	10,249	121	18,788
Transaction costs during the period (*)	163	1,460	3,208	20	4,851
Foreign exchange/inflation indexation charges	8	117	931	1	1,057
Pre-payments	(1,051)	(11,005)	(7,936)	(353)	(20,345)
Cumulative translation adjustment (CTA)	11	(151)	96	(1)	(45)
Balance as of December 31, 2017	3,671	31,265	51,911	269	87,116
<b>Total Balance as of December 31, 2017</b>	<b>3,671</b>	<b>49,508</b>	<b>55,560</b>	<b>307</b>	<b>109,046</b>
<b>Current</b>					7,001
<b>Non-current</b>					102,045

(\*) It includes premium and discount over notional amounts

As shown in note 6.1, the IFRS 9 provisions will govern the accounting treatment for modification of contractual cash flow from January 1, 2018.

The table below presents a reconciliation between finance debt and cash flows from financing activities:

	Balance as of December 31, 2016	Additions (new funding obtained)	Amortization (*)	Transaction costs during the period	Foreign exchange and indexation charges	Cumulative translation adjustment (CTA)	Balance as of December 31, 2017
<b>Finance debt</b>	118,126	25,589	(42,667)	7,147	1,171	(320)	109,046
Reconciliation to the Statement of Cash Flows							
Transfer to held for sale		1,619	(15)				
Purchase of property, plant and equipment on credit		(133)					
Expenses with debt restructuring			(339)				
Compensating balances			(54)				
Finance Leases			20				
<b>Net cash used in financing activities</b>		<b>27,075</b>	<b>(43,076)</b>				

(\*) It includes principal, interest and pre-payments of debt.

### 17.3. Summarized information on current and non-current finance debt

Maturity in	up to 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 years and onwards	Total (*)	Fair value
<b>Financing in Brazilian Reals (R\$):</b>	1,460	2,779	4,103	3,052	4,648	5,463	21,505	18,499
Floating rate debt	772	2,335	3,678	2,632	4,269	4,239	17,925	
Fixed rate debt	688	444	425	420	379	1,224	3,580	
Average interest rate	6.6%	6.6%	6.8%	7.3%	6.8%	5.9%	6.6%	
<b>Financing in U.S.Dollars (US\$):</b>	5,123	2,814	5,228	8,716	12,571	44,829	79,281	88,968
Floating rate debt	3,893	1,565	3,918	3,152	9,539	13,133	35,200	
Fixed rate debt	1,230	1,249	1,310	5,564	3,032	31,696	44,081	
Average interest rate	5.4%	5.8%	5.8%	5.7%	5.6%	6.5%	6.1%	
<b>Financing in R\$ indexed to US\$:</b>	85	81	81	81	78	-	406	391
Floating rate debt	20	19	19	19	16	-	93	
Fixed rate debt	65	62	62	62	62	-	313	
Average interest rate	3.8%	3.7%	3.6%	3.3%	2.6%	-	3.6%	
<b>Financing in Pound Sterling (£):</b>	62	-	-	-	-	2,321	2,383	2,590
Fixed rate debt	62	-	-	-	-	2,321	2,383	
Average interest rate	6.2%	-	-	-	-	6.3%	6.3%	
<b>Financing in Japanese Yen (¥):</b>	91	-	-	-	-	-	91	97
Floating rate debt	91	-	-	-	-	-	91	
Average interest rate	0.4%	-	-	-	-	-	0.4%	
<b>Financing in Euro (€):</b>	173	802	229	896	717	2,556	5,373	6,069
Floating rate debt	1	-	182	-	-	-	183	
Fixed rate debt	172	802	47	896	717	2,556	5,190	
Average interest rate	4.3%	4.3%	4.5%	4.6%	4.8%	4.6%	4.5%	
<b>Financing in other currencies:</b>	7	-	-	-	-	-	7	7
Fixed rate debt	7	-	-	-	-	-	7	
Average interest rate	14.0%	-	-	-	-	-	14.0%	
<b>Total as of December 31, 2017</b>	<b>7,001</b>	<b>6,476</b>	<b>9,641</b>	<b>12,745</b>	<b>18,014</b>	<b>55,169</b>	<b>109,046</b>	<b>116,621</b>
Average interest rate	5.6%	5.9%	5.9%	5.9%	5.7%	6.4%	6.1%	
<b>Total as of December 31, 2016</b>	<b>9,755</b>	<b>11,216</b>	<b>20,898</b>	<b>16,313</b>	<b>18,777</b>	<b>41,167</b>	<b>118,126</b>	<b>118,768</b>
Average interest rate	6.1%	6.0%	5.9%	5.9%	5.4%	6.4%	6.2%	

\* The average maturity of outstanding debt as of December 31, 2017 is 8.61 years (7.46 years as of December 31, 2016).

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\$ 54,248 as of December 31, 2017 (US\$ 46,510 as of December 31, 2016); 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\$ 62,373 as of December 31, 2017 (US\$ 72,258 as of December 31, 2016).

The sensitivity analysis for financial instruments subject to foreign exchange variation is set out in note 33.2.

## 17.4. Capitalization rate used to determine the amount of borrowing costs eligible for capitalization

The capitalization rate used to determine the amount of borrowing costs eligible for capitalization was the weighted average of the borrowing costs applicable to the borrowings that were outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. In 2017 the capitalization rate was 6.16% p.a. (5.80% p.a. in 2016).

## 17.5. Lines of credit

Company	Financial institution	Date	Maturity	Amount		
				Available (Lines of Credit)	Used	Balance
<b>Abroad</b>						
Petrobras	China Development Bank	12/4/2017	12/14/2019	5,000	3,000	2,000
PGT BV	CHINA EXIM	10/24/2016	Not defined	1,000	-	1,000
PGT BV				6,000	3,000	3,000
<b>In Brazil</b>						
PNBV	BNDES	9/3/2013	3/26/2018	2,986	824	2,162
Transpetro	BNDES	11/7/2008	8/12/2041	533	171	362
Transpetro	Banco do Brasil	7/9/2010	4/10/2038	24	10	14
Transpetro	Caixa Econômica Federal	11/23/2010	Not defined	99	-	99
<b>Total</b>				<b>3,642</b>	<b>1,005</b>	<b>2,637</b>

## 17.6. 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, 2026 and 2027 are also collateralized based on future oil exports for specific buyers limited to 400 thousand barrels per day up to 2019, 300 thousand barrels per day from 2020 to 2026, and 100 thousand barrels per day in 2027. This collateral may not exceed the amount of the related debt, amounting to US\$ 10,815 at December 31, 2017 (US\$ 9,208 at December 31, 2016).

On January 30, 2018, the Company prepaid the remaining balance of a financing agreement with CDB maturing in 2019, in the amount of US\$ 2.8 billion, as set out in note 35.1. After this settlement, the new limits for the collateralization based on future oil exports are 200 thousand barrels per day up to 2019, 300 thousand barrels per day from 2020 to 2026, and 100 thousand barrels per day in 2027.

In accordance with the Company's Business and Management Plan (BMP 2018-2022), the extension of these terms is associated to a better indebtedness level, as set out in note 19.

The loans obtained by structured entities are collateralized based on the projects' assets, as well as liens on receivables of the structured entities. Bonds issued by the Company in the capital market are unsecured.

The global notes are issued by the Company in the capital market through its wholly-owned subsidiary Petrobras Global Finance B.V. – PGF and 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
2018	123	(69)	54	52	(27)	25
2019-2022	481	(221)	260	148	(75)	73
2023 and thereafter	603	(128)	475	388	(257)	131
As of December 31, 2017 (*)	1,207	(418)	789	588	(359)	229
Current			54			25
Non-current			735			204
As of December 31, 2017 (*)			789			229
Current			91			18
Non-current			1,383			226
As of December 31, 2016			1,474			244

(\*) For information on termination of the finance lease contract related to Vitoria 10,000 drilling rig in 2017, see note 8.3.

### 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.

2018	8,417
2019	6,292
2020	6,228
2021	6,544
2022	6,180
2023 and thereafter	58,358
As of December 31, 2017	92,019
As of December 31, 2016	96,918

As of December 31, 2017, the balance of estimated future minimum lease payments under operating leases includes US\$ 52,701 (US\$ 49,671 as of December 31, 2016) with respect to assets under construction, for which the lease term has not commenced.

During 2017, the Company recognized expenditures of US\$ 10,228 (US\$ 9,920 in 2016) for operating leases installments.

As shown in note 6.1, the IFRS 16 provisions will govern the accounting treatment for operating leases from January 1, 2019.

## 19. Related-party transactions

The Company has a related-party transactions policy, which is annually revised and approved by the Board of Directors, and is applicable to all the Petrobras Group, in accordance with the Company's by-laws.

In order to ensure the goals of the Company are achieved and align them with transparency of processes and corporate governance best practices, this policy guides Petrobras and its workforce while entering into related-party transactions and dealing with potential conflicts of interest on these transactions, based on the following assumptions and provisions:

- Prioritization of the Company's interests regardless of the counterparty;
- Arm's length basis;
- Compliance with market conditions, especially concerning terms, prices and guarantees or with adequate compensatory payment;
- Accurate and timely disclosure in accordance with applicable authorities.

The Audit Committee must approve in advance transactions between the Company and its associates, the Brazilian Federal Government, including its agencies or similar bodies and controlled entities, taking into account the materiality established by this policy. The Audit Committee reports monthly to the Board of Directors.

Transactions with entities controlled by key management personnel or by their close family members are also approved in advance by the Audit Committee regardless of the amount involved.

Transactions with the Brazilian Federal Government, including its agencies or similar bodies and controlled entities, which are under the scope of Board of Directors approval, must be preceded by the Audit Committee and Minority Shareholders Committee assessment and must have prior approval of, at least, 2/3 of the board members.

The related-party transactions policy also aims to ensure an adequate and diligent decision-making process for the Company's key management.

### **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.

The balances of significant transactions are set out in the following table:

	2017	12.31.2017		2016	12.31.2016	
	Income (expense)	Assets	Liabilities	Income (expense)	Assets	Liabilities
<b>Joint ventures and associates</b>						
State-controlled gas distributors (joint ventures)	2,203	294	141	1,740	246	69
Petrochemical companies (associates)	3,847	59	16	3,578	131	27
Other associates and joint ventures	(633)	177	691	462	178	382
<b>Subtotal</b>	<b>5,417</b>	<b>530</b>	<b>848</b>	<b>5,780</b>	<b>555</b>	<b>478</b>
<b>Brazilian government – Parent and its controlled entities</b>						
Government bonds	153	1,702	-	130	1,113	-
Banks controlled by the Brazilian Government	(1,466)	5,839	12,390	(3,073)	4,114	19,860
Receivables from the Electricity sector (note 8.4)	643	5,247	-	962	4,922	2
Petroleum and alcohol account - receivables from the Brazilian Government	1	251	-	5	268	-
Others	227	45	217	200	408	333
<b>Subtotal</b>	<b>(442)</b>	<b>13,084</b>	<b>12,607</b>	<b>(1,776)</b>	<b>10,825</b>	<b>20,195</b>
Pension plans	-	68	94	-	48	99
<b>Total</b>	<b>4,975</b>	<b>13,682</b>	<b>13,549</b>	<b>4,004</b>	<b>11,428</b>	<b>20,772</b>
Revenues, mainly sales revenues	7,517	-	-	6,652	-	-
Purchases and services	(1,588)	-	-	(94)	-	-
Foreign exchange and inflation indexation charges, net	239	-	-	(284)	-	-
Finance income (expenses), net	(1,193)	-	-	(2,270)	-	-
Current assets	-	2,521	-	-	3,062	-
Non-current assets	-	11,161	-	-	8,366	-
Current liabilities	-	-	1,544	-	-	4,037
Non-current liabilities	-	-	12,005	-	-	16,735
<b>Total</b>	<b>4,975</b>	<b>13,682</b>	<b>13,549</b>	<b>4,004</b>	<b>11,428</b>	<b>20,772</b>

In addition to the aforementioned transactions, Petrobras and the Brazilian Federal Government entered into the Assignment Agreement in 2010, which grants the Company the right to carry out prospecting and drilling activities for hydrocarbons located in the pre-salt area limited to the production of five billion barrels of oil equivalent.

For detailed information on Assignment Agreement, see note 12.3.

## 19.2. Petroleum and Alcohol accounts - Receivables from the Brazilian Federal Government

As of December 31, 2017, the balance of receivables related to the Petroleum and Alcohol accounts was US\$ 251 (US\$ 268 as of December 31, 2016). 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 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.

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.

On July 18, 2017, the Brazilian Federal Government appealed the ruling and the court assessment of this appeal is pending.

### 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 December 2017 and December 2016 were:

<b>Compensation of employees, excluding officers (amounts in U.S. dollars)</b>	<b>Dec/2017</b>	<b>Dec/2016</b>
Lowest compensation	964.52	934.64
Average compensation	5,591.00	5,376.73
Highest compensation	30,644.55	27,996.49
<b>Compensation of highest paid Petrobras officer</b>	<b>35,964.15</b>	<b>35,453.09</b>

The total compensation of Executive Officers and Board Members of Petrobras parent company is set out as follows:

	<b>2017</b>			<b>2016</b>		
	<b>Officers</b>	<b>Board members</b>	<b>Total</b>	<b>Board members and alternates</b>		
				<b>Officers</b>	<b>Board members and alternates</b>	<b>Total</b>
Wages and short-term benefits	3.7	0.4	4.1	3.4	0.4	3.8
Social security and other employee-related taxes	1.0	-	1.0	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
<b>Total compensation recognized in the statement of income</b>	<b>5.1</b>	<b>0.4</b>	<b>5.5</b>	<b>5.0</b>	<b>0.5</b>	<b>5.5</b>
Average number of members in the period (*)	7.92	9.00	16.92	7.67	11.00	18.67
Average number of paid members in the period (**)	7.92	5.75	13.67	7.67	9.33	17.00

(\*) Monthly average number of members.

(\*\*) Monthly average number of paid members.

In 2017 the board members and executive officers of the Petrobras group received US\$ 24.3 as compensation (US\$ 22.2 in 2016).

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 accordance with Brazilian regulation applicable to companies controlled by the Brazilian Government, Board members who are also members of the Audit Committee are only compensated with respect to their Audit Committee duties. The total compensation concerning these members totaled US\$ 94 thousand in 2017 (US\$ 113 thousand with social security and related charges).

The general meeting, held on April 27, 2017, fixed monthly compensation of Audit Committee members to 10% of monthly average executive officers' compensation, excluding certain social security benefits and paid vacation.

## 20. Provision for decommissioning costs

<b>Non-current liabilities</b>	<b>2017</b>	<b>2016</b>
Opening balance	10,252	9,150
Adjustment to provision	4,166	(564)
Transfers related to liabilities held for sale	(117)	(35)
Payments made	(709)	(730)
Interest accrued	757	660
Others	24	(41)
Cumulative translation adjustment	(230)	1,812
<b>Closing balance</b>	<b>14,143</b>	<b>10,252</b>

The estimates for abandonment and dismantling of oil and natural gas producing properties are revised annually at December 31 along with the annual process of oil and gas reserves certification and whenever an indication of significant change in the assumptions used in the estimates occurs.

In 2017, the adjustment to this provision in the amount of US\$ 4,166 primarily reflected the decrease in the risk-adjusted discount rate from 7.42% p.a in 2016 to 5.11% p.a. in 2017, which was affected by the improved market risk perception, as well as due to an acceleration of fields abandonment regarding certain projects.

## 21. Taxes

### 21.1. Income taxes and other taxes

<b>Income taxes</b>	<b>Current assets</b>		<b>Current liabilities</b>		<b>Non-current liabilities</b>
	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>
Taxes in Brazil					
Income taxes	442	595	39	112	-
Income taxes - Tax settlement programs (*)	-	-	228	-	671
	442	595	267	112	671
Taxes abroad	37	7	32	15	-
<b>Total</b>	<b>479</b>	<b>602</b>	<b>299</b>	<b>127</b>	<b>671</b>

(\*) See note 20.2 for detailed information.

<b>Other taxes</b>	<b>Current assets</b>		<b>Non-current assets</b>		<b>Current liabilities</b>		<b>Non-current liabilities (*)</b>	
	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>	<b>12.31.2016</b>
Taxes in Brazil								
Current / Deferred ICMS (VAT)	934	969	707	676	1,021	1,078	-	-
Current / Deferred PIS and COFINS	820	710	2,282	2,262	820	463	-	-
CIDE	14	22	-	-	104	118	-	-
Production taxes	-	-	-	-	1,605	1,232	-	-
Withholding income taxes	-	-	-	-	157	486	-	-
Tax Settlement Program (**)	-	-	-	-	648	28	-	-
Others	170	165	72	191	165	190	86	20
<b>Total in Brazil</b>	<b>1,938</b>	<b>1,866</b>	<b>3,061</b>	<b>3,129</b>	<b>4,520</b>	<b>3,595</b>	<b>86</b>	<b>20</b>
Taxes abroad	20	34	14	12	28	33	-	-
<b>Total</b>	<b>1,958</b>	<b>1,900</b>	<b>3,075</b>	<b>3,141</b>	<b>4,548</b>	<b>3,628</b>	<b>86</b>	<b>20</b>

(\*) Other non-current taxes are classified as other non-current liabilities.

(\*\*) It includes the amount of US\$ 3 relating to tax amnesty and refinancing program (REFIS) from previous periods.

## 21.2. Brazilian federal settlement programs

In 2017, the Company joined certain settlement programs created by the Brazilian Federal Government, which enabled the settlement of significant disputes in which the Company was a defendant (see note 30), with certain benefits, such as the use of tax loss carry forwards and reduction in interests, penalties and related charges. The settlement of disputes involving Brazilian Federal Tax Authorities, Brazilian Federal Agencies and similar bodies reduced tax disputes amounting to US\$ 11,552 that as shown below:

Provisional measures	Signed into law	Brazilian federal settlement programs	Disputes	Amount of relief	Debts
766	-	Tax Settlement Program - PRT (*)	502	-	502
783	13.496	Special Tax Settlement Program - PERT	2,203	1,001	1,202
780	13.494	Non-Tax Debts Settlement Program - PRD	340	113	227
795	13.586	Withholding income tax on remittances for payment of charter of vessels	8,507	7,976	531
			11,552	9,090	2,462

(\*) Benefit of using tax loss carryforwards to settle 80% of the debt.

The balances of respective liabilities carried on the statement of financial position as of December 31, 2017 are shown below:

	Settlement				Inflation indexation	CTA	12.31.2017
	Tax liabilities	In cash	Tax losses used	Total			
<b>PRT</b>							
Income taxes	321	(64)	(103)	(167)	-	(1)	153
Other taxes	181	(36)	(145)	(181)	-	-	-
<b>Total</b>	<b>502</b>	<b>(100)</b>	<b>(248)</b>	<b>(348)</b>	<b>-</b>	<b>(1)</b>	<b>153</b>
<b>PERT</b>							
Income taxes (*)	1,128	(425)	-	(425)	21	20	744
Others taxes	74	(34)	-	(34)	2	(2)	40
	1,202	(459)	-	(459)	23	18	784
<b>PRD</b>							
Production taxes	227	(132)	-	(132)	-	(8)	87
<b>Law 13.586/17</b>							
Withholding income tax	531	-	-	-	-	(10)	521
<b>Total</b>	<b>2,462</b>	<b>(691)</b>	<b>(248)</b>	<b>(939)</b>	<b>23</b>	<b>(1)</b>	<b>1,545</b>
Current							874
Non-current							671

(\*) It includes incremental relief amounting to US\$ 239 according to Law 13.496/17.

The following table presents the settlement years of the outstanding amount of these programs:

	2018	2019	2020	2021	2022	2023 onwards	Total
	PRT	153	-	-	-	-	-
PERT	119	60	60	60	60	425	784
PRD	87	-	-	-	-	-	87
Law 13.586/17	521	-	-	-	-	-	521
<b>Total</b>	<b>880</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>425</b>	<b>1,545</b>

### **21.2.1. Tax Settlement Program (Programa de Regularização Tributária - PRT)**

The PRT enabled relief for the settlement of tax and non-tax debts overdue up to November 30, 2016 to the Brazilian Federal Tax Authorities (Brazilian Federal Revenue Service and National Treasury Attorney's Office).

The Company joined the program to settle, principally, proceedings at administrative level totaling US\$ 502, for which outflow of resources were probable, related to disallowed tax credits applied for income taxes and other Brazilian Federal taxes computation.

After assessing the reliefs provided by the PRT, the Company decided to settle the total debt of these tax disputes (US\$ 502) with the benefit of using tax loss carry forwards to pay US\$ 402, of which US\$ 248 was already used at December 31, 2017 and the remaining (US\$ 153 after foreign translation effects) is expected to be used in up to 12 months. The amount of US\$ 100 was settled in a lump sum payment.

After joining the PRT in May 2017, the Company recognized a reversal of provisions for legal proceedings previously recognized for this matter in the amount of US\$ 485. The impacts of this program were accounted for in the second quarter of 2017 within the Company's statement of income amounting to US\$ 82 after tax effects, as shown in note 21.2.5.

### **21.2.2. Special Tax Settlement Program (Programa Especial de Regularização Tributária - PERT)**

The PERT enabled relief for the settlement of tax and non-tax debts overdue up to April 30, 2017 to the Brazilian Federal Tax Authorities (Brazilian Federal Revenue Service and National Treasury Attorney's Office), including amounts under disputes involving these authorities.

The Company elected to join the PERT to settle the legal proceeding, in the amount of US\$ 1,977, with respect to a notice of deficiency issued due to the use of expenses arising from the Terms of Financial Commitment (TFC), signed by Petrobras and Petros Plan in 2008, as deductible in determining taxable profit. The TFC represents a commitment to cover obligations due to participants' accepted changes in the plan benefits and disputes resolved at that period.

The court ruled on this matter in the second quarter of 2017 granting the deduction of these expenses from the taxable profit computation, but limited the deduction to 20% of the payroll and compensation of key management participants in the plan. After assessing the fundamentals of this court ruling, the Company reassessed the probability of outflow of resources with respect to this dispute and estimated a portion of it as probable.

The Company was not able to use tax loss carry forwards to settle this amount as this tax dispute was in the scope of the National Treasury Attorney's Office. Accordingly, an assessment of the other reliefs was performed and, as a result, the Company decided to settle this tax dispute, totaling US\$ 1,977, by paying US\$ 1,317, which takes into account the benefits reliefs on interests, penalties and related charges. Of this amount, US\$ 432 was settled up to December 2017, and the remaining amount will be settled through 145 monthly installments bearing interest from January 2018 onwards.

In addition, pursuant the law 13.496 enacted on October 24, 2017, which enabled incremental relief relating to this matter, the remaining amount was recalculated and decreased by US\$ 239.

Pursuant to the Provisional Measure 807/2017 enacted on October 31, 2017, the period to join this program was extended from August 31 to November 14, 2017. Therefore, the Company decided in the third quarter of 2017 to settle other disputes relating to debts in the scope of the Brazilian Federal Revenue Service amounting to US\$ 226, following unfavorable court rulings that changed the Company's estimates about probability of outflow of resources to probable. After the relief under the PERT, the total amount of these disputes was reduced to US\$ 125, of which US\$ 103 was settled in January 2018 through a lump sum payment, and the remaining amount will be paid through 141 monthly installments. These disputes refer to:

- Tax dispute relating to the use of tax benefit under the Thermolectric Priority Program (Programa Prioritário de Termoeletricidade) established by the Decree 3.371/2000, that allegedly enabled total relief (zero rate) of tax on imported products (*Imposto de Importação –II*) and the tax on manufactured products (*Imposto sobre Produtos Industrializados–IPI*) over the import of certain equipment necessary for setting up electricity generation units. After the reliefs provided for by PERT, this tax dispute in the amount of US\$ 104 was reduced to US\$ 48;
- Tax dispute relating to the use of certain tax loss carry forwards as deduction from the computation of taxable income. After the reliefs provided for by this program, this tax dispute in the amount of US\$ 38 will be settled by paying US\$ 20;
- Other debts related to contributions to private social service and vocational training entities linked to trade unions, as well as PIS and COFINS (Social Integration Program and Social Security Financing). These amounts totaled US\$ 25 that, after the relief provided for by this program was reduced to US\$ 19; and
- The wholly-owned subsidiaries Transpetro and BR also decided to settle Brazilian federal taxes disputes amounting to US\$ 59. After the relief on interest, penalties and related charges, this amount will be settled by paying US\$ 38.

Accordingly, the Company recognized the amount of US\$ 1,839 within the statement of income in 2017, made up of tax debts after reliefs and tax effects amounting to US\$ 1,117, reversals of deferred income tax assets for unused tax losses from 2012 to 2017 amounting to US\$ 711 and indexation charges of US\$ 22.

### **21.2.3. Non-Tax Debts Settlement Program (Programa de Regularização de Débitos não Tributários - PRD)**

The PRD enabled relief for the settlement of non-tax debts overdue to the Brazilian Federal Agencies and similar bodies up to October 25, 2017, including amounts under disputes and debts in the scope of other settlement programs involving these authorities.

The Company joined the PRD to settle some legal proceedings involving ANP, with respect to production tax debts for which the likelihood of losses were deemed probable, following a court ruling in August 2017 granting to ANP its arguments.

After assessing the benefits from relief on interest, penalties and related charges provided for by this program, the Company decided to settle these disputes, totaling US\$ 340 by paying US\$ 227 plus interest, of which US\$ 136 was settled payment in the fourth quarter of 2017 and the remaining amount in January 2018.

Accordingly, the Company recognized US\$ 164 within the statement of income in December 31, 2017, after tax effects, as shown in note 21.2.5.

### **21.2.4. Settlement program under law 13.586/2017**

As presented in note 21.4, the law 13.586 enacted on December 28, 2017, formerly Provisional Measure 795/17, provided for the tax treatment of several relevant issues relating to the exploration and production of oil or natural gas. This law also established the settlement program of withholding income tax on remittances abroad related to charter contracts for vessels, enabling the regularization of events occurred in the period from 2008 to 2014.

The decision to join the program was based on the economic benefits thereof. Proceeding with the disputes would involve financial efforts to provide significant judicial deposits and this program gave rise to the possibility of ceasing disputes at administrative and judicial levels related to the period from 2008 to 2013 in the amount of US\$ 8,507, as well as amounts relating to the 2014 not yet under dispute. The company will pay US\$ 531 in 12 consecutive installments bearing interest at SELIC rate, of which the first was paid in January 2018.

Accordingly, the Company recognized US\$ 350 within the statement of income in December 31, 2017, after tax effects, as shown in note 21.2.5.

### 21.2.5. Impacts of the tax settlement programs within statement of income

	PRT (*)	PERT	PRD	Law 13,586/17	Total
Cost of sales	-	-	(131)	-	(131)
Other taxes	(169)	(366)	(25)	(323)	(883)
Finance expenses	(249)	(309)	(71)	(208)	(837)
Income taxes - notice of deficiency	(98)	(565)	-	-	(663)
<b>Total - after reliefs</b>	<b>(516)</b>	<b>(1,240)</b>	<b>(227)</b>	<b>(531)</b>	<b>(2,514)</b>
Impacts of PIS/COFINS on settlement programs	-	(69)	(7)	-	(76)
Income taxes - deductible expenses	(51)	192	70	180	391
Other income and expenses - reversal of provision (*)	485	11	-	-	496
<b>Total</b>	<b>(82)</b>	<b>(1,106)</b>	<b>(164)</b>	<b>(351)</b>	<b>(1,703)</b>
Income taxes - reversal of unused tax losses from 2012 to 2017	-	(711)	-	-	(711)
<b>Impacts within the statement of income (before Indexation charges)</b>	<b>(82)</b>	<b>(1,817)</b>	<b>(164)</b>	<b>(351)</b>	<b>(2,414)</b>
Indexation charges	-	(22)	-	-	(22)
<b>Impacts within the statement of income</b>	<b>(82)</b>	<b>(1,839)</b>	<b>(164)</b>	<b>(351)</b>	<b>(2,436)</b>

(\*) A portion of this provision was recognized within the statement of income in the first quarter 2017 in the amount of US\$ 199.

### 21.3. Tax amnesty programs – State Tax (Programas de Anistias Estaduais)

In 2017, the Company elected to settle in cash VAT (ICMS) tax disputes concerning the states of Amazonas, Ceará, Minas Gerais and Pernambuco by joining states amnesty settlement programs, which exempted the company from having to pay interest and penalties. Accordingly, the Company charged US\$ 117 as other taxes.

## 21.4. Brazilian Tax Law

### 21.4.1. Federal Law

On December 28, 2017, the Brazilian Federal Government signed the Provisional Measure No. 795 into Law. 13,586 which outlines tax requirements applicable to the oil and gas exploration and development activities and also establishes a special regime for exploration, development and production of oil, gas and other liquid hydrocarbons.

It is expected that there will be greater stability and legal security in the industry following this new tax regulation model, allowing an increase in investments and a reduction in litigation. The main provisions of this law are presented below:

- Immediate deduction of investments made in connection with the oil and gas exploration and production phases from income taxes basis of computation, as well as deductions of investments made in the development phase through accelerated depreciation (2.5 times the unit of production method rate).
- Exclusion from Brazilian parent companies income tax basis, up to December 31, 2019, of a portion of income earned abroad, by direct or indirect subsidiary, or related to the activities of chartering by time or bare hull, operating lease, rent, loan of goods or rendering of services directly related to the phases of exploration and production of oil and natural gas;
- Creation of Repetro-Sped expiring at December 2040, which has provisions which enhanced the former Repetro (Special Customs Regime for the Export and Import of Goods destined to Exploration and Production of Oil and Natural Gas Reserves), notably the tax relief over goods with definitive permanence in Brazil in addition to the previous relief relating to temporary admissions. In addition, the Repetro-Sped brought other important enhancements, such as: i) the possibility of migrating goods under the old regime to the new one, without paying the federal tax burden in the nationalization process; (ii) increasing the possibility of applying the regime to well equipment; (iii) exemption of federal taxes for goods purchased by Brazilian suppliers, including the intermediary manufacturers; and iv) greater adherence and rationality in relation to the operations of the industry, minimizing risks of noncompliance with the regime.
- New rules relating to the determination of withholding income tax on remittances for payment of vessels charters.

As set out in note 21.2.4, this law established a tax settlement program relating to withholding income tax on remittances for payment of vessels charters through 2014, enabling the company to settle disputes thereof.

In addition, the Social Integration Program (PIS) and Contribution to Social Security Financing (COFINS) rates over diesel and gasoline sales were increased pursuant to the Decree 9.101 enacted in July 2017. This tax burden was taken into account in the sale prices and, as a consequence, there was a significant increase in these taxes charges in 2017.

Conversely, the Brazilian Federal Supreme Court, in October 2017, ruled on the inclusion of amount of VAT tax within the computation basis of PIS and COFINS. According to its decision, sales revenues do not include the amount of VAT. Therefore, VAT must not be taken into account in determining the amount of PIS and COFINS.

#### a) ANP Resolution 703/2017

ANP enacted the Resolution No. 703 on September 26, 2017, establishing new criteria for reference price for the calculation of production taxes. The new calculation will be effective on January 1, 2018 and will be applied gradually until 2022, starting from a percentage of 20% according to the new rules. The new reference price for production taxes calculation takes into account different characteristics of the product in each exploratory area.

## 21.4.2. State laws

### b) VAT (ICMS) tax and state rate over transactions involving crude oil operations State Law

On December 30, 2015, the state of Rio de Janeiro enacted laws that increased the tax burden on the oil industry since March 2016, as follows:

- Law No. 7,182 – establishes a state 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.

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.

### c) VAT (ICMS) tax incentives over the Repetro-Sped

Following the creation of Repetro-Sped pursuant to the new requirements provided for Provisional Measure No. 795 into Law. 13,586/2017 (see note 21.4.3), the Brazilian Federal Government authorized its states to provide tax incentives relating to VAT (ICMS) tax with direct impacts on the oil and gas industry.

Pursuant to the ICMS Convention 03/2018 enacted on January 17, 2018, ratified on February 1, 2018, the Brazilian Federal Government authorized its states to reduce the basis of VAT (ICMS) tax computation on imports or sale in the domestic market of goods with definitive permanence, as well as VAT (ICMS) exemption on import of goods with temporary permanence in Brazil. In addition, VAT (ICMS) exemption for goods migrating from the old to the new tax regime was also provided for.

At the date of issue of these financial statements, the State of Rio de Janeiro and the State of São Paulo were the only states enacting new regulations governing the tax incentives authorized by the Brazilian Federal Government.

## 21.5. 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 and other receivables / payables and financing	Finance leases	Provision for legal proceedings	Tax losses	Inventories	Employee Benefits	Others	Total
	Exploration and decommissioning costs	Others (*)								
Balance at January 1, 2016	(10,323)	1,291	7,613	(350)	792	5,215	353	1,199	(6)	5,784
Recognized in the statement of income for the year	1,078	(533)	(374)	36	183	(230)	21	522	210	913
Recognized in shareholders' equity (****)	-	-	(4,629)	301	-	(3)	-	1,058	-	(3,273)
Cumulative translation adjustment	(1,960)	106	918	(68)	179	1,094	55	252	(12)	564
Others (**)	-	73	(16)	(9)	(26)	(36)	-	(22)	92	56
<b>Balance at December 31, 2016</b>	<b>(11,205)</b>	<b>937</b>	<b>3,512</b>	<b>(90)</b>	<b>1,128</b>	<b>6,040</b>	<b>429</b>	<b>3,009</b>	<b>284</b>	<b>4,044</b>
Recognized in the statement of income for the period (***)	363	(1,292)	(1,099)	(64)	1,134	278	130	(4)	139	(415)
Recognized in shareholders' equity (****)	-	-	(887)	-	-	(69)	-	(273)	9	(1,220)
Cumulative translation adjustment	150	45	34	4	(40)	(67)	(6)	(34)	(11)	75
Use of tax credits	-	-	-	-	-	(271)	-	-	-	(271)
Others	-	(188)	(16)	20	(21)	120	16	(10)	108	29
<b>Balance at December 31, 2017</b>	<b>(10,692)</b>	<b>(498)</b>	<b>1,544</b>	<b>(130)</b>	<b>2,201</b>	<b>6,031</b>	<b>569</b>	<b>2,688</b>	<b>529</b>	<b>2,242</b>
Deferred tax assets										4,307
Deferred tax liabilities										(263)
<b>Balance at December 31, 2016</b>										<b>4,044</b>
Deferred tax assets										3,438
Deferred tax liabilities										(1,196)
<b>Balance at December 31, 2017</b>										<b>2,242</b>

(\*) Mainly includes impairment adjustments and capitalized borrowing costs.

(\*\*) Includes US\$ 77 transferred to liabilities associated with assets held for sale relating to Liquegás, PESA and NTS.

(\*\*\*) Does not include US\$ 52 relating to deferred income taxes of companies when classified as held for sale.

(\*\*\*\*) The amounts presented as Loans, trade and other receivables/payables and financing, relate to the tax effect on exchange rate variation recognized within other comprehensive income (cash flow hedge accounting) as set out note 33.2.

**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 2018-2022 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 reversed and expected taxable events occur based on its 2018-2022 BMP.

The estimated schedule of recovery/reversal of net deferred tax assets (liabilities) recoverable (payable) as of December 31, 2017 is set out in the following table:

	<b>Assets</b>	<b>Liabilities</b>
2018	683	(372)
2019	403	96
2020	397	121
2021	465	862
2022	498	24
2023 and thereafter	992	465
<b>Recognized deferred tax credits</b>	<b>3,438</b>	<b>1,196</b>
Brazil	511	-
Abroad	2,660	-
<b>Unrecognized deferred tax credits</b>	<b>3,171</b>	<b>-</b>
<b>Total</b>	<b>6,609</b>	<b>1,196</b>

At December 31, 2017, the Company had tax loss carryforwards arising from offshore subsidiaries, for which no deferred tax assets had been recognized. These tax losses totaling US\$ 2,660 (US\$ 2,532 as of December 31, 2016) arose mainly from oil and gas exploration and production and refining activities in the United States of US\$ 2,370 (US\$ 2,276 as of December 31, 2016), as well as activities in Spain in the amount of US\$ 290 (US\$ 256 as of December 31, 2016).

An aging of the unrecognized tax carryforwards, from companies abroad is set out below:

	<b>Unrecognized deferred tax credits</b>
2020	42
2021	152
2022	6
2023	55
2024	36
2025	6
2026	113
2027	130
2028	147
2029	162
2030 and thereafter	1,811
<b>Total</b>	<b>2,660</b>

**21.6. 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:

	2017	2016	2015
Net income before income taxes	1,997	(3,665)	(9,748)
Nominal income taxes computed based on Brazilian statutory corporate tax rates (34%)	(679)	1,247	3,314
Adjustments to arrive at the effective tax rate:			
· Different jurisdictional tax rates for companies abroad	669	(157)	(251)
· Brazilian income taxes on income of companies incorporated outside Brazil (*)	(70)	(320)	(751)
· Tax incentives	169	51	11
· Tax loss carryforwards (unrecognized tax losses)	(146)	(265)	(554)
· Non-taxable income (non-deductible expenses), net (**)	(472)	(1,080)	(658)
· Tax settlement programs (***)	(1,373)	-	-
· Others	74	(160)	(28)
<b>Income taxes expense</b>	<b>(1,828)</b>	<b>(684)</b>	<b>1,137</b>
Deferred income taxes	(467)	913	2,043
Current income taxes	(1,361)	(1,597)	(906)
<b>Total</b>	<b>(1,828)</b>	<b>(684)</b>	<b>1,137</b>
Effective tax rate of income taxes	91.5%	(18.7)%	11.7%

(\*) Relates to Brazilian income taxes on earnings of offshore investees, as established by Law No. 12,973/2014.

(\*\*) Includes results in equity-accounted investments and expenses relating to health care plan.

(\*\*\*) Income taxes in the scope of PRT and PERT and reversals of losses carry forwards from 2012 to 2017, as shown in note 21.2.4.

## 22. Employee benefits (Post-Employment)

	2017	2016
<b>Liabilities</b>		
Petros Pension Plan	10,728	10,752
Petros 2 Pension Plan	260	293
AMS Medical Plan	10,802	11,214
Other plans	40	38
<b>Total</b>	<b>21,830</b>	<b>22,297</b>
Current	844	820
Non-current	20,986	21,477
<b>Total</b>	<b>21,830</b>	<b>22,297</b>

### 22.1. Petros Plan and Petros 2 Plan

The Company's post-retirement plans are managed by Fundação Petrobras de Seguridade Social (Petros Foundation), which was established by Petrobras as a nonprofit legal entity governed by private law with administrative and financial autonomy.

Petros Foundation has committees for assessing and resolving on risk management matters, mainly an Integrity Program Against Harmful Acts, established in 2017, with the purpose of improving its corporate governance.

#### 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 Foundation performs an annual actuarial review of its costs using the capitalization method for most benefits. The employers (sponsors) make regular contributions in amounts equal to the contributions of the participants (active employees, assisted employees and retired employees), on a parity basis.

As of December 31, 2017, the balance of the Terms of Financial Commitment (TFC), signed by Petrobras and Petros Foundation in 2008 is US\$ 3,720. The TFC 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\$ 4,067, updated in the third quarter of 2017 to reflect the increase in the commitments assumed in the TFC.

The employers' expected contributions to the plan for 2018 are US\$ 220 and interest payments on TFC US\$ 222.

The average duration of the actuarial liability related to the plan, as of December 31, 2017, is 12.51 years (13.06 years as of December 31, 2016).

### **Deficit settlement plan – Petros Plan**

Petros Foundation's financial statements for 2016 were approved by the Executive Council of Petros Foundation on May 26, 2017 and presented an accumulated deficit of US\$ 8,192 (US\$ 5,788 accumulated until 2015) in the Petros Plan, according to the general accepted accounting standards for the post-retirement sector, regulated in Brazil by the Post-Retirement Benefit Federal Council – CNPC.

The deficit determined by Petros Foundation is annually calculated by an independent actuary and is already recognized in the Company's financial statements in accordance with IFRS.

On June 19, 2017, the Superintendency of Post-retirement Benefits (PREVIC) issued the Conduct Adjustment Declaration (TAC) for Petros Plan, determining a deadline for the implementation of its plan for reduction of the accumulated deficit computed at the end of 2015.

On September 12, 2017, the Executive Council of Petros Foundation approved the deficit of the year 2015. This amount was updated based on interest and inflation and reached US\$ 8,253 at December 31, 2017.

The Company and the Secretariat of Management and Governance for the State-owned Companies (*Secretaria de Coordenação e Governança das Empresas Estatais* – SEST) assessed the deficit settlement plan and additional contributions from participants and sponsors will commence in March 2018.

Pursuant to relevant regulation, the sponsors and participants will cover this deficit based on their respective proportions of regular contributions. Accordingly, the Company will cover approximately US\$ 4,141 of this deficit and the contributions will occur for 18 years through decreasing values, of which the estimated amount for the first year is US\$ 450.

The additional contributions of the participants during their employed and assisted phases were considered in the actuarial evaluation of 2017, reducing the present value of the obligation, in the amount of US\$ 4.1 billion, while the additional contributions of the sponsor will reduce the actuarial obligation at the time of the disbursement, without impacting the income statement.

### **Split of Petros Plan**

On February 15, 2018, the PREVIC authorized the split of Petros Plan, expected to occur on March 31, 2018, into two separate plans: Petros Plan – Renegotiated and Petros Plan – Non-renegotiated.

This split arises from the renegotiation procedures held in 2006-2007 period and in 2012, when 75% of the participants accepted the option to change to a model that sets forth solely inflation indexation on the annual adjustment of their benefits. The other participants' benefits remained adjusted by the same rate as the Petrobras' workforce had their salaries adjusted.

Petros Foundation will assess the effect of the split on the deficit settlement plan, whose additional contributions will commence in March 2018. The results of this study may trigger a revision of the settlement plan in 2019.

### Reconciliation between results registered by Petros and the Company

The table below presents the reconciliation of the deficit of Petros Plan registered by Petros Foundation, according to the standards issued by CNPC, and by sponsor Petrobras, according to international accounting standards (IAS 19):

	<b>Petros Plan</b>	
	<b>2017</b>	<b>2016</b>
Deficit registered by Petros	1,209	8,189
Extraordinary sponsor contributions	4,037	-
Effects of the TFC over plan assets	3,684	3,642
Ordinary sponsor contributions	2,829	3,069
Financial assumptions	1,528	982
Actuarial valuation method	(2,803)	(5,372)
Others	244	242
<b>Net actuarial liability registered by the Company</b>	<b>10,728</b>	<b>10,752</b>

The main differences are:

- Sponsor contributions – Petros Foundation uses the discounted cash flow of expected sponsor contributions, while Petrobras uses the realized sponsor contributions.
- Effects of the TFC over plan assets – Petros Foundation accounts for its receivables arising from the TFC.
- Financial assumptions – the main difference is the discount rate used by Petros Foundation, based on actuarial target, while the discount rate used by Petrobras is based on the yield curve of a long-term Brazilian Government Bonds (NTN), as set out in note 5.4.
- Actuarial valuation method – Petrobras uses the projected unit credit method to determine the present value of its defined benefit obligations, which represents a more accelerated term of capitalization when compared to the aggregate method of capitalization used by Petros Foundation.

### 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, Petrobras Biocombustível and Araucária Nitrogenados. The plan is open to new participants although there will no longer be payments relating to past service costs.

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\$ 283 in 2017.

The defined benefit portion of the contributions was suspended from July 1, 2012 to June 30, 2018, as determined by the Executive Council of Petros Foundation, based on advice of the actuarial consultants from Petros Foundation. Therefore, the entire contributions are being applied to the individual accounts of plan participants.

For 2018 the employers' expected contributions to the defined contribution portion of the plan are US\$ 279.

The average duration of the actuarial liability related to the plan, as of December 31, 2017 is 43.53 years (43.20 at December 31, 2016).

## **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.

The actuarial liability of the subsidiary Liquigás is reclassified as held for sale, as set out in note 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 Foundation establishes investment policies for 5-year periods, reviewed annually. Petros uses an asset liability management model (ALM) to address net cash flow mismatches of the benefit plans, based on liquidity and solvency parameters, simulating a 30-year period.

Portfolio allocation limits for the period between 2018 and 2022 for the Petros Plan are 45% 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 5% in structured finance projects. Allocation limits for Petros 2 Plan for the same period are: 65% to 90% in fixed-income securities, 5% to 20% in variable-income securities, 0% to 5% in real estate, 2% to 8% in loans to participants, 0% to 5% in structured finance projects and 0% to 2% in investments abroad.

The pension plan assets by type of asset are set out as follows:

Type of asset	2017				2016	
	Quoted prices in active markets	Unquoted prices	Total fair value	%	Total fair value*	%
<b>Receivables</b>	-	1,139	1,139	8%	1,306	8%
<b>Fixed income</b>	6,683	2,003	8,686	58%	7,078	46%
Corporate bonds	-	118	118		62	
Government bonds	6,683	61	6,744		6,019	
Fixed income funds	-	1,815	1,815		986	
Other investments	-	9	9		11	
<b>Variable income</b>	2,877	285	3,162	21%	4,657	30%
Common and preferred shares	2,877	-	2,877		4,493	
Other investments	-	285	285		164	
<b>Structured investments</b>	-	373	373	2%	731	5%
Private equity funds	-	307	307		636	
Venture capital funds	-	14	14		16	
Real estate Funds	-	52	52		79	
<b>Real estate properties</b>	-	1,045	1,045	7%	1,141	7%
	9,560	4,845	14,405	96%	14,913	96%
Loans to participants	-	620	620	4%	632	4%
	9,560	5,465	15,025	100%	15,545	100%

\* Re-presented values for better comparability with the current year.

As of December 31, 2017, the investment portfolio included debentures of US\$ 32, Company's common and preferred shares in the amount of US\$ 14 and US\$ 20, respectively, and real estate properties leased by the Company in the amount of US\$ 397.

Loans to participants are measured at amortized cost, which is considered to be an appropriate estimate of fair value.

In 2017, the Company improved its monitoring model over Petros Foundation, mainly: enhancement on internal controls over investment portfolio; establishment of specific committees to provide technical advisory for the members indicated by the Company to the Executive and Fiscal Councils of Petros Foundation, in accordance with relevant regulation establishing practices to be performed by the Board of Directors and Executive Officers of the sponsors.

## 22.4. Medical Benefits: Health Care Plan - *Assistência Multidisciplinar de Saúde ("AMS")*

Petrobras, Petrobras Distribuidora S.A., Petrobras Transporte S.A. – Transpetro, Petrobras Biocombustível, Transportadora Brasileira Gasoduto Brasil-Bolívia – TBG and Termobahia 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, of which the Company satisfies 70% of these costs as governed by the collective bargaining agreement.

The average duration of the actuarial liability related to this health care plan, as of December 31, 2017, is 22.08 years (22.04 as of December 31, 2016).

#### **CGPAR resolutions**

On January 18, 2018, the Inter-ministerial Commission for Corporate Governance and Administration of Participations of the Union (CGPAR), through CGPAR Resolutions 22 and 23, established guidelines and parameters of governance and cost limits to health care plans operated by state-owned companies.

The main objective of the resolutions is to make feasible the sustainability and the economic, financial and actuarial balance of the health plans operated by state-owned companies.

The company has up to 48 months to adjust the AMS health plan to this new regulation provisions and is assessing the financial impacts it may cause, including among others, a possible decrease in its actuarial liability following the parity basis of contribution, between the Company and the participants, determined by this rule.

#### **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**

	2017				
	Pension Plans		Medical Plan	Other plans	Total
	Petros	Petros 2	AMS		
<b>Changes in the present value of obligations</b>					
Obligations at the beginning of the year	25,872	678	11,214	78	37,842
Interest expense:	2,776	72	1,222	10	4,080
Term of financial commitment (TFC)	325	-	-	-	325
Actuarial	2,451	72	1,222	10	3,755
Current service cost	89	44	161	4	298
Contributions paid by participants	68	-	-	-	68
Benefits paid	(1,905)	(34)	(466)	(3)	(2,408)
Remeasurement: Experience (gains) / losses (*)	(2,755)	61	(520)	7	(3,207)
Remeasurement: (gains) / losses - demographic assumptions	22	(30)	(63)	(9)	(80)
Remeasurement: (gains) / losses - financial assumptions	1,293	113	(567)	7	846
Others	-	-	-	(6)	(6)
Cumulative Translation Adjustment	(379)	(17)	(179)	(3)	(578)
<b>Obligations at the end of the year</b>	<b>25,081</b>	<b>887</b>	<b>10,802</b>	<b>85</b>	<b>36,855</b>
<b>Changes in the fair value of plan assets</b>					
Fair value of plan assets at the beginning of the year	15,120	385	-	40	15,545
Interest income	1,609	40	-	3	1,652
Contributions paid by the sponsor (Company)	230	-	467	2	699
Contributions paid by participants	68	-	-	-	68
Term of financial commitment (TFC) paid by the Company	223	-	-	-	223
Benefits Paid	(1,905)	(34)	(466)	(3)	(2,408)
Remeasurement: Return on plan assets due to lower interest income	(786)	249	-	4	(533)
Others	-	-	-	-	-
Cumulative Translation Adjustment	(206)	(13)	(1)	(1)	(221)
<b>Fair value of plan assets at the end of the year</b>	<b>14,353</b>	<b>627</b>	<b>0</b>	<b>45</b>	<b>15,025</b>
<b>Amounts recognized in the Statement of Financial Position</b>					
Present value of obligations	25,081	887	10,802	85	36,855
(-) Fair value of plan assets	(14,353)	(627)	-	(45)	(15,025)
<b>Net actuarial liability as of December 31,</b>	<b>10,728</b>	<b>260</b>	<b>10,802</b>	<b>40</b>	<b>21,830</b>
<b>Changes in the net actuarial liability</b>					
Balance as of January 1,	10,752	293	11,214	38	22,297
Remeasurement effects recognized in other comprehensive	(654)	(105)	(1,150)	1	(1,908)
Costs incurred in the period	1,256	76	1,383	11	2,726
Contributions paid	(230)	-	(467)	(2)	(699)
Payments related to Term of financial commitment (TFC)	(223)	-	-	-	(223)
Others	-	-	-	(6)	(6)
Cumulative Translation Adjustment	(173)	(4)	(178)	(2)	(357)
<b>Balance as of December 31,</b>	<b>10,728</b>	<b>260</b>	<b>10,802</b>	<b>40</b>	<b>21,830</b>

(\*) It includes additional contributions of participants regarding the deficit settlement plan as set out in note 22.1.

	2016				
	Pension Plan		Medical Plan		
	Petros	Petros 2	AMS	Other plans	Total
<b>Changes in the present value of obligations</b>					
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
<b>Obligations at the end of the year</b>	<b>25,872</b>	<b>678</b>	<b>11,214</b>	<b>78</b>	<b>37,842</b>
<b>Changes in the fair value of plan assets</b>					
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
<b>Fair value of plan assets at the end of the year</b>	<b>15,120</b>	<b>385</b>	<b>0</b>	<b>40</b>	<b>15,545</b>
<b>Amounts recognized in the Statement of Financial Position</b>					
Present value of obligations	25,872	678	11,214	78	37,842
(-) Fair value of plan assets	(15,120)	(385)	-	(40)	(15,545)
<b>Net actuarial liability as of December 31,</b>	<b>10,752</b>	<b>293</b>	<b>11,214</b>	<b>38</b>	<b>22,297</b>
<b>Changes in the net actuarial liability</b>					
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
<b>Balance as of December 31,</b>	<b>10,752</b>	<b>293</b>	<b>11,214</b>	<b>38</b>	<b>22,297</b>

**b) Defined benefit costs**

					2017
	Pension Plans		Medical Plan		
	Petros	Petros 2	AMS	Other Plans	Total
Service cost	89	44	161	4	298
Interest on net liabilities (assets)	1,167	32	1,222	7	2,428
<b>Net expenses for the year</b>	<b>1,256</b>	<b>76</b>	<b>1,383</b>	<b>11</b>	<b>2,726</b>
Related to active employees:					
Included in the cost of sales	236	40	263	-	539
Operating expenses in statement of income	103	24	136	10	273
Related to retirees	917	12	984	1	1,914
<b>Net expenses for the year</b>	<b>1,256</b>	<b>76</b>	<b>1,383</b>	<b>11</b>	<b>2,726</b>
<b>2016</b>					
	Pension Plans		Medical Plan		
	Petros	Petros 2	AMS	Other Plans	Total
Service cost	83	21	128	18	250
Interest on net liabilities (assets)	945	12	1,093	4	2,054
<b>Net expenses for the year</b>	<b>1,028</b>	<b>33</b>	<b>1,221</b>	<b>22</b>	<b>2,304</b>
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	643	4	780	1	1,428
<b>Net expenses for the year</b>	<b>1,028</b>	<b>33</b>	<b>1,221</b>	<b>22</b>	<b>2,304</b>
<b>2015</b>					
	Pension Plans		Medical Plan		
	Petros	Petros 2	AMS	Other Plans	Total
Service cost	77	35	58	12	182
Interest on net liabilities (assets)	801	29	933	15	1,778
<b>Net expenses for the year</b>	<b>878</b>	<b>64</b>	<b>991</b>	<b>27</b>	<b>1,960</b>
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	487	4	659	1	1,151
<b>Net expenses for the year</b>	<b>878</b>	<b>64</b>	<b>991</b>	<b>27</b>	<b>1,960</b>

**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:

	Pension Benefits		Discount Rate		Medical Cost	
			Medical Benefits		Medical Benefits	
	+100 bps	-100 bps	+100 bps	-100 bps	+100 bps	-100 bps
Pension Obligation	(2,642)	3,247	(1,268)	1,568	1,687	(1,380)
Current Service cost and interest cost	(63)	78	(60)	72	213	(170)

#### d) Actuarial assumptions

Assumptions	2017		2016	
Discount rate - (real rate)	5.35% <sup>(1)</sup> / 5.45% <sup>(2)</sup> / 5.41% <sup>(3)</sup>		5.74% (1) / 5.69% (2) / 5.72% (3)	
Expected Inflation (Brazilian price index-IPCA)	3.96% <sup>(1)</sup> (2) (3) (4)		4.87% (1) (2) (3) (4)	
Nominal discount rate (real rate + inflation)	9.52% <sup>(1)</sup> / 9.63% <sup>(2)</sup> / 9.59% <sup>(3)</sup>		10.89% (1) / 10.84% (2) / 10.87% (3)	
Expected salary growth - real rate	1.19% <sup>(1)</sup> (5) / 2.53% <sup>(2)</sup> (5)		1.53% (1) (5) / 2.58% (2) (5)	
Expected salary growth - nominal (real rate + Inflation)	5.19% <sup>(1)</sup> (5) / 6.59% <sup>(2)</sup> (5)		6.47% (1) (5) / 7.57% (2) (5)	
Medical plan turnover	0.498% p.a. <sup>(6)</sup>		0.597% p.a. (6)	
Pension plan turnover	Null		Null	
Expected changes in medical and hospital costs	11.3% a 4.5% p.a. <sup>(7)</sup>		13.91% to 4.00% p.a. <sup>(7)</sup>	
Mortality table	EX-PETROS 2013 (both genders) <sup>(1)</sup> (3) AT-2000 female, smoothed in a 10% coefficient <sup>(2)</sup>		EX-PETROS 2013 (both genders) <sup>(1)</sup> (3) AT-2000 female, smoothed in a 10% coefficient <sup>(2)</sup>	
Disability table	American Group <sup>(1)</sup> (3) American Group smoothed in 40% <sup>(2)</sup>		TASA 1927 (1) (3) / LIGHT-low (2)	
Mortality table for disabled participants	AT-49 male <sup>(1)</sup> (3) IAPB 1957- strong <sup>(2)</sup>		AT-49 male amplified in a 10% coefficient <sup>(1)</sup> (3) IAPB 1957 - strong <sup>(2)</sup>	
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: 3.96% for 2018 and converging to 4.50% in 2025 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.

#### e) Expected maturity analysis of pension and medical benefits

	2017				
	Pension Plan		Medical Plan		Total
	Petros	Petros 2	AMS	Other plans	
Up to 1 Year	1,495	32	403	2	1,932
1 To 2 Years	1,446	31	419	1	1,897
2 To 3 Years	1,402	30	432	1	1,865
3 To 4 Years	1,364	30	443	1	1,838
Over 4 Years	19,374	764	9,105	80	29,323
<b>Total</b>	<b>25,081</b>	<b>887</b>	<b>10,802</b>	<b>85</b>	<b>36,855</b>

## 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\$ 2 in 2017 were recognized in the statement of income.

## 22.7. Profit sharing

The Company's profit sharing benefits comply with Brazilian legal requirements and those of the Brazilian Secretariat of Coordination and Governance of State-Owned Enterprises (SEST), of the Ministry of Planning, Budget and Management, and of the Ministry of Mines and Energy, and are computed based on the consolidated net income attributable to the shareholders of Petrobras.

The amount of profit sharing benefits is computed based on the results of six corporate indicators, for which annual goals are defined by the Executive Board and approved by the Board of Directors pursuant to the review of the Business and Management Plan (BMP). The annual goals are based on the results of the following corporate indicators:

- Maximum permissible levels of crude oil and oil products spill;
- Lifting cost excluding production taxes in Brazil;
- Crude oil and NGL production in Brazil;
- Feedstock processed - excluding NGL - in Brazil,
- Vessel operating efficiency; and
- Percentage of compliance with natural gas delivery schedules.

The results of the six individual goals are factored into a consolidated result that will determine the percentage of the profit to be distributed as a profit sharing benefit to employees. However, in the event the Company records a net loss for the period and all the annual goals are achieved, the profit sharing benefit will be half a month salary for each employee added to half of the lowest amount of profit sharing paid in the prior year, as established in the Company's collective bargaining agreement.

Although the loss attributable to shareholders of Petrobras recognized for 2017, the annual goals were achieved and, as a result, the company accounted for the amount of US\$ 151 in 2017 as other income and expenses regarding profit sharing benefits in accordance with clauses of the collective bargaining agreement.

## 22.8. Voluntary Separation Incentive Plan

From January 2014 to December 31, 2017, the Company implemented voluntary separation incentive plans (PIDV) as presented below:

	<b>Enrollments</b>	<b>Separations</b>	<b>Cancellations</b>	<b>Outstanding</b>
Petrobras (PIDV 2014 and 2016)	19,499	(16,441)	(2,801)	257
Petrobras Distribuidora (PIDV BR 2014, 2015 and 2016)	2,163	(1,678)	(468)	17
<b>Total</b>	<b>21,662</b>	<b>(18,119)</b>	<b>(3,269)</b>	<b>274</b>

As of December 31, 2017 changes in the provision are set out as follows:

	12.31.2017	12.31.2016
Opening Balance	811	199
Enrollments	-	1,239
Revision of provisions	(237)	(11)
Separations in the period	(558)	(656)
Cumulative translation adjustment	18	40
<b>Closing Balance</b>	<b>34</b>	<b>811</b>
Current	34	811
Non-current	-	-

## 23. Equity

### 23.1. Share capital (net of share issuance costs)

As of December 31, 2017 and 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

#### 23.2.1. Incremental costs directly attributable to the issue of shares

Includes any transaction costs directly attributable to the issue of new shares, net of taxes.

#### 23.2.2. Change in interest in subsidiaries

Includes any excess of amounts paid/received over the carrying value of the interest acquired/disposed. Changes in interests in subsidiaries that do not result in loss of control of the subsidiary are equity transactions, such as the change in BR Distribuidora, as set out in note 10, which amounted to US\$ 479.

### 23.3. Profit reserves

#### 23.3.1. Legal reserve

Represents 5% of the net income for the year, calculated pursuant to article 193 of the Brazilian Corporation Law.

#### 23.3.2. 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.

#### 23.3.3. Tax incentives reserve

Government grants are recognized in the statement of income and are appropriated from retained earnings to the tax incentive reserve in the shareholders' equity pursuant to article 195-A of Brazilian Corporation Law. This reserve may only be used to offset losses or increase share capital.

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 period from 2014 to 2017, to be allocated to the tax incentives reserve in upcoming periods, is US\$ 39.

#### **23.3.4. 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\$ 87 as of December 31, 2017 will be allocated to the profit retention reserve.

#### **23.4. Other comprehensive income**

In 2017, the Company principally recognized as other comprehensive income the following effects:

- Cumulative translation adjustment of US\$ 851, mainly due to exchange rate differences arising from the translation of these consolidated financial statements to the presentation currency. In addition, the sale of Petrobras Chile and Guarani (see note 10.1) triggered the recycling of cumulative translation adjustments previously recognized in shareholders' equity to the income statement within other income and expenses, totaling US\$ 37.
- Actuarial gain on defined benefit plans in the amount of US\$ 1,635, after taxes.
- Foreign exchange rate variation gain of US\$ 1,724, after taxes and amounts reclassified to the statement of income, recognized in the Company's equity, as a result of its cash flow hedge accounting policy. At December 31, 2017, the cumulative balance of foreign exchange variation losses, net of tax effects, is US\$ 9,573 (see note 33.2).

#### **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 2017 and 2016, the Board of Directors did not propose dividend distributions for those years.

## 23.6. Earnings per share

Per Share	2017			2016			2015		
	Common	Preferred	Total	Common	Preferred	Total	Common	Preferred	Total
Net income (loss) attributable to shareholders of Petrobras	(52)	(39)	(91)	(2,760)	(2,078)	(4,838)	(4,821)	(3,629)	(8,450)
Weighted average number of outstanding shares	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 share - in U.S. dollars	(0.01)	(0.01)	(0.01)	(0.37)	(0.37)	(0.37)	(0.65)	(0.65)	(0.65)
Basic and diluted earnings (losses) per ADS equivalent - in U.S. dollars <sup>(*)</sup>	(0.02)	(0.02)	(0.02)	(0.74)	(0.74)	(0.74)	(1.30)	(1.30)	(1.30)

(\*) - Petrobras' ADSs are equivalent to two shares.

Basic earnings per share are calculated by dividing the net income (loss) attributable to shareholders of Petrobras by the weighted average number of outstanding shares during the period.

Diluted earnings (losses) per share are calculated by adjusting the net income (loss) attributable to shareholders of Petrobras and the weighted average number of outstanding shares during the period taking into account the effects of all dilutive potential shares (equity instrument or contractual arrangements that are convertible into shares).

Basic and diluted earnings (losses) are identical as the Company has no potential share in issue.

## 24. Sales revenues

	2017	2016	2015
Diesel	25,049	25,524	30,532
Automotive gasoline	16,765	16,263	16,320
Liquefied petroleum gas	3,999	3,083	2,881
Jet fuel	3,131	2,573	3,325
Naphtha	2,637	2,472	2,594
Fuel oil (including bunker fuel)	1,392	1,167	2,297
Other oil products	3,775	3,372	3,468
<b>Subtotal oil products</b>	<b>56,748</b>	<b>54,454</b>	<b>61,417</b>
Natural gas	5,174	3,952	5,894
Ethanol, nitrogen products and renewables	3,878	3,743	3,868
Electricity	3,620	1,942	3,944
Services and others	913	811	906
<b>Domestic market</b>	<b>70,333</b>	<b>64,902</b>	<b>76,029</b>
Exports	13,075	8,439	9,692
Sales abroad (*)	5,419	8,064	11,593
<b>Foreign market</b>	<b>18,494</b>	<b>16,503</b>	<b>21,285</b>
<b>Sales revenues (**)</b>	<b>88,827</b>	<b>81,405</b>	<b>97,314</b>

(\*) Sales revenues from operations outside of Brazil, including trading and excluding exports. In 2016, it includes sales revenues from the former subsidiary PESA.

(\*\*) Sales revenues by business segment are set out in note 29.

As shown in note 6.1, IFRS 15 provisions will govern the accounting treatment for revenues from contracts with customers from January 1, 2018.

In 2017, there was no customer whose sales revenues expressed 10% or more of the Company's sales revenues. In 2016, sales from transactions with two customers reached approximately 10% or more of the Company's sales revenue, totaling US\$ 8,640 and US\$ 7,691 (US\$ 9,793 and US\$ 8,146 in 2015). These sales revenues mainly impacted the Refining, Transportation and Marketing (RT&M) business segment.

## 25. Other income and expenses

	2017	2016	2015
Provision for the class action agreement	(3,449)	-	-
Pension and medical benefits - retirees	(1,914)	(1,428)	(1,151)
Unscheduled stoppages and pre-operating expenses	(1,598)	(1,859)	(1,239)
Gains / (losses) related to legal, administrative and arbitration proceedings	(898)	(1,393)	(1,569)
Allowance for impairment of other receivables	(432)	(671)	(374)
Institutional relations and cultural projects	(258)	(253)	(428)
Profit sharing	(151)	-	-
Health, safety and environment	(70)	(80)	(95)
Operating expenses with thermoelectric power plants	(67)	(96)	(119)
Reclassification of cumulative translation adjustments - CTA	(37)	(1,457)	-
Provision for debt assumed from suppliers with subcontractors	-	(105)	-
Government grants	91	173	17
Gain on remeasurement of investment retained with loss of control	217	-	-
Voluntary Separation Incentive Plan - PIDV	237	(1,228)	(115)
Amounts recovered from Lava Jato investigation	252	131	72
Gains / (losses) on decommissioning of returned/abandoned areas	337	1,491	(144)
Expenses/Reimbursements from E&P partnership operations	372	569	530
Ship/Take or Pay agreements	543	282	225
Gains / (losses) on disposal/write-offs of assets (*)	1,498	293	(758)
Others	(272)	424	(197)
<b>Total</b>	<b>(5,599)</b>	<b>(5,207)</b>	<b>(5,345)</b>

(\*) Includes returned areas and cancelled projects, gains on the divestment of NTS in the second quarter of 2017 (see note 10.1), as well as losses on materials and supplies in the amount of US\$ 309 mainly recognized in the third quarter of 2017 due to revised projects portfolio.

## 26. Costs and Expenses by nature

	2017	2016	2015
Raw material and products for resale	(20,053)	(18,870)	(29,110)
Materials, third-party services, freight, rent and other related costs	(19,049)	(14,920)	(20,951)
Depreciation, depletion and amortization	(13,307)	(13,965)	(11,591)
Employee compensation	(9,045)	(9,984)	(9,079)
Production taxes	(7,900)	(4,879)	(6,064)
Provision for the class action agreement	(3,449)	-	-
Other taxes (*)	(1,843)	(714)	(2,796)
Unscheduled stoppages and pre-operating expenses	(1,598)	(1,859)	(1,239)
Impairment (losses) / reversals	(1,191)	(6,193)	(12,299)
(Losses) / Gains on legal, administrative and arbitration proceedings	(898)	(1,393)	(1,569)
Allowance for impairment of trade receivables	(708)	(1,131)	(941)
Exploration expenditures written off (includes dry wells and signature bonuses)	(279)	(1,281)	(1,441)
Institutional relations and cultural projects	(258)	(253)	(428)
Changes in inventories	110	(437)	(155)
Health, safety and environment	(70)	(80)	(95)
Reclassification of cumulative translation adjustment	(37)	(1,457)	-
Provision for debt acknowledgments of suppliers with subcontractors	-	(105)	-
Amounts recovered from Lava Jato investigation	252	131	72
Gain on remeasurement of investment retained with loss of control	217	-	-
Gains and losses on disposal/write-offs of assets (**)	1,498	293	(758)
<b>Total</b>	<b>(77,608)</b>	<b>(77,097)</b>	<b>(98,444)</b>
<b>In the Statement of income</b>			-
Cost of sales	(60,147)	(55,417)	(67,485)
Selling expenses	(4,538)	(3,963)	(4,627)
General and administrative expenses	(2,918)	(3,319)	(3,351)
Exploration costs	(800)	(1,761)	(1,911)
Research and development expenses	(572)	(523)	(630)
Other taxes (*)	(1,843)	(714)	(2,796)
Impairment	(1,191)	(6,193)	(12,299)
Other income and expenses	(5,599)	(5,207)	(5,345)
<b>Total</b>	<b>(77,608)</b>	<b>(77,097)</b>	<b>(98,444)</b>

(\*) It includes the impact of tax settlement programs in the amount of US\$ 883, mainly recognized in the second quarter of 2017 as set out note in 21.2.

(\*\*) Includes returned areas and cancelled projects, as well as the divestment in NTS as set out in note 10.1.

## 27. Net finance income (expense)

	2017	2016	2015
Debt interest and charges	(7,388)	(7,764)	(6,858)
Foreign exchange gains (losses) and indexation charges on net debt (*)	(4,129)	(2,507)	(3,834)
Income from investments and marketable securities (Government Bonds)	580	547	693
<b>Financial result on net debt</b>	<b>(10,937)</b>	<b>(9,724)</b>	<b>(9,999)</b>
Capitalized borrowing costs	1,976	1,729	1,773
Gains (losses) on derivatives	(64)	(111)	256
Interest income from marketable securities	24	5	25
Unwinding of discount on the provision for decommissioning costs	(762)	(662)	(231)
Other finance expenses and income, net	(622)	291	(659)
Other foreign exchange gains (losses) and indexation charges, net	490	717	394
<b>Net finance income (expenses)</b>	<b>(9,895)</b>	<b>(7,755)</b>	<b>(8,441)</b>
Income	1,047	1,053	1,412
Expenses	(7,395)	(6,958)	(6,437)
Foreign exchange gains (losses) and indexation charges	(3,547)	(1,850)	(3,416)
<b>Total</b>	<b>(9,895)</b>	<b>(7,755)</b>	<b>(8,441)</b>

(\*) Includes debt raised in Brazil (in Brazilian reais) indexed to the U.S. dollar.

## 28. Supplemental information on statement of cash flows

	2017	2016	2015
<b>Additional information on cash flows:</b>			
<b>Amounts paid/received during the period:</b>			
Withholding income tax paid on behalf of third-parties	857	932	1,034
<b>Capital expenditures and financing activities not involving cash</b>			
Purchase of property, plant and equipment on credit	133	123	171
Finance leases	86	90	-
Provision/(reversals) for decommissioning costs	4,503	937	4,145
Use of deferred tax and judicial deposit for the payment of contingency	314	138	960

## 29. Segment information

The operating segment information is reported in the manner in which the Company's senior management assesses business performance and makes decisions regarding investments and resource allocation.

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
<b>Consolidated assets by operating segment-12.31.2017</b>								
Current assets	7,575	12,670	1,811	64	2,961	27,472	(5,422)	47,131
Non-current assets	137,044	38,396	16,744	126	3,160	9,274	(509)	204,235
Long-term receivables	7,619	3,330	2,395	4	1,074	7,489	(461)	21,450
Investments	1,429	1,492	830	33	5	6	-	3,795
Property, plant and equipment	126,487	33,400	13,231	89	1,862	1,629	(48)	176,650
Operating assets	91,386	29,217	10,580	85	1,603	1,306	(48)	134,129
Under construction	35,101	4,183	2,651	4	259	323	-	42,521
Intangible assets	1,509	174	288	-	219	150	-	2,340
<b>Total Assets</b>	<b>144,619</b>	<b>51,066</b>	<b>18,555</b>	<b>190</b>	<b>6,121</b>	<b>36,746</b>	<b>(5,931)</b>	<b>251,366</b>
<b>Consolidated assets by operating segment-12.31.2016</b>								
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
<b>Total Assets</b>	<b>140,096</b>	<b>52,580</b>	<b>19,488</b>	<b>522</b>	<b>6,230</b>	<b>33,769</b>	<b>(5,702)</b>	<b>246,983</b>

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## Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



### Consolidated Statement of Income by operating segment

Jan-Dec/2017

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	42,184	67,037	12,374	213	27,567	-	(60,548)	88,827
Intersegments	40,762	16,142	3,027	201	416	-	(60,548)	-
Third parties	1,422	50,895	9,347	12	27,151	-	-	88,827
Cost of sales	(27,937)	(57,778)	(8,797)	(222)	(25,501)	-	60,088	(60,147)
Gross profit (loss)	14,247	9,259	3,577	(9)	2,066	-	(460)	28,680
Income (expenses)	(3,750)	(3,603)	(676)	(22)	(1,266)	(8,217)	73	(17,461)
Selling	(125)	(1,731)	(1,793)	(2)	(995)	27	81	(4,538)
General and administrative	(331)	(457)	(165)	(22)	(274)	(1,669)	-	(2,918)
Exploration costs	(800)	-	-	-	-	-	-	(800)
Research and development	(333)	(13)	(26)	-	-	(200)	-	(572)
Other taxes	(503)	(203)	(258)	(7)	(42)	(830)	-	(1,843)
Impairment of assets	43	(781)	(446)	(7)	-	-	-	(1,191)
Other income and expenses	(1,701)	(418)	2,012	16	45	(5,545)	(8)	(5,599)
Net income / (loss) before financial results and income taxes	10,497	5,656	2,901	(31)	800	(8,217)	(387)	11,219
Net finance income (expenses)	-	-	-	-	-	(9,895)	-	(9,895)
Results in equity-accounted investments	136	443	117	(26)	2	1	-	673
Net income / (loss) before income taxes	10,633	6,099	3,018	(57)	802	(18,111)	(387)	1,997
Income taxes	(3,571)	(1,922)	(985)	10	(272)	4,780	132	(1,828)
Net income (loss) for the period	7,062	4,177	2,033	(47)	530	(13,331)	(255)	169
Net income (loss) attributable to:								
Shareholders of Petrobras	7,021	4,235	1,915	(47)	521	(13,481)	(255)	(91)
Non-controlling interests	41	(58)	118	-	9	150	-	260
Net income (loss) for the period	7,062	4,177	2,033	(47)	530	(13,331)	(255)	169

# Petróleo Brasileiro S.A. - Petrobras

## Notes to the financial statements

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### Consolidated Statement of Income by operating segment

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 income and expenses	(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) for the period	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) for the period	1,368	5,680	855	(323)	67	(10,914)	(1,082)	(4,349)

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## Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



### Consolidated Statement of Income by operating segment

	Jan-Dec/2015							
	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	35,680	74,321	13,145	229	33,406	-	(59,467)	97,314
Intersegments	34,178	22,451	2,073	213	552	-	(59,467)	-
Third parties	1,502	51,870	11,072	16	32,854	-	-	97,314
Cost of sales	(25,171)	(60,384)	(10,539)	(252)	(30,849)	-	59,710	(67,485)
Gross profit (loss)	10,509	13,937	2,606	(23)	2,557	-	243	29,829
Income (expenses)	(13,883)	(5,834)	(2,211)	(95)	(2,785)	(6,363)	212	(30,959)
Selling	(225)	(1,999)	(511)	(2)	(2,124)	20	214	(4,627)
General and administrative	(418)	(438)	(236)	(29)	(277)	(1,953)	-	(3,351)
Exploration costs	(1,911)	-	-	-	-	-	-	(1,911)
Research and development	(172)	(117)	(53)	(9)	(1)	(278)	-	(630)
Other taxes	(160)	(709)	(412)	(2)	(69)	(1,444)	-	(2,796)
Impairment of assets	(9,830)	(1,664)	(683)	(46)	(76)	-	-	(12,299)
Other expenses, net	(1,167)	(907)	(316)	(7)	(238)	(2,708)	(2)	(5,345)
Net income / (loss) before financial results and income taxes	(3,374)	8,103	395	(118)	(228)	(6,363)	455	(1,130)
Net finance income (expenses)	-	-	-	-	-	(8,441)	-	(8,441)
Results in equity-accounted investments	(309)	356	123	(199)	9	(157)	-	(177)
Net income / (loss) before income taxes	(3,683)	8,459	518	(317)	(219)	(14,961)	455	(9,748)
Income taxes	1,200	(2,746)	(132)	41	78	2,851	(155)	1,137
<b>Net income (loss)</b>	<b>(2,483)</b>	<b>5,713</b>	<b>386</b>	<b>(276)</b>	<b>(141)</b>	<b>(12,110)</b>	<b>300</b>	<b>(8,611)</b>
Net income (loss) attributable to:								
Shareholders of Petrobras	(2,480)	5,727	237	(276)	(142)	(11,816)	300	(8,450)
Non-controlling interests	(3)	(14)	149	-	1	(294)	-	(161)
<b>Net income (loss)</b>	<b>(2,483)</b>	<b>5,713</b>	<b>386</b>	<b>(276)</b>	<b>(141)</b>	<b>(12,110)</b>	<b>300</b>	<b>(8,611)</b>

## 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) 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) agreement to settle the Consolidated Securities Class Action before the United States District Court for the Southern District of New York; (ii) collection of royalties over the shale extraction; (iii) non-compliance with contractual terms relating to oil platform construction; (iv) compensation relating to an easement over a property; (v) collection of production taxes over natural gas production; (vi) penalties applied by ANP relating to measurement systems.

Provisions for legal proceedings are set out as follows:

	12.31.2017	12.31.2016
<b>Current and Non-current liabilities</b>		
Civil claims	4,342	575
Labor claims	1,364	1,226
Tax claims	1,229	1,528
Environmental claims	91	60
Other claims	-	2
<b>Total</b>	<b>7,026</b>	<b>3,391</b>
Current liabilities	2,256	-
Non-current liabilities	4,770	3,391
	<b>12.31.2017</b>	<b>12.31.2016</b>
Opening Balance	3,391	2,247
Additions	3,937	997
Use of provision	(454)	(654)
Accruals and charges	285	350
Others	-	(52)
Cumulative translation adjustment	(133)	503
<b>Closing Balance</b>	<b>7,026</b>	<b>3,391</b>

In preparing its financial statements for the period ended December 31, 2017, the Company considered all available information concerning legal proceedings in which the Company is a defendant, in order to estimate the amounts of obligations and probability that outflows of resources will be required.

Excluding foreign exchange translation effects (see note 2), the main changes in the provision for legal proceedings in 2017 were primarily attributable to the class action settlement provisioned in the last quarter, to unfavorable court rulings that changed probabilities of outflows of resources relating to certain claims to probable, as well as indexation charges over the balance of provision, as presented below:

## Labor claims

Provision for labor claims increased mainly due to the assessment of court rulings on several labor disputes occurred during this period and to indexation charges over the balance of provision, partially offset by the reversion of a provision made to a claim filed by Sindipetro Norte Fluminense relating to the methodology used to consider overtime into the calculation of paid weekly rest following a favorable decision on the Company's appeal granted by the Superior Labor Court ("*Tribunal Superior do Trabalho - TST*").

## Tax claims

Provision for tax claims decreased primarily reflecting the reversion of a provision previously recognized in 2016 with respect to disallowed tax credits applied for income taxes and other Brazilian Federal taxes computation, following the Company's decision to benefit from the Special Tax Settlement Program (*Programa Especial de Regularização Tributária - PRT*), as shown in note 21.2.1.

In addition, there were some provisions recognized and reversed during this period due to unfavorable court rulings and the decision to settle them along with the reliefs provided by the PRT, relating to:

- Disallowed tax credits applied for income taxes and other Brazilian Federal taxes computation, as set out in note 21.2.1; and
- Deduction of amounts paid to Petros Plan from the taxable profit computation, use of tax benefits over the import of certain equipment and the use of tax loss carry forwards as a deduction from the taxable income computation, as shown in note 21.2.2.

## Civil claims

Provision for civil claims increased following the agreement to settle the Consolidated Securities Class Action, as set out in note 30.4.1, assessment of court rulings occurred in this period denying the Company's appeals with respect to production taxes collection over gas production in Urucu field, fines imposed by ANP relating to measurement systems and other civil claims, as well as indexation charges over the balance of provisions.

In addition, there were some provisions recognized and reversed during 2017, due to settlements reached and unfavorable rulings payed and joined to PRD, in respect of:

- Agreements to settle Opt-out Claims filed before the United States District Court for the Southern District of New York, as set out in note 30.4.1;
- Disputes with ANP relating to production taxes over oil and gas production, as set out in note 21.2.3; and
- Arbitration award against the Company determined by the International Chamber of Commerce on the merits of P-62 construction.

## 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:

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## Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



	12.31.2017	12.31.2016
<b>Non-current assets</b>		
Tax	3,302	1,803
Civil	891	1,101
Labor	1,209	1,006
Environmental	176	84
Others	4	5
<b>Total</b>	<b>5,582</b>	<b>3,999</b>

	12.31.2017	12.31.2016
Opening Balance	3,999	2,499
Additions	1,601	952
Use of provision	(138)	(147)
Accruals and charges	226	185
Others	-	(28)
Cumulative translation adjustment	(106)	538
Closing Balance	5,582	3,999

In 2017, the Company made judicial deposits in the amount of US\$ 1,601 mainly resulting from an unfavorable decision issued by the Regional Federal Court of Rio de Janeiro (*Tribunal Regional Federal – TRT/RJ*) in October 2017, with respect to withholding income tax on remittances for payments of vessel charters occurred from 1999 to 2002, as set out in note 30.3.

### 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 estimates of contingent liabilities for legal proceedings are indexed to inflation and updated by applicable interests. As of December 31, 2017, estimated contingent liabilities for which the possibility of loss is not considered remote are set out in the following table:

Nature	12.31.2017	12.31.2016
Tax	39,137	47,830
Labor	7,202	7,225
Civil - General	9,621	9,049
Civil - Environmental	2,354	2,172
Others	-	1
<b>Total</b>	<b>58,314</b>	<b>66,277</b>

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	Estimate	
	12.31.2017	12.31.2016
<b>Plaintiff: Secretariat of the Federal Revenue of Brazil</b>		
1) Withholding income tax (IRRF), Contribution of Intervention in the Economic Domain (CIDE), Social Integration Program (PIS) and Contribution to Social Security Financing (COFINS) on remittances for payments of vessel charters.  Current status: In October 2017, the Regional Federal Court (Tribunal Regional Federal – TRF) of the State of Rio de Janeiro ruled that the Company should have paid withholding income tax (Imposto de Renda Retido na Fonte- IRRF) on remittances for payments of vessel charters, occurred from 1999 to 2002, which have a current debt of US\$ 2.7 billion. The legal argument involves the legality of the normative rule issued by the Federal Revenue of Brazil, which ensured no taxation over those remittances. The Company considers the likelihood of loss as possible, since there are decisions from Superior Courts favorable to the understanding of the Company, and will continue to defend its opinion. The Company joined to the settlement program established by law 13,586/17, which enabled the regularization of administrative and judicial proceedings relating to IRRF from 2008 to 2013, including the tax deficiency notice issued in January 2, 2018, as set out in note 21.2.4. The other claims, concerning CIDE and PIS/COFINS, involve lawsuits in different administrative and judicial stages, for which the Company understand there is a possible likelihood of loss, since there are legal predictions in line with the understanding of the Company, including the mentioned tax deficiency notice.	13,041	15,479
2) Income from foreign subsidiaries and associates located outside Brazil not included in the computation of taxable income (IRPJ and CSLL).  Current status: In 2017, the Company received a new tax deficiency notice for not including income from subsidiaries located outside Brazil. This and the other claims involve lawsuits in different administrative and judicial stages. The Company considers the likelihood of loss as possible, since there are decisions from Superior Courts favorable to the understanding of the Company.	3,988	3,095
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.	3,621	3,375
4) Incidence of social security contributions over contingent bonuses paid to employees. Current status: Awaiting the hearing of an appeal at the administrative level, including a new tax deficiency notice received by the Company.	1,541	1,053
5) Collection of Contribution of Intervention in the Economic Domain (CIDE) on transactions with fuel retailers and service stations protected by judicial injunctions determining that fuel sales were made without gross-up of such tax. Current status: This claim involves lawsuits in judicial stages.	672	656
6) Deduction from the basis of calculation of taxable income (income tax - IRPJ and social contribution - CSLL) of several expenses related to employee benefits.  Current status: The court ruled on this matter in the second quarter of 2017 granting the deduction of these expenses from the taxable profit computation, but limited it to 20% of the payroll and compensation of key management participants in the plan. After assessing the fundamentals of this court ruling, the Company reassessed the probability of outflow of resources with respect to this dispute and estimated it as probable. The other claims of this item, which have different legal basis, remain with their likelihood of loss as possible, and are in different administrative and judicial stages.	613	2,355
7) 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: The likelihood of loss is now considered remote, since the Administrative Board of Tax Appeals (Conselho Administrativo de Recursos Fiscais - CARF) granted unanimous decisions favorable to the Company in administrative proceedings.	-	6,305
<b>Plaintiff: State of São Paulo Finance Department</b>		
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. Regarding the absence of a tax document while relocating a rig, there was a definitive decision in favor of the Company, which reduced the balance of this contingent liability.	761	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.	887	834
<b>Plaintiff: States of RJ, BA and AL Finance Departments</b>		
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.		

# Petróleo Brasileiro S.A. – Petrobras

## Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



Current status: This claim involves lawsuits in different administrative and judicial stages.	1,366	1,354
<b>Plaintiff: Municipal governments of the cities of Anchieta, Aracruz, Guarapari, Itapemirim, Marataízes, Linhares, Vila Velha and Vitória</b>		
11) Alleged failure to withhold and pay tax on services provided offshore (ISSQN) in favor of some municipalities in the State of Espírito Santo, under the allegation that the service was performed in their "respective coastal waters".		
Current status: This claim involves lawsuits in different administrative and judicial stages.	1,224	1,117
<b>Plaintiff: States of RJ, SP, PR, RO and MG Finance Departments</b>		
12) 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 administrative and judicial stages.	1,087	1,285
<b>Plaintiff: States of PR, AM, BA, ES, PA, PE and PB Finance Departments</b>		
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.	976	840
<b>Plaintiff: States of RJ, SP, ES, BA, PE, MG, RS, AL and SE Finance Departments</b>		
14) Misappropriation of VAT tax credit (ICMS) 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.	994	490
<b>Plaintiff: States of RJ, RN, AL, AM, PA, BA, GO, MA, SP and PE Finance Departments</b>		
15) Alleged failure to write-down VAT (ICMS) credits related to zero tax rated or non-taxable sales made by the Company's customers.		
Current status: This claim involves lawsuits in different administrative and judicial stages.	1,029	755
<b>Plaintiff: States of SP, RS and SC Finance Departments</b>		
16) 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.	852	827
<b>Plaintiff: States of SP, CE, PB, RJ, BA, PA and AL Finance Departments</b>		
17) 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.	578	566
<b>Plaintiff: States of AM, BA, RS and RJ Finance Departments</b>		
18) 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.	448	351
<b>Plaintiff: States of RJ, SP, SE and BA Finance Departments</b>		
19) 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.	513	405
<b>Plaintiff: States of MG, MT, GO, RJ, PA, CE, BA, PR, SE, AL, RN, SP and PR Finance Departments</b>		
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.	284	341
<b>Plaintiff: State of Pernambuco Finance Department</b>		
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.	335	312
22) Other tax matters	4,327	4,332
<b>Total for tax matters</b>	<b>39,137</b>	<b>47,830</b>

Description of labor matters	Estimate	
	12.31.2017	12.31.2016
<b>Plaintiff: Sindipetro of ES, RJ, BA, MG, SP, PE, PB, SE, AL, RN, CE, PI, PR, SC and RS.</b>		
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. Due to an unfavorable court decision relating to individual bargaining agreements and favorable court decision relating to collective bargaining agreements, the Company consider the likelihood of loss as possible.	4,516	4,383
<b>Plaintiff: Sindipetro of Norte Fluminense – SINDIPETRO/NF</b>		
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 of standby work per workday, as well as an 11-hour period for rest between workdays, subject to a daily fine.  Current status: Awaiting the Superior Labor Court to judge appeals filed by the plaintiff.	389	369
<b>Plaintiff: Sindipetro of ES, RJ, MG, BA, SP, PR, CE, PI, SC, AL, SE and RS</b>		
3) Class Actions regarding wage underpayments to certain employees due to expected changes in the methodology used to consider overtime into the calculation of paid weekly rest, allegedly computed based on ratios that are higher than the 1/6 ratio established by Law No. 605/49.  Current status: The Superior Labor Court ("Tribunal Superior do Trabalho - TST") unified, in all of its classes, favorable understanding to the Company's opinion relating to the paid weekly rest, whereas there are TST decisions favorable to the plaintiffs on individual and class actions judged before the mentioned unification. However, two of these class actions, relating to claims filed by SINDIPETRO/MG and SINDIPETRO/NF, had their decisions suspended by the TST, in trial sessions held on September 26, 2017 and February 20, 2018, due to some motions to set aside the judgments proposed by the Company. For this reason and in face of the remote possibility of a reversal on this decision, the likelihood of loss is now considered remote.	121	311
4) Other labor matters	2,176	2,162
<b>Total for labor matters</b>	<b>7,202</b>	<b>7,225</b>

Description of civil matters	Estimate	
	12.31.2017	12.31.2016
<b>Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP</b>		
<p>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.</p> <p>Current status: This list involves claims that are disputed in court and in arbitration proceedings. The Company has made judicial deposits on the Lula/Cernambi and the Baúna/Piracicaba fields proceedings for the alleged differences resulting from the special participation. However, with the reversal 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 Parque das Baleias complex proceeding, the Superior Court of Justice ("Superior Tribunal de Justiça - STJ") ruled that is the Chamber of Arbitration which has the responsibility to determine if the claim should be arbitrated or not. On the Tartaruga Verde and Mestiça fields unitization proceeding, the Regional Federal Court of the Second Region has the opinion that the Chamber of Arbitration has jurisdiction, and authorized this arbitration. Therefore, the arbitrations on the Lula/Cernambi and Baúna/Piracicaba fields unitization are currently stayed, while the Judiciary states there is no obstacle to continue with the Parque das Baleias complex and the Tartaruga Verde and Mestiça fields arbitrations. The change in the amount relates to the indexation charge and the inclusion of production taxes on the Parque das Baleias complex, which collection is stayed due to judicial and arbitral decision.</p>	2,633	1,992
<p>2) Administrative proceedings challenging an ANP order requiring Petrobras to pay additional special participation fees and royalties (production taxes) with respect to several fields, including a misunderstanding about the oil prices used on the calculation of production taxes on Lula field. It also includes contention about fines imposed by ANP due to alleged failure to comply with the minimum exploration activities program, as well as alleged irregularities relating to compliance with oil and gas industry regulation.</p> <p>Current status: In August 2017, the Company had an adverse judicial sentence relating to a fine issued by ANP. Therefore, in the third quarter, several proceedings had the probability of loss considered as probable. However, one claim relating to Lula field had the probability of loss considered as remote, following a favorable decision in administrative stage.</p> <p>The other claims involve lawsuits in different administrative and judicial stages.</p>	1,635	1,668
<b>Plaintiff: Several plaintiffs in Brazil and EIG Management Company in USA</b>		
<p>3) Arbitration in Brazil and lawsuit in the USA regarding Sete Brasil.</p> <p>Current status: The arbitrations are at different stages, with no court ruling at this moment. The lawsuit filed by EIG and affiliates alleges that the Company committed fraud by inducing plaintiffs to invest in Sete Brasil Participações S. A. ("Sete") through communications that failed to disclose the alleged corruption scheme. The District Court of the District of Columbia partially granted the Company's motion to dismiss. Petrobras entered another motion to dismiss the remaining part of the lawsuit and the proceeding is currently stayed in the first instance due to this appeal. On October 30, 2017, the Company filed a response to EIG's counter-arguments presented in the appeal.</p>	2,127	1,644
<b>Plaintiff: Refinaria de Petróleo de Manguinhos S.A.</b>		
<p>4) Lawsuit seeking to recover damages for alleged anti-competitive practices with respect to gasoline, diesel and LPG sales in the domestic market.</p> <p>Current status: This claim is in the judicial stage. In a recent decision, the Brazilian Judicial Branch did not consider the Company's practices as anti-competitive, supporting previous opinion of the Brazilian Antitrust Regulator (CADE). Thus, the likelihood of loss is now deemed remote.</p>	-	575
<b>Plaintiff: Vantage Deepwater Company and Vantage Deepwater Drilling Inc.</b>		
<p>5) Arbitration in the United States for unilateral termination of the drilling service contract tied to ship-probe Titanium Explorer.</p> <p>Current status: The merits hearing has been held and the award of the Arbitration Tribunal is expected to be rendered in the first quarter of 2018.</p>	400	400
<b>6) Other civil matters</b>	2,826	2,770
<b>Total for civil matters</b>	<b>9,621</b>	<b>9,049</b>

Description of environmental matters	Estimate	
	12.31.2017	12.31.2016
<b>Plaintiff: Ministério Público Federal, Ministério Público Estadual do Paraná, AMAR - Associação de Defesa do Meio Ambiente de Araucária, IAP - Instituto Ambiental do Paraná and IBAMA - Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis.</b>		
1) Legal proceeding related to specific performance obligations, indemnification and compensation for damages related to an environmental accident that occurred in the State of Paraná on July 16, 2000. Current status: The court partially ruled in favor of the plaintiff. However, both parties (the plaintiff and the Company) filed an appeal.	942	855
<b>Plaintiff: Instituto Brasileiro de Meio Ambiente - IBAMA and Ministério Público Federal</b>		
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.	444	442
3) Other environmental matters	968	876
<b>Total for environmental matters</b>	<b>2,354</b>	<b>2,173</b>

## 30.4. Class action and related proceedings

### 30.4.1. Class action and related proceedings in the USA

Between December 8, 2014 and January 7, 2015, five putative securities class action complaints were filed against the Company, Petrobras International Finance Company S.A. ("PifCo"), Petrobras Global Finance B.V. ("PGF," and collectively with the Company and PifCo, the "Petrobras Defendants"), certain underwriters of debt securities (the "Underwriter Defendants"), among other defendants (the "Defendants"), in the United States District Court for the Southern District of New York ("SDNY" or the "District Court"). These actions were consolidated on February 17, 2015 (the "Consolidated Securities Class Action" or "Class Action"). The Court appointed a lead plaintiff, Universities Superannuation Scheme Limited ("USS"), on March 4, 2015. In sum and substance, the complaints in the Consolidated Securities Class Action asserted claims under the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Securities Act of 1933, as amended (the "Securities Act"), alleging that in the Company's press releases, filings with the U.S. Securities and Exchange Commission (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.

In addition to the Consolidated Securities Class Action, 33 lawsuits were filed by individual investors before the same judge in the SDNY, and one was filed in the United States District Court for the Eastern District of Pennsylvania (collectively, the "Individual Actions"), consisting of allegations similar to those in the Consolidated Securities Class Action.

Between August 2015 and December 2015, the Company and certain other defendants made motions to dismiss the complaints and amended complaints in the Consolidated Securities Class Action and certain of the Individual Actions. Certain, but not all, of the claims were definitively dismissed and others were dismissed but with leave to re-plead. Thus, the actions continued against the Company and other defendants with respect to certain claims. Following the motion to dismiss stage, the complaint that was then considered operative for the subsequent proceedings in the Class Action was the fourth consolidated amended complaint ("FAC") filed on November 30, 2015 by plaintiff USS, Employees' Retirement System of the State of Hawaii ("Hawaii"), North Carolina Department of State Treasurer ("North Carolina") (collectively, "Class Plaintiffs"), and one other plaintiff whose claims were later dismissed.

The judge scheduled a consolidated trial for the Class Action and the Individual Actions to begin on September 19, 2016, except that the judge ordered that any Individual Actions filed in the SDNY after December 31, 2015 would be stayed in all respects until after the completion of the trial. Six of the Individual Actions have been stayed as a result of this order.

On February 2, 2016, the judge granted Class Plaintiffs' motion for class certification, certifying a class under the Securities Act represented by Hawaii and North Carolina (the "Securities Act Class") and a class under the Exchange Act represented by USS (the "Exchange Act Class"). The Securities Act Class was defined, in relevant part, as all purchasers who purchased or otherwise acquired debt securities issued by Petrobras, PifCo, and/or PGF, in domestic transactions, directly in, pursuant and/or traceable to public offerings on May 15, 2013 and March 11, 2014, and were damaged thereby. The Exchange Act Class was defined, in relevant part, as all purchasers who, between January 22, 2010 and July 28, 2015, purchased or otherwise acquired Petrobras securities, including debt securities issued by PifCo and/or PGF on the New York Stock Exchange or pursuant to other domestic transactions, and were damaged thereby.

On June 15, 2016, the United States Court of Appeals for the Second Circuit ("Second Circuit") granted the Petrobras Defendants' (and other defendants') motion requesting interlocutory appellate review of the District Court's class certification of the Class Action. The Petrobras Defendants (and other defendants) moved in District Court for a stay of all District Court proceedings, which the district judge denied on June 24, 2016 and, on June 27, 2016, the parties filed motions for summary judgment. The Petrobras Defendants (and other defendants) then moved in the Second Circuit for a stay of all District Court proceedings. On August 2, 2016, the Second Circuit granted the motion to stay all District Court proceedings during the pendency of the appeal.

Between on or about October 21, 2016 and September 13, 2017, Petrobras' board of directors approved agreements to settle 21 of the Individual Actions (the "Settled Individual Actions"), leaving 13 remaining pending Individual Actions (six of which had been stayed since filed) (the "Pending Individual Actions"). The terms of the settlements for the Settled Individual Actions are confidential and Petrobras denies all allegations of wrongdoing. The settlements are aimed at eliminating the uncertainties, burdens and expense of ongoing litigation.

Based on the settlements reached in the Settled Individual Actions and advanced stages of negotiations in certain other Pending Individual Actions, the Company charged US\$448 million to the statement of income as other income and expenses (US\$ 76 in 2017 and US\$ 372 in 2016).

On July 7, 2017, the Second Circuit vacated, in part, the class certification decision in the Class Action and remanded the case to the District Court for further proceedings. The Second Circuit partially granted the appeal by the Petrobras Defendants (and other defendants), reversing some aspects of the District Court's ruling and affirming others. Among other issues, the Second Circuit ruled that the district judge failed to consider whether the question of whether the transactions occurred in the United States could be determined through a common set of evidence, and whether, if not, common issues would predominate over individual ones. The effect of the Second Circuit's decision was to vacate the classes certified by the District Court pending additional proceedings in the District Court on remand.

On July 21, 2017, the Petrobras Defendants (and other defendants) filed a request for panel rehearing or en banc rehearing with the Second Circuit regarding portions of the Second Circuit's decision affirming the District Court's order, which was denied on August 24, 2017.

On November 1, 2017, the Petrobras Defendants (and other defendants) filed a petition for writ of certiorari in the United States Supreme Court appealing the Second Circuit's decision. On November 3, 2017, the Second Circuit granted the Company's unopposed motion to stay the mandate, which was filed by Petrobras on August 30, 2017.

At the end of December 2017, the Company signed an agreement in principle to settle the Consolidated Securities Class Action, which is still subject to court approval (the "Class Action Settlement").

The Class Action Settlement is intended to resolve all pending and prospective claims by purchasers of Petrobras securities in the United States and by purchasers of Petrobras securities that are listed for trading or that clear or settle through the Depository Trust Company in the United States, including the Pending Individual Actions. Under the Class Action Agreement, the parties have agreed to the certification, for settlement purposes only, of a new class defined as all persons who (i) during the time Period between January 22, 2010 and July 28, 2015, inclusive (the “Class Period”), purchased or otherwise acquired Petrobras Securities, including debt securities issued by PifCo and/or PGF, on the New York Stock Exchange or pursuant to other Covered Transactions; and/or (ii) purchased or otherwise acquired debt securities issued by Petrobras, PifCo, and/or PGF, in Covered Transactions, directly in, pursuant and/or traceable to a May 13, 2013 public offering registered in the United States and/or a March 10, 2014 public offering registered in the United States before Petrobras made available to its security holders an earnings statement covering a period of at least twelve months beginning after the effective date of the offerings (i.e. before August 11, 2014 in the case of the May 13, 2013 public offering and before May 15, 2015 in the case of the March 10, 2014 public offering). Covered Transactions is defined to mean (i) any transaction in a Petrobras Security listed for trading on the New York Stock Exchange (“NYSE”); (ii) any transaction in a Petrobras Security that cleared or settled through the Depository Trust Company’s book-entry system; or (iii) any transaction in a Petrobras Security that otherwise qualifies as “domestic” under the Supreme Court’s decision in *Morrison v. National Australia Bank*, 561 U.S. 247 (2010). Excluded from the definition of Covered Transaction are purchases of any Petrobras Security on the Brazilian Stock Exchange (B3).

If approved, the Class Action Settlement eliminates the risk of an adverse judgment which, as Petrobras has previously reported, could have a material adverse effect on the Company and its financial situation, and puts an end to the uncertainties, burdens and costs of protracted litigation.

Under the Class Action Settlement, Petrobras (together with its subsidiary PGF) has agreed to pay US\$ 2,950 to resolve claims in two installments of US\$ 983 and a further installment of US\$ 984. The first installment was paid on March 1, 2018. The second installment will be paid within 10 days of final approval of the Class Action Settlement. The third installment will be paid by the later of (i) six months after final approval, or (ii) January 15, 2019. Accordingly, the Company charged US\$ 3,449 to its statement of income for the last quarter of 2017 as other expenses and income, taking into account the gross up of tax related to the Petrobras’s portion of the settlement.

On January 16, 2018, United States Supreme Court granted a joint motion to defer consideration of Petrobras’ petition for a writ of certiorari, pending final approval of the Class Action Settlement.

A stipulation between the settling parties containing the terms of the Class Action Settlement was submitted to the District Court for preliminary approval. On February 23, 2018, the District Court held a hearing on preliminary approval of the settlement, and subsequently granted preliminary approval on February 28, 2018. Notice is being provided to potential class members who will have an opportunity to opt out of the settlement and make any objections to the District Court, which the District Court will then review.

After the notice and objection period, the District Court is scheduled to hold a hearing on June 4, 2018 to determine whether to grant final approval of the Class Action Settlement. If final approval is not granted by the District Court, or if the settlement does not become final for any other reason, the Company will return to its position prior to the Class Action Settlement and, depending on the outcome of the subsequent litigation, the Company might 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.

Individuals are seeking measures against Petrobras in Brazil to annul and/or suspend the Class Action Settlement. No adverse action has been taken to date against the settlement.

The plaintiffs in the Pending Individual Actions will be eligible to participate in the settlement. These plaintiffs will also have the option to opt out of the Class Action Settlement and, if they do, any such actions will continue.

The Pending Individual Actions 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, and analysis by retained experts. Except as set forth above, the Company is unable to determine at this time whether the plaintiffs in the Pending Individual Actions will determine to participate or not in the Class Action Agreement or to make a reliable estimate of eventual loss, if any, arising from certain Pending Individual Actions if they determine to opt out of the Class Action Agreement.

The Company intends to defend these actions vigorously.

### **30.4.2. Class action in the Netherlands**

On January 23, 2017, the Stichting Petrobras Compensation Foundation (“Foundation”) filed a class action before the district court in Rotterdam, in the Netherlands, against Petrobras and its subsidiaries Petrobras International Braspetro B.V. (PIBBV) and Petrobras Global Finance B.V. (PGF); joint venture Petrobras Oil & Gas B.V. (PO&G), and some former managers of Petrobras.

This Foundation allegedly represents an unidentified group of investors and demands judicial remedies for alleged damages caused to investors who purchased securities issued by Petrobras and PGF outside the United States, before July 28, 2015, due to alleged illegal acts. The Foundation also alleges financial losses are connected to the facts uncovered by the Lava-Jato investigation and to purported false and misleading financial information released by the Company.

Petrobras, PGF, PIBBV and PO&G filed their first response to the claim on May 3, 2017 (first docket date), presenting the law firms that will defend these companies and requesting a hearing to discuss some aspects of the case.

On August 23, 2017, a hearing was held at the District Court in Rotterdam to establish the timeframe for proceedings. The next steps are: (i) initial arguments by defendants in November 2017, (ii) the Foundation’s reply in March 2018, and (iii) the oral hearing on June 28, 2018. The Court ruling is expected to be presented in September 2018. Petrobras (and other defendants) presented preliminary defenses in November 29, 2017.

This class action involves complex issues that are subject to substantial uncertainties and depend on a number of factors such as the legitimacy of the Foundation as the plaintiffs’ attorney, the applicable rules to this complaint, the information produced in discovery, analysis by experts, the timing of court decisions and rulings by the court on key issues. Currently, it is not possible to determine if the Company will be responsible for the payment of compensation as a result of this action as this assessment depends on the outcome of these complex issues. Moreover, it is uncertain which investors are able to file complaints related to this matter against the Company.

In addition, the claims asserted are broad, span a multi-year period and involve a wide range of activities, and, at the current stage, the impacts of such claims are highly uncertain. The uncertainties inherent in all such matters affect the amount and timing of the ultimate resolution of these actions. As a result, the Company is unable to make a reliable estimate of eventual loss arising from this action. The Company is victim of the corruption scheme uncovered by the Lava-Jato investigation and aims to present and prove this condition before the Netherlands Authorities.

The uncertainties inherent in all such matters do not enable the Company to identify possible risks related to this action. Compensation for the alleged damages will only be determined by court rulings on complaints to be filed by individual investors, unless agreements to settle Opt-out Claims occur. The Foundation is not able to demand compensation for damages.

Petrobras and its subsidiaries deny the allegations presented by the Foundation and intend to defend themselves vigorously.

### **30.4.3. Other Related Investor Claims**

Petrobras is also currently a party to arbitration and judicial proceedings in Brazil, all of which are currently in their initial stages. In each case, the proceedings were brought by investors that purchased Petrobras' shares traded in Brazilian Stock Exchange (B3), alleging damages caused by facts uncovered in the Lava Jato Operation.

## **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.

The court granted the Company, in all of the lawsuits, the definitive right to recover those taxes, but it required prior examination and approval by the court of the settlement reports (court-ordered liquidation stage). In 2017, there were a settlement reports issued in favor of the Company relating to the most significant amount to be recovered, however their final approvals by the court are still pending.

As of December 31, 2017, the Company had non-current receivables of US\$ 944 (US\$ 980 as of December 31, 2016) related to PIS and COFINS, which are indexed to inflation.

## **31. Commitment to purchase natural gas**

The Company has an active GSA agreement (Gas Supply Agreement ) entered into with Yacimientos Petroliferos Fiscales Bolivianos – YPFB to purchase certain minimum volumes of natural gas at prices linked to the international fuel oil price through 2019, after which the agreement may be extended until all contracted volume has been delivered.

As of December 31, 2017, the total amount of the GSA for the 2018-2019 period is nearly 22 billion cubic meters of natural gas (equivalent to 30.08 million cubic meters per day) and corresponds to a total estimated value of US\$ 3.42 billion. Based on the aforementioned extension clause, the Company foresees an extension of the GSA term to April 2020 on the same volume basis according to current indicators, representing an estimated additional amount of US\$ 3.40 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\$ 2,205 of which US\$ 878 were still in force as of December 31, 2017, net of commitments undertaken. The collateral comprises crude oil from previously identified producing fields, pledged as collateral, amounting to US\$ 806 and bank guarantees of US\$ 72.

### 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.

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, 2017, 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				Maturity
	Notional value		Fair value		
	12.31.2017	12.31.2016	Asset Position (Liability)		
	12.31.2017	12.31.2016	12.31.2017	12.31.2016	
<b>Derivatives not designated for hedge accounting</b>					
Future contracts - total (*)	(15,561)	(1,866)	(98)	(8)	
Long position/Crude oil and oil products	43,862	88,303	-	-	2018
Short position/Crude oil and oil products	(59,423)	(90,169)	-	-	2018
Options - total (*)	-	120	-	-	
Call/Crude oil and oil products	-	-	-	-	2018
Put/Crude oil and oil products	-	120	-	-	2018
Forward contracts - total			-	0.3	
Long position/Foreign currency forwards (BRL/USD)(**)	US\$ 55	-	0.3	-	2018
Short position/Foreign currency forwards (BRL/USD)(**)	US\$ 78	US\$ 15	(0.3)	0.3	2018
Swap			105	-	
Foreign currency / Cross-currency Swap (**)	GBP 700	-	92	-	2026
Foreign currency / Cross-currency Swap (**)	GBP 600	-	13	-	2034
<b>Derivatives designated for hedge accounting</b>					
Swap			-	(10)	
Interest – Libor / Fixed rate (**)	US\$ 0	US\$ 371	-	(10)	
<b>Total recognized in the Statement of Financial Position</b>			<b>7</b>	<b>(17.7)</b>	

(\*) Notional value in thousands of bbl.

(\*\*) Amounts in US\$ and GBP are presented in million.

	Gains/ (losses) recognized in the statement of income (*)			Gains/(losses) recognized in the Shareholders' Equity (**)			Guarantees given as collateral	
	2017	2016	2015	2017	2016	2015	12.31.2017	12.31.2016
Commodity derivatives	(144)	(48)	238	(9)	-	-	205	55
Foreign currency derivatives	89	(55)	27	1	7	9	(50)	-
Interest rate derivatives	(9)	(8)	(9)	6	4	1	-	-
	(64)	(111)	256	(2)	11	10	155	55
Cash flow hedge on exports (***)	(3,154)	(2,841)	(2,057)	2,611	13,620	(19,075)	-	-
<b>Total</b>	<b>(3,218)</b>	<b>(2,952)</b>	<b>(1,801)</b>	<b>2,609</b>	<b>13,631</b>	<b>(19,065)</b>	<b>155</b>	<b>55</b>

(\*) 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.

A sensitivity analysis of the derivative financial instruments for the different types of market risks as of December 31, 2017 is set out following:

Financial Instruments	Risk	Probable	Reasonably possible	Remote
		Scenario (*)	scenario	Scenario
<b>Derivatives not designated for hedge accounting</b>				
Future contracts	Crude oil and oil products - price changes	-	(240)	(479)
Forward contracts	Foreign currency - depreciation BRL x USD	(0.3)	5	11
		(0.3)	(235)	(468)

(\*) The probable scenario was computed based on the following risks: oil and oil products prices: fair value on December 31, 2017 / R\$ x U.S. Dollar - a 1.8% appreciation of the Real. 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. However, derivatives may be used in specific circumstances depending on business environment analysis and assessment of whether the Business and Management targets are being met. The use of derivatives in 2017 as hedging instruments aimed 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.

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 foreign exchange gain or loss from proportions of its long-term debt obligations (denominated in U.S. dollars) and foreign exchange gain or loss of its highly probable U.S. dollar denominated future export revenues, so that gains or losses associated with the hedged transaction (the highly probable future exports) and the hedging instrument (debt obligations) are recognized in the statement of income in the same periods.

Foreign exchange gains and losses on proportions of cash flows from debt obligations (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 debts in the hedging relationships for which they had been designated.

Individual hedging relationships were designated in a one-to-one proportion, meaning that the highly probable future exports for each month and the proportions of cash flows from debt obligations, hedged in individual hedging relationship, an equal in US dollar amount. 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 their foreign exchange gains and losses hedging relationship has been designated is no longer highly probable, the Company revokes the designation and the cumulative foreign exchange gains or losses that have been recognized in other comprehensive income remain separately in equity until the forecast exports occur.

If future exports, for foreign exchange gains and losses hedging relationship has been designated is no longer expected to occur, any related cumulative foreign exchange gains or losses that have been recognized in other comprehensive income from the date the hedging relationship was designated to the date the Company revoked the designation is immediately recycled from equity to the statement of income.

In addition, when a financial instrument designated as a hedging instrument expires or settled, the Company may replace it with another financial instrument in a manner in which the hedge relationship continues to occur. Likewise, whenever a hedged transaction effectively occurs, its financial instrument previously designated as a hedging instrument may be designate for a new hedge relationship.

The carrying amounts, the fair value as of December 31, 2017, 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\$ 3.3080 exchange rate are set out below:

# Petróleo Brasileiro S.A. – Petrobras

## Notes to the financial statements

(Expressed in millions of US Dollars, unless otherwise indicated)



Present value of hedging instrument notional value at  
12.31.2017

Hedging Instrument	Hedged Transactions	Nature of the Risk	Maturity Date (US\$ million)	(US\$ million)	(R\$ million)
Foreign exchange gains and losses on proportion of non-derivative financial instruments cash flows	Foreign exchange gains and losses on a portion of highly probable future monthly exports revenues	Foreign Currency – Real vs U.S. Dollar Spot Rate	January 2018 to December 2027	58,400	193,189

### Changes in the present value of hedging instrument notional value

	US\$	R\$ million
Amounts designated as of December 31, 2016	61,763	201,293
Additional hedging relationships designated, designations revoked and hedging instruments re-designated	21,129	68,252
Exports affecting the statement of income	(3,986)	(12,703)
Principal repayments / amortization	(20,506)	(65,726)
Foreign exchange variation	-	2,073
Amounts designated as of December 31, 2017	58,400	193,189

The average ratio of future exports for which cash flow hedge accounting was designed to the highly probable future exports is 65.8%.

A roll-forward schedule of cumulative foreign exchange losses recognized in other comprehensive income as of December 31, 2017 is set out below:

	Exchange rate	Tax effect	Total
Balance at January 1, 2016	(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)
Recognized in shareholders' equity	(543)	185	(358)
Reclassified to the statement of income - occurred exports	3,151	(1,071)	2,080
Reclassified to the statement of income - exports no longer expected or not occurred	3	(1)	2
Balance at December 31, 2017	(14,508)	4,935	(9,573)

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 BMP-2018-2022, would not indicate a reclassification adjustment from equity to the statement of income.

A schedule of expected reclassification of cumulative foreign exchange losses recognized in other comprehensive income to the statement of income as of December 31, 2017 is set out below:

	2018	2019	2020	2021	2022	2023	2024	2025 to 2027	Total
Expected realization	(5,063)	(3,487)	(2,812)	(2,401)	(2,730)	(1,455)	(311)	3,751	(14,508)

IFRS 9 is effective from January 1, 2018 and provides for new requirements for hedge accounting. See note 6 for additional information on impacts of this new accounting standard on the Company's financial statements.

**b) Cross currency swap – Pounds Sterling x Dollar**

In the first quarter of 2017, the Company, through its wholly owned subsidiary Petrobras Global Trading B.V. (PGT), entered into cross currency swaps maturing in 2026 and 2034, with notional amounts of € 700 million and € 600 million, respectively, in order to hedge its Pounds/U.S. Dollar exposure arising from bonds issued amounting to € 1,300. The Company does not expect to settle these swaps before their expiration dates.

**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.

Financial Instruments	Exposure at 12.31.2017	Risk	Probable Scenario (*)	Reasonably possible scenario	Remote Scenario
Assets	3,783		(66)	946	1,891
Liabilities (**)	(63,455)	Dollar/Real	1,112	(15,864)	(31,728)
Cash flow hedge on exports	58,401		(1,024)	14,600	29,200
	(1,271)		22	(318)	(637)
Liabilities	(96)	Yen/Dollar	-	(24)	(48)
	(96)		-	(24)	(48)
Assets	3	Euro/Real	-	1	2
Liabilities	(26)		1	(7)	(13)
	(23)		1	(6)	(11)
Assets	6,308	Euro/Dollar	(51)	1,577	3,154
Liabilities	(10,592)		86	(2,648)	(5,296)
	(4,284)		35	(1,071)	(2,142)
Assets	2	Pound	-	1	1
Liabilities	(23)	Sterling/Real	1	(6)	(11)
	(21)		1	(5)	(10)
Assets	3,209	Pound Sterling	(50)	802	1,605
Liabilities	(4,816)	/Dollar	76	(1,204)	(2,408)
Derivative - cross currency swap	1,757		(28)	439	879
	150		(2)	37	76
<b>Total</b>	<b>(5,545)</b>		<b>57</b>	<b>(1,387)</b>	<b>(2,772)</b>

(\*) On December 31, 2017, the probable scenario was computed based on the following risks: R\$ x U.S. Dollar - a 1.8% appreciation of the Real / Japanese Yen x U.S. Dollar - a 0.4% depreciation of the Japanese Yen / Euro x U.S. Dollar: a 0.8% depreciation of the Euro / Pound Sterling x U.S. Dollar: a 1.6% depreciation of the Pound Sterling / Real x Euro - a 2.6% appreciation of the Real / Real x Pound Sterling - a 3.3% appreciation of the Real. Source: Focus and Bloomberg.

(\*\*)It includes the Class Action provision as set out note 30.4.

**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 2018-2022 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 8.62 years.

Over the period covered by our Business and Management Plan, the Company aims at reducing leverage, preserving cash and prioritizing capital expenditures, primarily in oil and gas production in Brazil in highly productive and profitable areas based on its main targets and assumptions.

As a part of the financing planning, the Company expects to raise funds by means of its venture and divestment program for the 2017-2018 period, which foresees US\$ 21 billion of proceeds. 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 4.13.

### **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 with low credit risk.

#### **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.

##### **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(*)	
	2017	2016	2017	2016
AAA	-	5,217	-	-
AA	752	7	609	-
A	14,864	11,372	-	-
BBB	801	42	-	-
BB	3,566	2,794	-	-
B	4	10	-	-
AAA.br	126	373	-	874
AA.br	818	1,369	-	-
A.br	1,239	-	-	-
BB.br	317	-	1,162	-
Other ratings	32	21	-	-
	22,519	21,205	1,771	874

(\*) It does not include São Martinho's common shares described in note 7.

### 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 partnership and divestment program.

A maturity schedule of the Company's finance debt (undiscounted), including face value and interest payments is set out as follows:

Maturity	2018	2019	2020	2021	2022	2023 and thereafter	Balance at	Balance at
							December 31, 2017	December 31, 2016
Principal	5,524	6,570	9,849	12,927	18,183	57,477	110,530	119,734
Interest	6,055	5,845	5,398	4,782	4,000	34,647	60,728	58,406
Total	11,579	12,415	15,247	17,709	22,183	92,124	171,258	178,140

### 33.7. Insurance

The Company's insurance strategy involves acquiring insurance to cover risks that may produce material impacts and to cover risks that are subject to compulsory insurance coverage (pursuant to legal or contractual requirements). The remaining risks are self-insured and Petrobras intentionally assumes the entire risk by abstaining from contracting insurance. The Company assumes a significant portion of its risk, by entering into insurance policies that have deductible clauses up to the equivalent to US\$ 180.

The main information concerning the insurance coverage outstanding at December 31, 2017 is set out below:

Assets	Types of coverage	Amount insured
Facilities, equipment inventory and products inventory	Fire, operational risks and engineering risks	155,352
Tankers and auxiliary vessels	Hulls	3,525
Fixed platforms, floating production systems and offshore drilling units	Oil risks	34,240
<b>Total</b>		<b>193,117</b>

Petrobras does not have loss of earnings insurance or insurance related to 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.

	Fair value measured based on			Total fair value recorded
	Level I	Level II	Level III	
<b>Assets</b>				
Marketable securities	1,829	-	-	1,829
Foreign currency derivatives	-	105	-	105
Balance at December 31, 2017	1,829	105	-	1,934
Balance at December 31, 2016	784	0.3	-	784.3
<b>Liabilities</b>				
Commodity derivatives	(98)	-	-	(98)
Interest rate derivatives	-	-	-	-
Balance at December 31, 2017	(98)	-	-	(98)
Balance at December 31, 2016	(8)	(10)	-	(18)

There were no material transfers between levels for the periods presented.

The estimated fair value for the Company's long term debt, 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**

### **35.1. Second installment of the exploratory block BM-S-8 sale**

The production sharing agreement with respect to the Norte de Carcará area, entered into by the Brazilian Federal Government, Statoil, Petrogal and Exxon, was made official on February 2, 2018 through the Brazilian Federal Register (official gazette). This fact completes the conditions precedent for the second payment of the exploratory block BM-S-8 sold by the Company in July 2016, in the amount of US\$ 300.

The company expects to receive this amount before March 31, 2018, and the third installment of this sale, in the amount of US\$ 900, is still pending certain future events related to the signing of a unitization agreement.

### **35.2. Extrajudicial Mediation with Sete Brasil**

On March 1, 2018, the Company's Board of Directors approved the key terms for a possible agreement in the context of the extrajudicial mediation procedure in progress with Sete Brasil Participações S.A. – Under Judicial Recovery ("Sete Brasil").

The signing of the agreement between Petrobras and Sete Brasil is conditional upon presentation, by Sete Brasil, of an international-class drilling rig operator with experience in deep waters, in accordance with the approval criteria of Petrobras. This agreement is further conditioned to the success in the negotiation and approval, by the relevant bodies of both companies, of the final terms and conditions of the documents necessary to its implementation.

### **35.3. Revolving credit facility**

On March 7, 2018, the Company entered into a revolving credit facility (RCF) with a syndicate of 17 banks, in the amount of US\$ 4.350 and maturing in March 2023. The Company may use this line of credit up to the month prior to maturity and the maintenance of the limit with the banks will cost 0.51% p.a. In the case of use, funds raised will bear interest at 6M Libor + 1.3% p.a. rate if the Company is investment grade rated at the date of the withdrawal. Otherwise, it will bear interest at 6M Libor + 1.7% p.a. rate.

## **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.

# **Petróleo Brasileiro S.A. – Petrobras**

Supplementary information (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

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## **Supplementary information**

### **Supplementary information on Oil and Gas Exploration and Production (unaudited)**

This section provides supplemental information on oil and gas exploration and production activities of the Company. The information included in items (i) through (iii) provides historical cost information pertaining to costs incurred in exploration, property acquisition and development, capitalized costs and results of operations. The information included in items (iv) and (v) presents information on Petrobras' estimated net proved reserve quantities, standardized measure of estimated discounted future net cash flows related to proven reserves, and changes in estimated discounted future net cash flows.

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, 2017, maintains activities in Brazil; 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. However, the Company only estimates reserves in Brazil, the United States, Nigeria and Argentina.

# Petróleo Brasileiro S.A. – Petrobras

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

As set out in note 4.7, the Company uses the successful efforts method of accounting for appraisal and development costs of crude oil and natural gas production. In addition, notes 4.8 and 4.9 presents the accounting policies applied by the Company for recognition, measurement and disclosure of property, plant and equipment and intangible assets.

The following table summarizes capitalized costs for oil and gas exploration and production activities with the related accumulated depreciation, depletion and amortization, and asset retirement obligations:

	Consolidated entities							Equity Method Investees
	Abroad						Total	
	Brazil	South America	North America	Africa	Others	Total		
December 31, 2017								
Unproved oil and gas properties	5,803	109	-	-	-	109	5,912	-
Proved oil and gas properties	96,195	111	4,656	-	-	4,767	100,962	3,134
Support Equipment	86,021	606	81	-	392	1,079	87,100	6
Gross Capitalized costs	188,019	826	4,737	-	392	5,955	193,974	3,140
Depreciation, depletion and amortization	(63,245)	(504)	(2,217)	-	(12)	(2,733)	(65,978)	(1,287)
Net capitalized costs	124,774	322	2,520	-	380	3,222	127,996	1,853
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	2,811
Support Equipment	84,549	473	70	-	4	547	85,096	6
Gross Capitalized costs	179,452	676	4,610	-	4	5,290	184,742	2,817
Depreciation, depletion and amortization	(55,580)	(348)	(1,917)	-	(4)	(2,269)	(57,849)	(1,165)
Net capitalized costs	123,872	328	2,693	-	-	3,021	126,893	1,652
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	2,899
Support Equipment	70,931	1,066	65	-	4	1,135	72,066	88
Gross Capitalized costs	148,473	3,215	4,568	-	4	7,787	156,260	2,987
Depreciation, depletion and amortization	(40,763)	(2,037)	(1,574)	-	(4)	(3,615)	(44,378)	(1,282)
Net capitalized costs	107,710	1,178	2,994	-	-	4,172	111,882	1,705

# Petróleo Brasileiro S.A. – Petrobras

Supplementary information on Oil and Gas Exploration and Production (unaudited)  
(Expressed in millions of US Dollars, unless otherwise indicated)



## ii) Costs incurred in oil and gas property acquisition, exploration and development activities

Costs incurred are summarized below and include both amounts expensed and capitalized:

	Consolidated entities							Equity Method Investees
	Abroad						Total	
	Brazil	South America	North America	Africa	Others	Total		
December 31, 2017								
Acquisition costs:								
Proved	-	-	-	-	-	-	-	-
Unproved	903	-	-	-	-	-	903	-
Exploration costs	1,223	33	4	-	-	37	1,260	4
Development costs	11,553	23	230	-	-	253	11,806	294
<b>Total</b>	<b>13,679</b>	<b>56</b>	<b>234</b>	<b>-</b>	<b>-</b>	<b>290</b>	<b>13,969</b>	<b>298</b>
December 31, 2016								
Acquisition costs:								
Proved	-	98	-	-	-	98	98	-
Unproved	-	-	-	-	-	-	-	-
Exploration costs	1,459	44	6	-	1	51	1,510	5
Development costs	12,429	176	148	-	-	324	12,753	389
<b>Total</b>	<b>13,888</b>	<b>318</b>	<b>154</b>	<b>-</b>	<b>1</b>	<b>473</b>	<b>14,361</b>	<b>394</b>
December 31, 2015								
Acquisition costs:								
Proved	-	-	-	-	-	-	-	-
Unproved	-	-	-	-	-	-	-	-
Exploration costs	3,266	59	83	-	-	142	3,408	10
Development costs	15,536	451	397	-	-	848	16,384	431
<b>Total</b>	<b>18,802</b>	<b>510</b>	<b>480</b>	<b>-</b>	<b>-</b>	<b>990</b>	<b>19,792</b>	<b>441</b>

## (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, 2017, 2016 and 2015 are shown in the following table. The Company transfers substantially all of its Brazilian crude oil and gas production to the Refining, Transportation & Marketing segment in Brazil. The internal transfer prices calculated by the Company's model may not be indicative of the price the Company would have realized had this production been sold in an unregulated spot market. Additionally, the prices calculated by the Company's model may not be indicative of the future prices to be realized by the Company. Gas prices used are those set out in contracts with third parties.

Production costs are lifting costs incurred to operate and maintain productive wells and related equipment and facilities, including operating employees' compensation, materials, supplies, fuel consumed in operations and operating costs related to natural gas processing plants.

Exploration expenses include the costs of geological and geophysical activities and projects without economic feasibility. Depreciation and amortization expenses relate to assets employed in exploration and development activities. In accordance with Codification Topic 932 – Extractive Activities – Oil and Gas, income taxes are based on statutory tax rates, reflecting allowable deductions. Interest income and expense are excluded from the results reported in this table.

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## (iii) Results of operations for oil and gas producing activities

	Consolidated entities						Equity Method Investees	
	Abroad					Total		
	Brazil	South America	North America	Africa	Others			
<b>December 31, 2017</b>								
Net operation revenues:								
Sales to third parties	482	215	725	-	-	940	1,422	443
Intersegment	40,762	-	-	-	-	-	40,762	-
	41,244	215	725	-	-	940	42,184	443
Production costs	(17,894)	(71)	(163)	-	-	(234)	(18,128)	(51)
Exploration expenses	(686)	(37)	(77)	-	-	(114)	(800)	1
Depreciation, depletion and amortization	(9,466)	(44)	(302)	-	(8)	(354)	(9,820)	(123)
Impairment of oil and gas properties	169	(13)	(113)	-	-	(126)	43	-
Other operating expenses	(2,571)	(12)	(125)	-	(274)	(411)	(2,982)	(19)
Results before income tax expenses	10,796	38	(55)	-	(282)	(299)	10,497	251
Income tax expenses	(3,672)	(13)	18	-	96	101	(3,571)	(98)
Results of operations (excluding corporate overhead and interest costs)	7,124	25	(37)	-	(186)	(198)	6,926	153
<b>December 31, 2016</b>								
Net operation revenues:								
Sales to third parties	693	224	563	-	-	787	1,480	381
Intersegment	31,689	506	-	-	-	506	32,195	31
	32,382	730	563	-	-	1,293	33,675	412
Production costs	(13,939)	(315)	(132)	-	-	(447)	(14,386)	(56)
Exploration expenses	(1,603)	(35)	(122)	-	(1)	(158)	(1,761)	(4)
Depreciation, depletion and amortization	(10,051)	(99)	(327)	-	-	(426)	(10,477)	(170)
Impairment of oil and gas properties	(3,102)	(126)	(44)	-	-	(170)	(3,272)	-
Other operating expenses	(1,497)	(97)	(184)	-	22	(259)	(1,756)	(28)
Results before income tax expenses	2,190	58	(246)	-	21	(167)	2,023	154
Income tax expenses	(745)	(44)	-	-	12	(32)	(777)	(108)
Results of operations (excluding corporate overhead and interest costs)	1,445	14	(246)	-	33	(199)	1,246	46
<b>December 31, 2015</b>								
Net operation revenues:								
Sales to third parties	2,867	303	590	-	-	893	3,760	561
Intersegment	30,951	969	-	-	-	969	31,920	19
	33,818	1,272	590	-	-	1,862	35,680	580
Production costs	(17,023)	(556)	(189)	-	-	(745)	(17,768)	(209)
Exploration expenses	(1,582)	(18)	(311)	-	-	(329)	(1,911)	(30)
Depreciation, depletion and amortization	(7,403)	(301)	(246)	-	-	(547)	(7,950)	(187)
Impairment of oil and gas properties	(9,165)	(207)	(458)	-	-	(665)	(9,830)	(278)
Other operating expenses	(2,932)	47	(91)	-	(160)	(204)	(3,136)	(43)
Income before income tax expenses	(4,287)	237	(705)	-	(160)	(628)	(4,915)	(167)
Income tax expenses	1,458	(77)	1	-	16	(60)	1,398	(84)
Results of operations (excluding corporate overhead and interest costs)	(2,829)	160	(704)	-	(144)	(688)	(3,517)	(251)

### **(iv) Reserve quantities information**

As presented in note 5.1, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations – prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence within a reasonable time. Reserves estimate involves a high degree of judgment and complexity and its application affects different items of these Financial Statements.

The Company's estimated net proved oil and gas reserves and changes thereto for the years 2017, 2016 and 2015 are shown in the following table. Proved reserves are estimated by the Company's reservoir geologists and engineers in accordance with the reserve definitions prescribed by the Securities and Exchange Commission.

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 changes as additional information becomes available.

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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	Abroad						Synthetic oil in Brazil	Total
	Crude oil in Brazil(*)	South America	North America	Africa	Total of crude oil abroad			
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	
Revisions of previous estimates	649.3	0.3	31.4	-	31.7	0.2	681.1	
Extensions and discoveries	69.1	0.3	-	-	0.3	-	69.4	
Improved Recovery	212.7	-	-	-	-	-	212.7	
Sales of reserves	-	-	-	-	-	-	-	
Purchases of reserves	-	-	-	-	-	-	-	
Production for the year	(744.6)	(0.2)	(13.2)	-	(13.4)	(1.0)	(759.0)	
Reserves at December 31, 2017	8,249.4	1.2	114.6	-	115.8	6.0	8,371.3	

\* In 2017, it includes 263.7 million barrels related to assets held for sale.

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.

Proved developed and undeveloped reserves - Equity Method Investees	Abroad						Brazil's Synthetic Oil	Total
	Crude Oil abroad	South America	North America	Africa	Total of crude oil abroad			
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	
Revisions of previous estimates	-	-	-	2.6	2.6	-	2.6	
Extensions and discoveries	-	-	-	-	-	-	-	
Improved Recovery	-	-	-	-	-	-	-	
Sales of reserves	-	-	-	-	-	-	-	
Purchases of reserves	-	-	-	-	-	-	-	
Production for the year	-	-	-	(8.2)	(8.2)	-	(8.2)	
Reserves at December 31, 2017	-	-	-	63.4	63.4	-	63.4	

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

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A summary of the annual changes in the proved reserves of natural gas is as follows (in billions of cubic feet):

Proved developed and undeveloped reserves - Consolidated Entities	Abroad				Total Natural Gas Abroad	Brazil's Synthetic Gas	Total
	Natural Gas in Brazil(*)	South America	North America	Africa			
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
Revisions of previous estimates	(81.5)	19.5	(24.9)	-	(5.5)	0.1	(86.9)
Extensions and discoveries	37.4	41.0	-	-	41.0	-	78.4
Improved Recovery	204.2	-	-	-	-	-	204.2
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	(877.9)	(14.2)	(21.3)	-	(35.5)	(1.2)	(914.6)
Reserves at December 31, 2017	7,676.1	160.2	40.9	-	201.1	8.1	7,885.3

\* In 2017, it includes 173.7 billion cubic feet related to assets held for sale.

Natural gas production volumes used in this table are the net volumes withdrawn from our proved reserves, including fuel gas consumed in operations and excluding reinjected gas. Our disclosure of proved gas reserves also includes fuel gas volumes, which represent 33% of our total proved reserves of natural gas at December, 2017.

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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Proved developed and undeveloped reserves - Equity Method Investees	Abroad				Total Natural Gas Abroad	Brazil's Synthetic Gas	Total
	Natural Gas in Brazil	South America	North America	Africa			
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
Revisions of previous estimates	-	-	-	5.7	5.7	-	5.7
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	-	-	(0.9)	(0.9)	-	(0.9)
Reserves at December 31, 2017	-	-	-	17.3	17.3	-	17.3

Natural gas production volumes used in this table are the net volumes withdrawn from our proved reserves, including fuel gas consumed in operations and excluding reinjected gas. Our disclosure of proved gas reserves also includes fuel gas volumes, which represent 100% of our total proved reserves of natural gas at December, 2017.

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

The tables below summarize information about the changes in total proved reserves of crude oil and natural gas, in millions of barrels of oil equivalent, in our consolidated entities and equity method investees for 2017, 2016 and 2015:

Proved developed and undeveloped reserves	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, 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
Revisions of previous estimates	635.7	3.5	27.2	-	30.7	0.2	666.6
Extensions and discoveries	75.4	7.1	-	-	7.1	-	82.5
Improved Recovery	246.7	-	-	-	-	-	246.7
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	(891.0)	(2.6)	(16.7)	-	(19.3)	(1.2)	(911.4)
Reserves at December 31, 2017	9,528.8	27.9	121.5	-	149.3	7.4	9,685.5

\* In 2017, it includes 292.7 million barrels of oil equivalent related to assets held for sale.

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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Proved developed and undeveloped reserves - 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, 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
Revisions of previous estimates	-	-	-	3.5	3.5	-	3.5
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	-	-	(8.3)	(8.3)	-	(8.3)
Reserves at December 31, 2017	-	-	-	66.3	66.3	-	66.3

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

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, 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
Revisions of previous estimates	635.7	3.5	27.2	3.5	34.3	0.2	670.1
Extensions and discoveries	75.4	7.1	-	-	7.1	-	82.5
Improved Recovery	246.7	-	-	-	-	-	246.7
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	(891.0)	(2.6)	(16.7)	(8.3)	(27.7)	(1.2)	(919.8)
Reserves at December 31, 2017	9,528.8	27.9	121.5	66.3	215.6	7.4	9,751.7

\* In 2017, it includes 292.7 million barrels of oil equivalent

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

Apparent differences in the sum of the numbers are due to

In 2017, we incorporated 670.1 million boe of proved reserves by revising of previous estimates, including 355.4 million boe due to economic revisions, mainly due to the increase in prices, and 314.7 million boe due to technical revisions, mainly due to better than forecasted behavior from reservoirs, in the pre-salt layer of Santos and Campos basins, both in Brazil. In addition, we added 246.7 million boe in our proved reserves resulting from positive responses from improved recovery (water injection), and added 82.5 million boe in our proved reserves due to extensions and discoveries, mainly in the pre-salt of Santos basin.

Considering a production of 919.8 million boe in 2017, the company total proved reserves resulted in 9,751.7 million boe. This 919.8 million boe production does not consider the production of Extended Well Tests (EWTs) in exploratory blocks and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

In 2016, we incorporated 103 million boe of proved reserves from extensions and discoveries in Brazil (Santos Basin), and we added 131 million boe 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 layer of Santos and Campos Basins.

We reduced 169 million boe of our proved reserves due to sales of minerals in situ and increased 16 million boe in our proved reserves due to purchases of minerals in situ, resulting in a net effect of a decrease of 153 million boe in our proved reserves. The net result of these additions and disposals, excluding production, was an increase of 81 million boe to our proved reserves in 2016. Considering a production of 925 million boe in 2016, our decrease of proved reserves was 844 million boe.

In 2015, our proved reserves decreased by 2,186 million boe due to revisions of previous estimates, mostly as result of the decrease in oil prices during fiscal year of 2015, and decreased by 22 million boe due to sales of proved reserves. This decrease was partially offset by the incorporation of 494 million boe 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 million boe due to improved recovery. The net result (excluding production) was a decrease of 1,692 million boe in our proved reserves in 2015. Considering a production of 932 million boe in 2015, our net decrease of proved reserves was 2,625 million boe.

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(Expressed in millions of US Dollars, unless otherwise indicated)



	2017				2016				2015			
	Crude Oil	Synthetic Oil	Natural Gas	Synthetic Gas	Crude Oil	Synthetic Oil	Natural Gas	Synthetic Gas	Crude Oil	Synthetic Oil	Natural Gas	Synthetic Gas
	(millions of barrels)		(billions cubic feet)		(millions of barrels)		(billions cubic feet)		(millions of barrels)		(billions cubic feet)	
<b>Net proved developed reserves:</b>												
Consolidated Entities												
Brazil*	4,282.2	6.0	4,515.9	8.1	4,250.1	6.8	5,034.2	9.2	4,266.5	6.9	5,320.5	9.3
South America	0.7	-	56.7	-	0.5	-	33.7	-	39.7	-	366.3	-
North America	72.1	-	24.2	-	79.6	-	83.6	-	53.6	-	122.5	-
Abroad	72.8	-	80.9	-	80.1	-	117.3	-	93.4	-	488.8	-
<b>Total Consolidated Entities</b>	<b>4,355.0</b>	<b>6.0</b>	<b>4,596.8</b>	<b>8.1</b>	<b>4,330.2</b>	<b>6.8</b>	<b>5,151.5</b>	<b>9.2</b>	<b>4,359.8</b>	<b>6.9</b>	<b>5,809.3</b>	<b>9.3</b>
Equity Method Investees												
South America	-	-	-	-	-	-	-	-	6.6	-	8.0	-
Africa	29.6	-	9.3	-	32.5	-	8.6	-	28.0	-	10.4	-
Abroad	29.6	-	9.3	-	32.5	-	8.6	-	34.7	-	18.4	-
<b>Total Equity Method Investees</b>	<b>29.6</b>	<b>-</b>	<b>9.3</b>	<b>-</b>	<b>32.5</b>	<b>-</b>	<b>8.6</b>	<b>-</b>	<b>34.7</b>	<b>-</b>	<b>18.4</b>	<b>-</b>
<b>Total Consolidated and Equity Method Investees</b>	<b>4,384.6</b>	<b>6.0</b>	<b>4,606.0</b>	<b>8.1</b>	<b>4,362.7</b>	<b>6.8</b>	<b>5,160.1</b>	<b>9.2</b>	<b>4,394.5</b>	<b>6.9</b>	<b>5,827.7</b>	<b>9.3</b>
<b>Net proved undeveloped reserves:</b>												
Consolidated Entities												
Brazil**	3,967.2	-	3,160.2	-	3,812.9	-	3,359.7	-	4,277.7	-	4,267.2	-
South America	0.5	-	103.5	-	0.3	-	80.2	-	12.5	-	314.2	-
North America	42.6	-	16.7	-	16.8	-	3.6	-	37.0	-	16.0	-
Abroad	43.0	-	120.2	-	17.1	-	83.8	-	49.5	-	330.3	-
<b>Total Consolidated Entities</b>	<b>4,010.2</b>	<b>-</b>	<b>3,280.5</b>	<b>-</b>	<b>3,830.0</b>	<b>-</b>	<b>3,443.6</b>	<b>-</b>	<b>4,327.2</b>	<b>-</b>	<b>4,597.5</b>	<b>-</b>
Equity Method Investees												
South America	-	-	-	-	-	-	-	-	7.9	-	8.9	-
Africa	33.8	-	8.0	-	36.5	-	3.9	-	37.8	-	6.2	-
Abroad	33.8	-	8.0	-	36.5	-	3.9	-	45.7	-	15.1	-
<b>Total Equity Method Investees</b>	<b>33.8</b>	<b>-</b>	<b>8.0</b>	<b>-</b>	<b>36.5</b>	<b>-</b>	<b>3.9</b>	<b>-</b>	<b>45.7</b>	<b>-</b>	<b>15.1</b>	<b>-</b>
<b>Total Consolidated and Equity Method Investees</b>	<b>4,044.0</b>	<b>-</b>	<b>3,288.5</b>	<b>-</b>	<b>3,866.5</b>	<b>-</b>	<b>3,447.5</b>	<b>-</b>	<b>4,372.9</b>	<b>-</b>	<b>4,612.6</b>	<b>-</b>

\* In 2017, it includes 191.9 million barrels of oil equivalent and 131.8 billion cubic feet related to assets held for sale

\*\* In 2017, it includes 71.9 million barrels of oil equivalent and 41.9 billion cubic feet related to assets held for sale.

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.

## **(v) Standardized measure of discounted future net cash flows relating to proved oil and gas quantities and changes therein**

The standardized measure of discounted future net cash flows, related to the above proved oil and gas reserves, is calculated in accordance with the requirements of Codification Topic 932 – Extractive Activities – Oil and Gas.

Estimated future cash inflows from production in Brazil are computed by applying the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. Future price changes are limited to those provided by contractual arrangements existing at the end of each reporting year. Future development and production costs are those estimated future expenditures necessary to develop and produce year-end estimated proved reserves based on year-end cost, assuming continuing economic conditions. Estimated future income taxes (including future social contributions on net income - *CSLL*) are calculated by applying appropriate year-end statutory tax rates. The amounts presented as future income taxes expenses reflect allowable deductions considering statutory tax rates. Discounted future net cash flows are calculated using 10% mid-period discount factors. This discounting requires a year-by-year estimate of when the future expenditures will be incurred and when the reserves will be produced.

The valuation prescribed under Codification Topic 932 – Extractive Activities – Oil and Gas requires assumptions as to the timing and amount of future development and production costs. The calculations are made as of December 31 each year and should not be relied upon as an indication of Petrobras' future cash flows or the value of its oil and gas reserves.

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	Consolidated entities							Equity Method Investees
	Brazil**	Abroad					Total	
		South America	North America	Africa	Others	Total		
<b>December 31, 2017</b>								
Future cash inflows	439,058	912	5,361	-	-	6,274	445,332	3,487
Future production costs	(213,037)	(412)	(2,291)	-	-	(2,703)	(215,740)	(857)
Future development costs	(46,731)	(147)	(649)	-	-	(796)	(47,527)	(524)
Future income tax expenses	(63,087)	(89)	(86)	-	-	(175)	(63,262)	(339)
Undiscounted future net cash flows	116,204	265	2,335	-	-	2,600	118,803	1,768
10 percent midyear annual discount for timing of estimated cash flows*	(52,516)	(138)	(707)	-	-	(845)	(53,361)	(474)
Standardized measure of discounted future net cash flows	63,687	126	1,628	-	-	1,755	65,442	1,294
<b>December 31, 2016</b>								
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
<b>December 31, 2015</b>								
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

\*Semiannual capitalization

\*\*Includes the amount of US\$ 1,770 millions related to assets classified as held for sale in 2017.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

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## (v) Standardized measure of discounted future net cash flows relating to proved oil and gas quantities and changes therein

	Consolidated entities						Total	Equity Method Investees
	Abroad							
	Brazil*	South America	North America	Africa	Others			
Balance at January 1, 2017	34,424	98	830	-	-	927	35,351	583
Sales and transfers of oil and gas, net of production cost	(23,394)	(60)	(564)	-	-	(624)	(24,018)	(261)
Development cost incurred	11,553	23	230	-	-	253	11,806	294
Net change due to purchases and sales of minerals in place	-	-	-	-	-	-	-	-
Net change due to extensions, discoveries and improved recovery related costs	4,187	69	-	-	-	69	4,256	-
Revisions of previous quantity estimates	8,264	37	443	-	-	480	8,744	51
Net change in prices, transfer prices and in production costs	50,326	3	735	-	-	738	51,064	494
Changes in estimated future development costs	(15,878)	(31)	(144)	-	-	(175)	(16,053)	(25)
Accretion of discount	3,442	14	76	-	-	90	3,532	58
Net change in income taxes	(9,237)	(18)	(2)	-	-	(20)	(9,257)	(92)
Other - unspecified	-	(9)	25	-	-	16	16	190
<b>Balance at December 31, 2017</b>	<b>63,687</b>	<b>126</b>	<b>1,628</b>	<b>-</b>	<b>-</b>	<b>1,755</b>	<b>65,442</b>	<b>1,294</b>
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
<b>Balance at December 31, 2016</b>	<b>34,424</b>	<b>98</b>	<b>830</b>	<b>-</b>	<b>-</b>	<b>927</b>	<b>35,351</b>	<b>583</b>

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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)
<b>Balance at December 31, 2015</b>	<b>42,769</b>	<b>1,205</b>	<b>873</b>	<b>-</b>	<b>-</b>	<b>2,078</b>	<b>44,847</b>	<b>512</b>

\*Includes the amount of US\$ 1,770 millions related to assets classified as held for sale in 2017.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

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## **Additional information of general public concern – Law 13.303/16 (unaudited)**

On June 30th, 2016 the Brazilian federal government enacted the Law 13.303 providing for new guidelines, rules and procedures applicable to the Company as it is a partially state-owned enterprise.

In compliance with the relevant rule, on June 29, 2017 the Company released the 2016 Annual Letter of Public Policies and Corporate Governance presenting the main information regarding commitments to the achievement of public policy objectives, which are summarized below:

### **I – Priority Thermoelectric Program – (Programa Prioritário de Termoeletricidade- PPT)**

On February 24, 2000, the Brazilian federal government enacted the Decree No. 3.371 governing the implementation of thermoelectric power plants in Brazil through the Priority Thermoelectric Program (PPT). The thermoelectric power plants in the scope of this program were entitled to supply natural gas for up to 20 years with a pre-established price indexed to the U.S. inflation. The gas supply for the program, in 2017, generated revenues of approximately US\$ 356 and costs of US\$ 725. As of December 31, 2017, the company had three plants in the scope of this program and one of which had its contract terminated in 2018.

### **II – National Program for Rationalization of the Use of Oil and Gas Products – (Programa Nacional de Racionalização do Uso dos Derivados do Petróleo e do Gás Natural – CONPET)**

On February 18, 1991, the Brazilian federal government established the National Program for Rationalization of the Use of Oil and Gas Products (CONPET), which was intended to develop an anti-waste culture in the use of non-renewable natural resources. The Company is also a member of the Brazilian Labeling Program (*Programa Brasileiro de Etiquetagem*) in partnership with the National Institute of Metrology, Quality and Technology (INMETRO), which goal is to stimulate the production and use of gas appliances and vehicles with lower carbon emission. In 2017, the costs associated with CONPET were immaterial.

### **III – Program for the Mobilization of National Oil and Natural Gas Industry – (Programa de Mobilização da Indústria Nacional de Petróleo e Gás Natural – PROMINP)**

On December 19, 2003, the Brazilian federal government enacted the Decree 4.945 aiming at promoting enhancing operations of the domestic industry of goods and services, in a competitive and sustainable manner with respect to oil and gas projects in Brazil and abroad. In 2017, this project was discontinued.