

# ***FINANCIAL STATEMENTS***

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*December 31, 2016, 2015 and  
2014 with report of independent  
registered public accounting firm*

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To the Board of Directors and Shareholders

Petróleo Brasileiro S.A. - Petrobras

In our opinion, the accompanying consolidated statement of financial position and the related consolidated statements of income, comprehensive income, cash flows and changes in shareholders' equity 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 December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. 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 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  
CRC 2SP000160/O-5 "F" RJ

Rio de Janeiro, Brazil  
March 21, 2017

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Financial Position

December 31, 2016 and 2015

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



Assets	Note	12.31.2016	12.31.2015	Liabilities	Note	12.31.2016	12.31.2015
<b>Current assets</b>				<b>Current liabilities</b>			
Cash and cash equivalents	7	21,205	25,058	Trade payables	16	5,762	6,373
Marketable securities	7	784	780	Finance debt	17	9,755	14,683
Trade and other receivables, net	8	4,769	5,554	Finance lease obligations	18.1	18	19
Inventories, net	9	8,475	7,441	Income taxes payable	21.1	127	105
Recoverable income taxes	21.1	602	983	Other taxes payable	21.1	3,628	3,365
Other recoverable taxes	21.1	1,900	1,765	Payroll and related charges		2,197	1,302
Advances to suppliers		166	108	Pension and medical benefits	22	820	655
Other current assets		1,140	1,338	Others		2,104	1,946
		39,041	43,027			24,411	28,448
Assets classified as held for sale	10.3	5,728	152	Liabilities on assets classified as held for sale	10.3	492	125
		44,769	43,179			24,903	28,573
<b>Non-current assets</b>				<b>Non-current liabilities</b>			
Long-term receivables				Finance debt	17	108,371	111,482
Trade and other receivables, net	8	4,551	3,918	Finance lease obligations	18.1	226	78
Marketable securities	7	90	88	Deferred income taxes	21.6	263	232
Judicial deposits	30.2	3,999	2,499	Pension and medical benefits	22	21,477	12,195
Deferred income taxes	21.6	4,307	6,016	Provisions for legal proceedings	30.1	3,391	2,247
Other tax assets	21.1	3,141	2,821	Provision for decommissioning costs	20	10,252	9,150
Advances to suppliers		1,148	1,638	Others		550	509
Others		3,184	2,446			144,530	135,893
		20,420	19,426	<b>Total liabilities</b>		169,433	164,466
Investments	11	3,052	3,527	<b>Shareholders' equity</b>			
Property, plant and equipment	12	175,470	161,297	Share capital (net of share issuance costs)	23.1	107,101	107,101
Intangible assets	13	3,272	3,092	Capital transactions	23.2	628	321
		202,214	187,342	Profit reserves	23.3	53,143	57,977
				Accumulated other comprehensive (deficit)	23.4	(84,093)	(100,163)
				Attributable to the shareholders of Petrobras		76,779	65,236
				Non-controlling interests	11.4	771	819
				<b>Total equity</b>		77,550	66,055
<b>Total assets</b>		246,983	230,521	<b>Total liabilities and shareholder's equity</b>		246,983	230,521

The notes form an integral part of these financial statements.

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Income

December 31, 2016, 2015 and 2014

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



	Note	2016	2015	2014
Sales revenues	24	81,405	97,314	143,657
Cost of sales		(55,417)	(67,485)	(109,477)
Gross profit		25,988	29,829	34,180
Income (expenses)				
Selling expenses		(3,963)	(4,627)	(6,827)
General and administrative expenses		(3,319)	(3,351)	(4,756)
Exploration costs	15	(1,761)	(1,911)	(3,058)
Research and development expenses		(523)	(630)	(1,099)
Other taxes		(714)	(2,796)	(760)
Impairment of assets	14	(6,193)	(12,299)	(16,823)
Write-off - overpayments incorrectly capitalized	3	-	-	(2,527)
Other expenses, net	25	(5,207)	(5,345)	(5,737)
		(21,680)	(30,959)	(41,587)
Income (loss) before finance income (expense), results in equity-accounted investments and income taxes		4,308	(1,130)	(7,407)
Finance income		1,053	1,412	1,949
Finance expenses		(6,958)	(6,437)	(3,923)
Foreign exchange gains (losses) and inflation indexation charges		(1,850)	(3,416)	339
Net finance income (expense)	27	(7,755)	(8,441)	(1,635)
Results in equity-accounted investments	11.2	(218)	(177)	218
Loss before income taxes		(3,665)	(9,748)	(8,824)
Income taxes	21.7	(684)	1,137	1,321
Loss		(4,349)	(8,611)	(7,503)
Net income (loss) attributable to:				
Shareholders of Petrobras		(4,838)	(8,450)	(7,367)
Non-controlling interests		489	(161)	(136)
Loss		(4,349)	(8,611)	(7,503)
Basic and diluted loss per weighted-average of common and preferred share - in U.S. dollars	23.6	(0.37)	(0.65)	(0.56)

The notes form an integral part of these financial statements.

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Comprehensive Income

December 31, 2016, 2015 and 2014

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



	2016	2015	2014
Loss	(4,349)	(8,611)	(7,503)
Items that will not be reclassified to the statement of income:			
Actuarial gains (losses) on defined benefit pension plans	(5,296)	(53)	(5,947)
Deferred income tax	1,058	(14)	1,157
	(4,238)	(67)	(4,790)
Share of other comprehensive income (losses) in equity-accounted investments	(3)	(1)	-
Items that may be reclassified subsequently to the statement of income:			
Unrealized gains / (losses) on cash flow hedge - highly probable future exports			
Recognized in shareholders' equity	10,779	(21,132)	(6,443)
Reclassified to the statement of income	2,841	2,057	702
Deferred income tax	(4,629)	6,486	1,953
	8,991	(12,589)	(3,788)
Unrealized gains / (losses) on cash flow hedge - others			
Recognized in shareholders' equity	8	10	6
Reclassified to the statement of income	-	-	1
	8	10	7
Cumulative translation adjustments (*)			
Recognized in shareholders' equity	9,529	(29,248)	(15,606)
Reclassified to the statement of income	1,457	-	-
	10,986	(29,248)	(15,606)
Share of other comprehensive income (losses) in equity-accounted investments	344	(860)	(263)
<b>Total other comprehensive income (loss):</b>	<b>16,088</b>	<b>(42,755)</b>	<b>(24,440)</b>
<b>Total comprehensive income (loss)</b>	<b>11,739</b>	<b>(51,366)</b>	<b>(31,943)</b>
Comprehensive income (loss) attributable to:			
Shareholders of Petrobras	11,236	(51,209)	(31,729)
Non-controlling interests	503	(157)	(214)
<b>Total comprehensive income (loss)</b>	<b>11,739</b>	<b>(51,366)</b>	<b>(31,943)</b>

(\*) Includes a loss of US\$ 418(a gain of US\$ 1,002 in 2015) of cumulative translation adjustments in associates and joint ventures.

The notes form an integral part of these financial statements.

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Cash Flows

December 31, 2016, 2015 and 2014

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



	2016	2015	2014
<b>Cash flows from Operating activities</b>			
Loss	(4,349)	(8,611)	(7,503)
Adjustments for:			
Pension and medical benefits (actuarial expense)	2,304	1,960	2,022
Results in equity-accounted investments	218	177	(218)
Depreciation, depletion and amortization	13,965	11,591	13,023
Impairment of assets	6,193	12,299	16,823
Exploratory expenditures written-off	1,281	1,441	2,178
Gains and losses on disposal/written-offs of assets	(293)	758	481
Foreign exchange, indexation and finance charges	7,962	9,172	3,571
Write-off - overpayments incorrectly capitalized	-	-	2,527
Deferred income taxes, net	(913)	(2,043)	(3,045)
Allowance (reversals) for impairment of trade and others receivables	1,131	941	2,378
Inventory write-down to net realizable value	343	431	1,015
Reclassification of cumulative translation adjustment - CTA	1,457	-	-
Revision and unwinding of discount on the provision for decommissioning costs	(836)	382	448
Decrease (Increase) in assets			
Trade and other receivables, net	(39)	(396)	(2,507)
Inventories	(518)	291	570
Judicial deposits	(986)	(789)	(506)
Other assets	(319)	(819)	(2,297)
Increase (Decrease) in liabilities			
Trade payables	(1,060)	(1,226)	(1,211)
Other taxes payable	1,047	1,628	(392)
Pension and medical benefits	(766)	(709)	(834)
Income taxes paid	(372)	(567)	(853)
Other liabilities	664	76	1,079
<b>Net cash provided by operating activities</b>	<b>26,114</b>	<b>25,987</b>	<b>26,749</b>
<b>Cash flows from Investing activities</b>			
Capital expenditures	(14,085)	(21,653)	(34,808)
Increase (Decrease) in investments in investees	(125)	(108)	(329)
Proceeds from disposal of assets - Divestment	2,205	224	3,744
Divestment (Investment) in marketable securities	229	7,982	(5,469)
Dividends received	473	259	387
<b>Net cash used in investing activities</b>	<b>(11,303)</b>	<b>(13,296)</b>	<b>(36,475)</b>
<b>Cash flows from Financing activities</b>			
Investments by non-controlling interest	29	100	(98)
Financing and loans, net:			
Proceeds from financing	18,897	17,420	31,050
Repayment of principal	(30,660)	(14,809)	(10,031)
Repayment of interest	(7,308)	(6,305)	(5,995)
Dividends paid to Shareholders of Petrobras	-	-	(3,918)
Dividends paid to Non-controlling interests	(72)	(74)	(117)
Proceeds from sale of interest without loss of control (*)	-	503	-
<b>Net cash used in financing activities</b>	<b>(19,114)</b>	<b>(3,165)</b>	<b>10,891</b>
Effect of exchange rate changes on cash and cash equivalents	450	(1,123)	(378)
<b>Net increase / (decrease) in cash and cash equivalents</b>	<b>(3,853)</b>	<b>8,403</b>	<b>787</b>
<b>Cash and cash equivalents at the beginning of the year</b>	<b>25,058</b>	<b>16,655</b>	<b>15,868</b>
<b>Cash and cash equivalents at the end of the year</b>	<b>21,205</b>	<b>25,058</b>	<b>16,655</b>

(\*) Reclassified from Investing activities as set out in note 2.3.

The notes form an integral part of these financial statements.

# Petróleo Brasileiro S.A. – Petrobras

## Consolidated Statement of Changes in Shareholders' Equity

December 31, 2016, 2015 and 2014

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



	Share capital (net of share issuance costs)			Accumulated other comprehensive income (deficit) and deemed cost				Profit Reserves					Shareholders' equity attributable to shareholders of Petrobras	Non-controlling interests	Total consolidated shareholders' equity
	Share Capital	Share issuance costs	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			
	107,371	(279)	674	(26,440)	(3,911)	(2,505)	(178)	7,919	2,182	729	62,965	-	148,527	596	149,123
<b>Balance at January 1, 2014</b>		107,092	674				(33,034)				73,795		148,527	596	149,123
Capital increase with reserves	9	-	-	-	-	-	-	-	-	(9)	-	-	-	-	-
Realization of deemed cost	-	-	-	-	-	-	(4)	-	-	-	-	4	-	-	-
Capital transactions	-	-	(526)	-	-	-	-	-	-	-	-	-	(526)	393	(133)
Loss	-	-	-	-	-	-	-	-	-	-	-	(7,367)	(7,367)	(136)	(7,503)
Other comprehensive income (loss)	-	-	-	(15,528)	(3,788)	(4,790)	(256)	-	-	-	-	-	(24,362)	(78)	(24,440)
Appropriations:															
Transfer to reserves	-	-	-	-	-	-	-	-	-	-	(7,363)	7,363	-	-	-
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	(69)	(69)
	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 (loss)	-	-	-	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

The notes form an integral part of these financial statements.

## 1. The Company and its operations

Petróleo Brasileiro S.A. - Petrobras is a company controlled by the Brazilian government dedicated, directly or through its subsidiaries (referred to jointly as “Petrobras”, “the Company”, or “Petrobras Group”), either independently or through joint ventures or similar arrangements with third parties, to prospecting, drilling, refining, processing, trading and transporting crude oil from producing onshore and offshore oil fields and from shale or other rocks, as well as oil products, natural gas and other liquid hydrocarbons. In addition, Petrobras carries out energy related activities, such as research, development, production, transport, distribution and trading of all forms of energy, as well as other related or similar activities. The Company’s head office is located in Rio de Janeiro – RJ, Brazil.

## 2. Basis of preparation

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

These consolidated financial statements have been prepared and are being presented in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), and presents all relevant information related to the financial statements.

These financial statements have been prepared under the historical cost convention, except for available-for-sale financial assets, financial assets and financial liabilities measured at fair value and certain current and non-current assets and liabilities, as set out in the summary of significant accounting policies.

The annual consolidated financial statements were approved and authorized for issue by the Company’s Board of Directors in a meeting held on March 21, 2017.

### 2.2. Functional and presentation currency

The functional currency of Petrobras and all of its Brazilian subsidiaries is the Brazilian Real. The functional currency of most of the Petrobras entities that operate outside Brazil is the U.S. dollar.

Petrobras has selected the U.S. Dollar as its presentation currency. The financial statements have been translated from the functional currency (Brazilian Real) into the presentation currency (U.S. Dollar) in accordance with IAS 21 – “The effects of changes in foreign exchange rates”. All assets and liabilities are translated into U.S. dollars at the closing exchange rate at the date of the financial statements. Income and expenses, as well as cash flows are translated into U.S. dollars using the average exchange rates prevailing during the year. Equity items are translated using the exchange rates prevailing at the dates of the transactions. All exchange differences arising from the translation of the consolidated financial statements from the functional currency into the presentation currency are recognized as cumulative translation adjustments (CTA) within accumulated other comprehensive income (loss) in the consolidated shareholders’ equity.

<b>Brazilian Real x U.S. Dollar</b>	<b>Mar 2016</b>	<b>Jun 2016</b>	<b>Sep 2016</b>	<b>Dec 2016</b>	<b>Mar 2015</b>	<b>Jun 2015</b>	<b>Sep 2015</b>	<b>Dec 2015</b>
Quarterly average exchange rate	3.91	3.51	3.25	3.29	2.86	3.07	3.55	3.84
Period-end exchange rate	3.56	3.21	3.25	3.26	3.21	3.10	3.97	3.90

### 2.3. Corrections

For the preparation of the financial statements for the year ended December 31, 2016, the Company has corrected certain amounts from prior periods to conform to current period presentations. The Company concluded that these corrections are not material and they did not affect the income statement and the shareholders’ equity, as described below:

- Receivables from the electricity sector in the amount of US\$ 249, previously accounted for as current assets, were reclassified to trade and other receivables, net within non-current assets;
- Finance lease installments amounting to US\$ 7 were reclassified from trade payables to finance lease obligations within current liabilities, as well as finance lease installments amounting to US\$ 38 were reclassified from other non-current liabilities to finance lease obligations within non-current liabilities;
- Proceeds from disposal of interests in subsidiaries without loss of control in the amount of US\$ 503, previously presented in the Statement of Cash Flows as investing activities, were reclassified to financing activities.
- Fair value of finance debt changed from US\$ 98,600 to US\$ 109,168 due to changes in the finance debts fair value approach based on inputs other than quoted prices (level 2), as set out in note 17.1.

### 3. The “Lava Jato (Car Wash) Operation” and its effects on the Company

In 2009, the Brazilian Federal Police (*Polícia Federal*) began an investigation called “Lava Jato” (Car Wash) aimed at criminal organizations engaged in money laundering in several Brazilian states. The Lava Jato investigation is extremely broad and involves numerous investigations into several criminal practices focusing on crimes committed by individuals in different parts of the country and sectors of the Brazilian economy.

Beginning in 2014, the Brazilian Federal Prosecutor’s Office focused part of its investigation on irregularities involving Petrobras’s contractors and suppliers and uncovered a broad payment scheme that involved a wide range of participants, including former Petrobras personnel. Based on the information available to Petrobras, the payment scheme involved a group of companies that, between 2004 and April 2012, colluded to obtain contracts with Petrobras, overcharge the Company under those contracts and use the overpayment received under the contracts to fund improper payments to political parties, elected officials or other public officials, individual contractors and suppliers personnel, former Petrobras personnel and other individuals involved in the scheme. Petrobras refers to this scheme as the “payment scheme” and to the companies involved in the scheme as “cartel members”. The Company did not make any improper payment.

In addition to the payment scheme, the investigations identified specific instances of other contractors and suppliers that overcharged Petrobras and allegedly used the overpayment received from their contracts with the Company to fund improper payments, unrelated to the payment scheme, to certain former Petrobras personnel. Those contractors and suppliers are not cartel members and acted individually. Petrobras refers to these specific cases as the “unrelated payments.”

Certain former executives of Petrobras were arrested and/or charged for certain crimes such as money-laundering and passive corruption. Other former executives of the Company as well as executives of Petrobras contractors and suppliers were or may be charged as a result of the investigation.

The amounts paid by Petrobras related to contracts with contractors and suppliers involved in the payment scheme were included in historical costs of its property, plant and equipment. However, the Company believes that, under International Accounting Standard IAS 16 – Property, Plant and Equipment, the portion of the payments made to these companies and used by them to make improper payments, which represents additional charges incurred as a result of the payments scheme, should not have been capitalized. Thus, in the third quarter of 2014, the Company wrote off US\$2,527 of capitalized costs representing amounts that Petrobras overpaid for the acquisition of property, plant and equipment in prior years.

The Company has continuously monitored the investigations for additional information and to assess any potential impact on the adjustments made. No additional information has been identified that impacted the adopted calculation methodology and the recorded adjustment in 2014 for the preparation of the financial statements for the year ended December 31, 2016.

Petrobras will continue to monitor the results of the investigations and the availability of other information concerning the payment scheme. If information becomes available that indicates with sufficient precision that the estimate described above should be adjusted, Petrobras will evaluate whether the adjustment is material and, if so, recognize it.

### **3.1. The Company's response to the facts uncovered in the investigation**

The Company has been closely monitoring the investigations and cooperating fully with the Brazilian Federal Police (*Policia Federal*), the Brazilian Public Prosecutor's Office (*Ministério Público Federal*), Federal Auditor's Office (*Tribunal de Contas da União – TCU*), and the Ministry of Transparency, Supervision and Control (*Ministério da Transparência, Fiscalização e Controle*) in the investigation of all crimes and irregularities. We have responded to numerous requests for documents and information from these authorities.

The Company has also cooperated with the U.S. Securities and Exchange Commission (SEC) and the United States Department of Justice (DOJ), which, since November 2014, have been investigating potential violations of U.S. law based on information disclosed as a result of the Lava Jato investigation.

We have been formally recognized as a victim of the crimes identified under the Lava Jato investigation by the Brazilian Federal Prosecutor's Office, the lower court hearing the case and also by the Brazilian Supreme Court. As a result, we have entered into 29 criminal proceedings as an assistant to the prosecutor. In addition, we have entered into five criminal proceedings as an interested party. We have also renewed our commitment to continue cooperating with authorities to clarify the issues and report them regularly to our investors and to the public in general.

We do not tolerate corrupt practices and illegal acts perpetuated by any of our employees. Accordingly, in 2016, the Company continued to implement several measures as a response to the facts uncovered in the "Lava Jato" investigation and to improve its corporate governance and compliance systems as described below.

As part of the process of strengthening the internal control structure, among the measures taken in 2016, the Company approved its new Corporate Compliance Policy, performed training programs with personnel and executives focused on the prevention of corruption, reviewed the "Compliance Agents" initiative and adapted its findings to the new organization structure, conducted nearly 12,000 integrity due diligence procedures, and performed background checks as part of the decision making for appointing personnel to key positions.

Internal investigations are still in progress and are being carried out by two independent firms hired in October 2014, which report directly to a Special Committee that serves as a reporting line to the Board of Directors. The Special Committee is composed of our Governance and Compliance Officer, João Adalberto Elek Junior and two other independent and recognized experts: Ellen Gracie Northfleet, former Chief Justice of the Brazilian Supreme Court, who is recognized internationally as a jurist with great experience in analyzing complex legal issues; and Andreas Pohlmann from Germany, former Chief Compliance Officer of Siemens AG (2007-2010), who has broad experience in compliance and corporate governance matters.

We established Internal Investigative Committees (*Comissões Internas de Apuração*) to investigate instances of non-compliance with corporate rules, procedures or regulations. The Committees' investigation results are shared with the Brazilian authorities as they progress.

In addition, the Company has been taking the necessary procedural steps to seek compensation for damages suffered from the improper payments scheme, including those related to its reputation.

Accordingly, the Company joined 12 public civil suits addressing acts of administrative misconduct filed by the Brazilian Public Prosecutor's Office and the Federal Government, including demands for compensation for reputation damages.

In order to secure future compensation to Petrobras for each civil action related to misconduct, the courts granted cautionary orders in certain actions to impound defendants' property.

To the extent that any of the proceedings resulting from the Lava Jato investigation involve leniency agreements with cartel members or plea agreements with individuals pursuant to which they agree to return funds, the Company may be entitled to receive a portion of such funds. Nevertheless, the Company is unable to reliably estimate further recoverable amounts at this moment. Any recoverable amount will be recognized as income when received or when their economic benefits become virtually certain.

In 2016, the Company recognized the amount of US\$ 131 as compensations for damages relating to the “Lava Jato” Operation (US\$ 72 up to 2015) pursuant to leniency and cooperation agreements.

### **3.2. Approach adopted by the Company to adjust its property, plant and equipment for overpayments**

As it is not possible to specifically identify the amounts of each overpayment to contractors and suppliers, or periods over which such payments occurred, Petrobras developed a methodology to estimate the aggregate amount that it overpaid under the payment scheme, in order to determine the amount of the write-off representing the overstatement of its assets resulting from overpayments used to fund improper payments.

As it is impracticable to identify the periods and amounts of overpayments incurred, the Company developed a methodology to estimate the adjustment incurred in property, plant and equipment in the third quarter of 2014 using the five steps described below:

(1) Identify contractual counterparties: the Company listed all the companies identified as cartel members, and using that information the Company identified all of the contractors and suppliers that were either so identified or were part of consortia including entities so identified.

(2) Identify the period: the Company concluded from testimony that the payment scheme was operating from 2004 through April 2012.

(3) Identify contracts: the Company identified all contracts entered into with the counterparties identified in step 1 during the period identified in step 2, which included supplemental contracts when the original contract was entered into between 2004 and April 2012. It has identified all of the property, plant and equipment related to those contracts.

(4) Identify payments: the Company calculated the total contract values under the contracts mentioned in step 3.

(5) Apply a fixed percentage to the amount determined in Step 4: the Company estimated the aggregate overpayment by applying a percentage indicated in the depositions (3%) to the total amounts for identified contracts.

For overpayments attributable to non-cartel members, unrelated to the payment scheme, the Company included in the write-off for incorrectly capitalized overpayments the specific amounts of improper payments or percentages of contract values, as described in the testimony, which were used by those suppliers and contractors to fund improper payments.

For more information on the approach adopted by the Company to estimate the write-off for overpayments incorrectly capitalized, see note 3 to the Company’s audited consolidated financial statements for 2014.

The Company considered all available information for purposes of the preparation of the financial statements for the year ended December 31, 2016 and did not identify any additional information that would impact the adopted calculation methodology and consequently require additional write-offs.

Petrobras has closely monitored the progress of both the investigation by Brazilian authorities and the independent law firms and no new facts that could impact the Company’s previously recorded adjustments or change the methodology adopted were discovered. The Company will continuously monitor these investigations for additional information and will review their potential impact on the adjustment made.

### 3.3. Investigations involving the Company

Petrobras is not a target of the Lava Jato investigation and is formally recognized as a victim of the improper payments scheme by the Brazilian Authorities.

On November 21, 2014, Petrobras received a subpoena from the U.S. Securities and Exchange Commission (SEC) requesting certain documents and information about the Company. The Company has been complying with the subpoena and intends to continue to do so, working with the independent Brazilian and U.S. law firms that were hired to conduct an independent internal investigation.

On December 15, 2015, the State of São Paulo Public Prosecutor's Office issued the Order of Civil Inquiry 01/2015, establishing a civil proceeding to investigate the existence of potential damages caused by Petrobras to investors in the stock market. The Company has provided all relevant information required by the authorities.

### 3.4. Legal proceedings involving the Company

Note 30 provides information about class actions and other material legal proceedings.

## 4. Summary of significant accounting policies

The accounting policies set out below have been consistently applied to all periods.

### 4.1. Basis of consolidation

The consolidated financial statements include the financial information of Petrobras and the entities it controls (subsidiaries), joint operations and consolidated structured entities.

Control is achieved when Petrobras: i) has power over the investee; ii) is exposed, or has rights, to variable returns from involvement with the investee; and iii) has the ability to use its power to affect its returns.

Subsidiaries are consolidated from the date on which control is obtained until the date that such control no longer exists, by using accounting policies consistent with those adopted by Petrobras.

Note 11 sets out the consolidated entities and other direct investees.

Petrobras has no equity interest in its consolidated structured entities, but control is determined by the power the Company has over the relevant activities of such entities. Consolidated structured entities are set out below:

<b>Consolidated 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
PDET Offshore S.A.	Brazil	E&P
Fundo de Investimento em Direitos Creditórios Não-padronizados do Sistema Petrobras	Brazil	Corporate
Fundo de Investimento em Direitos Creditórios Padronizados do Sistema Petrobras	Brazil	Corporate

The consolidation procedures involve combining assets, liabilities, income and expenses, according to their function and eliminating all intragroup balances and transactions, including unrealized profits arising from intragroup transactions.

### 4.2. Business segment reporting

The information related to the Company's operating segments (business areas) is prepared based on items directly attributable to each segment, as well as items that can be allocated to each segment on a reasonable basis. This information reflects the views of the Company's Board of Executive Officers (Chief Operating Decision Maker – CODM).

The measurement of segment results includes transactions carried out with third parties and transactions between business areas, which are charged at internal transfer prices defined by the relevant areas using methods based on market parameters.

The Company's operating segments comprises the following business areas:

a) Exploration and Production (E&P): this segment covers the activities of exploration, development and production of crude oil, NGL (natural gas liquid) and natural gas in Brazil and abroad, for the primary purpose of supplying its domestic refineries and the sale of surplus crude oil and oil products produced in the natural gas processing plants to the domestic and foreign markets. The E&P segment also operates through partnerships with other companies;

b) Refining, Transportation and Marketing (RT&M): this segment covers the refining, logistics, transport and trading of crude oil and oil products activities in Brazil and abroad, exports of ethanol, extraction and processing of shale, as well as holding interests in petrochemical companies in Brazil;

c) Gas and Power: this segment covers the activities of transportation and trading of natural gas produced in Brazil and abroad, imported natural gas, transportation and trading of LNG (liquid natural gas), generation and trading of electricity, as well as holding interests in transporters and distributors of natural gas and in thermoelectric power plants in Brazil, in addition to being responsible for the fertilizer business;

d) Biofuels: this segment covers the activities of production of biodiesel and its co-products, as well as the ethanol-related activities: equity investments, production and trading of ethanol, sugar and the surplus electric power generated from sugarcane bagasse; and

e) Distribution: this segment covers the activities of Petrobras Distribuidora S.A, which sells oil products, ethanol and vehicle natural gas in Brazil. This segment also includes distribution of oil products operations abroad (South America).

The corporate segment comprises the items that cannot be attributed to the other segments, notably those related to corporate financial management, corporate overhead and other expenses, including actuarial expenses related to the pension and medical benefits for retired employees and their dependents.

Assets and the statement of income by business area are presented in note 29.

### **4.3. Financial instruments**

#### **4.3.1. Cash and cash equivalents**

Cash and cash equivalents comprise cash in hand, term deposits with banks and short-term highly liquid financial investments that are readily convertible to known amounts of cash, are subject to insignificant risk of changes in value and have a maturity of three months or less from the date of acquisition.

#### **4.3.2. Marketable securities**

Marketable securities comprise investments in debt or equity securities. These instruments are initially measured at fair value, classified and subsequently measured as set out below:

- Fair value through profit or loss – includes financial instruments purchased and held for trading in the short term. These instruments are measured at fair value with changes recognized in the statement of income in finance income (expenses).

- Held-to-maturity – includes non-derivative financial instruments with fixed or determinable payments and fixed maturity, for which management has the clear intention and ability to hold to maturity. These instruments are measured at amortized cost using the effective interest rate method.
- Available-for-sale – includes non-derivative financial instruments that are designated as available for sale or are not classified as financial assets at fair value through profit or loss or held-to-maturity investments. These instruments are measured at fair value and changes are recognized in other comprehensive income, in the shareholders' equity and recycled to the statement of income when the instruments are derecognized or realized.

Subsequent changes attributable to interest income or changes in foreign exchange rates or inflation indexation (price indexes) are recognized in the statement of income for all categories, when applicable.

#### **4.3.3. Trade receivables**

Trade receivables are initially measured at the fair value of the consideration to be received and, subsequently, at amortized cost using the effective interest rate method and adjusted for allowances for impairment or uncollectible receivables.

The Company recognizes an allowance for impairment of trade receivables when there is objective evidence that a loss event occurred after the initial recognition of the receivable and has an impact on the estimated future cash flows, which can be reliably estimated. Impairment losses on trade receivables are recognized in the statement of income in selling expenses.

#### **4.3.4. Loans and financing (Debt)**

Loans and financing are initially recognized at fair value less transaction costs incurred and subsequently measured at amortized cost using the effective interest rate method.

#### **4.3.5. Derivative financial instruments**

Derivative financial instruments are recognized in the statement of financial position as assets or liabilities and are initially and subsequently measured at fair value.

Gains or losses arising from changes in fair value are recognized in the statement of income in finance income (finance expense), unless the derivative is qualified and designated for hedge accounting.

#### **4.3.6. Cash flow hedge accounting**

The Company qualifies certain transactions for cash flow hedge accounting.

Hedging relationships qualify for cash flow hedges when they involve the hedging of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that may impact the statement of income.

Gains or losses relating to the effective portion of the hedge are recognized in other comprehensive income, in the shareholders' equity and recycled to the statement of income in finance income (expense) in the periods when the hedged item affects the statement of income. The gains or losses relating to the ineffective portion are immediately recognized in the statement of income.

When the hedging instrument expires or settled in advance, no longer meets the criteria for hedge accounting or the Company revokes the designation, the cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income from the period when the hedge was effective is recorded separately in equity until the forecast transaction occurs. When the forecast transaction is no longer expected to occur, the cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is immediately reclassified from shareholders' equity to the statement of income.

#### **4.4. Inventories**

Inventories are determined by the weighted average cost method and mainly comprise crude oil, intermediate products and oil products, as well as natural gas, LNG, fertilizers and biofuels, stated at the lower of the average cost, and their net realizable value.

Crude oil and LNG inventories can be traded or used for production of oil products and/or electricity generation, respectively.

Intermediate products are those product streams that have been through at least one of the refining processes, but still need further treatment, processing or converting to be available for sale.

Biofuels mainly include ethanol and biodiesel inventories.

Materials, supplies and others mainly comprise production supplies and operating materials used in the operations of the Company, stated at the average purchase cost, not exceeding replacement cost.

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

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

#### **4.5. Investments in other companies**

An associate is an entity over which the Company has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but not the ability to exercise control or joint control over those policies. The definition of control is set out in note 4.1.

A joint arrangement is an arrangement over which two or more parties have joint control (pursuant to contractual provisions). A joint arrangement is classified either as a joint operation or as a joint venture depending on the rights and obligations of the parties to the arrangement.

In a joint operation, the parties have rights to the assets and obligations for the liabilities related to the arrangement, while in a joint venture the parties have rights to the net assets of the arrangement.

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

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

#### **4.6. Business combinations and goodwill**

Acquisitions of businesses are accounted for using the acquisition method when control is obtained. Combinations of entities under common control are not accounted for as business combinations.

The acquisition method requires that the identifiable assets acquired and the liabilities assumed be measured at the acquisition-date fair value. Amounts paid in excess of the fair value are recognized as goodwill. In the case of a bargain purchase, a gain is recognized in the statement of income when the acquisition cost is lower than the acquisition-date fair value of the net assets acquired.

Changes in ownership interest in subsidiaries that do not result in loss of control of the subsidiary are equity transactions. Any excess of the amounts paid/received over the carrying value of the ownership interest acquired/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 upon the declaration of commerciality.
- Costs directly attributable to exploratory wells pending determination of proved reserves are capitalized within property, plant and equipment. Exploratory wells that have discovered oil and gas reserves, which cannot be classified as proved when drilling is completed, continue to be capitalized if the well has found a sufficient quantity of reserves to justify its completion as a producing well and progress on assessing the reserves and the economic and operating viability of the project is under way. An internal commission of technical executives of Petrobras reviews these conditions monthly for each well, by analysis of geoscience and engineering data, existing economic conditions, operating methods and government regulations.
- Costs related to exploratory wells drilled in areas of unproved reserves are charged to expense when determined to be dry or uneconomic by an expert commission of the Company.
- Costs related to the construction, installation and completion of infrastructure facilities, such as drilling of development wells, construction of platforms and natural gas processing units, construction of equipment and facilities for the extraction, handling, storing, processing or treating crude oil and natural gas, pipelines, storage facilities, waste disposal facilities and other related costs incurred in connection with the development of proved reserve areas are capitalized within property, plant and equipment.

#### **4.8. Property, plant and equipment**

Property, plant and equipment are measured at the cost to acquire or construct, including all costs necessary to bring the asset to working condition for its intended use and the estimated cost of dismantling and removing the asset and restoring the site, reduced by accumulated depreciation and impairment losses.

A condition of continuing to operate certain items of property, plant and equipment, such as industrial plants, offshore plants and vessels is the performance of regular major inspections and maintenance. Those expenditures are capitalized if a maintenance campaign is expected to occur, at least, 12 months later. Otherwise, they are expensed when incurred. The capitalized costs are depreciated over the period through the next major maintenance date.

Spare parts are capitalized when they are expected to be used during more than one period and can only be used in connection with an item of property, plant and equipment. These are depreciated over the useful life of the item of property, plant and equipment to which they relate.

Borrowing costs directly attributable to the acquisition or construction of qualifying assets are capitalized as part of the costs of these assets. General borrowing costs are capitalized based on the Company's weighted average cost of borrowings outstanding applied over the balance of assets under construction. Borrowing costs are amortized during the useful lives of the assets or by applying the unit-of-production method to the related assets. In general, the Company suspends capitalization of borrowing to the extent investments in a qualifying asset hibernates during a period greater than one year or whenever the asset is prepared for its intended use.

Whenever an asset is directly associated to oil and gas production and its estimated lifecycle is equal or greater than the estimated length of reserves depletion, the depreciation of this asset will be accounted for pursuant to the unit-of-production method.

Assets depreciated based on the straight line method include: (i) assets related to oil and gas production with useful lives shorter than the life of the field; (ii) floating platforms; and (iii) assets that are unrelated to oil and gas production.

The unit-of-production method of depreciation (amortization) is computed based on a unit-of-production basis (monthly production) over the proved developed oil and gas reserves, applied on a field-by-field basis.

Amortization of amounts paid for obtaining concessions for exploration of oil and natural gas of producing properties, such as signature bonuses (capitalized acquisition costs) is recognized using the unit-of-production method, computed based on the units of monthly production over the total proved oil and gas reserves, applied on a field-by-field basis.

Except for land, which is not depreciated, other property, plant and equipment are depreciated on a straight-line basis over its useful life. Note 12.2 provides further information on the estimated useful life by class of assets.

#### **4.9. Intangible assets**

Intangible assets are measured at the acquisition cost, less accumulated amortization and impairment losses and comprise rights and concessions, including the signature bonus paid for obtaining concessions for exploration of oil and natural gas (capitalized acquisition costs), public service concessions, trademarks, patents, software and goodwill.

Signature bonuses paid for obtaining concessions for exploration of oil and natural gas are initially capitalized within intangible assets and are transferred to property, plant and equipment upon the declaration of commerciality. They are not amortized before their transference to property, plant and equipment. Intangible assets with a finite useful life, other than amounts paid for obtaining concessions for exploration of oil and natural gas of producing properties, are amortized over the useful life of the asset on a straight-line basis.

Internally-generated intangible assets are not capitalized and are expensed as incurred, except for development costs that meet the recognition criteria related to the completion and use of assets, probable future economic benefits, and others.

Intangible assets with an indefinite useful life are not amortized but are tested annually for impairment. Their useful lives are reviewed annually.

#### **4.10. Impairment of property, plant and equipment and intangible assets**

Property, plant and equipment and intangible assets with definitive lives are tested for impairment when there is an indication that the carrying amount may not be recoverable. Assets are assessed for impairment at the smallest identifiable group that generates largely independent cash inflows from other assets or groups of assets (the cash-generating unit - CGU).

Assets related to development and production of oil and gas and (fields or group of fields) assets that have indefinite useful lives, such as goodwill acquired in business combinations, are tested for impairment annually, irrespective of whether there is any indication of impairment, or when any indication of impairment occurs.

The impairment test is performed through the comparison of the carrying amount of an individual asset or a cash-generating unit (CGU) with its recoverable amount. Whenever the recoverable amount is less than the carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use. Considering the existing synergies between the Company's assets and businesses, as well as the expectation of the use of its assets for their remaining useful lives, value in use is generally used by the Company for impairment testing purposes, except when specifically indicated.

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 effective divestment program and is considering opportunities for divestments in several areas where it operates. The divestment portfolio is dynamic because changes in market conditions and/or in the Company's evaluation of its different businesses may affect any ongoing negotiation or potential transaction.

The condition for classification as held for sale is met only when the sale is approved by the Company's Board of Directors and the asset or disposal group is available for immediate sale in its present condition and there is the expectation that the sale will occur within 12 months after its classification as held for sale. In addition, the sale should be expected to qualify for recognition as a completed sale within one year from the date of its classification as held for sale. However, an extended period required to complete a sale does not preclude an asset (or disposal group) from being classified as held for sale if the delay is caused by events or circumstances beyond the Company's control and there is sufficient evidence that the Company remains committed to its plan to sell the assets (or disposal groups).

Assets (or disposal groups) classified as held for sale and the associated liabilities are measured at the lower of their carrying amount and fair value less costs to sell. Assets and liabilities are presented separately in the statement of financial position.

#### **4.14. Decommissioning costs**

Decommissioning costs are future obligations to perform environmental restoration, dismantle and remove a facility when the Company terminates its operations due to the exhaustion of the area or economic feasibility.

Costs related to the abandonment and dismantling of areas are recognized as part of the cost of an asset (with a corresponding liability) based on the present value of the expected future cash outflows, discounted at a risk-adjusted rate when a future legal obligation exists and can be reliably measured.

Decommissioning costs estimates for oil and natural gas producing properties are initially recognized after a field is declared to be commercially viable.

The part of the cost of an asset relating to decommissioning costs estimates is depreciated on the same basis of its corresponding property, plant and equipment. Unwinding of the discount on the corresponding liability is recognized as a finance expense, when incurred. Decommissioning costs estimates are revised annually, at least.

#### **4.15. Provisions, contingent assets and contingent liabilities**

Provisions are recognized when there is a present obligation that arises from past events and for which it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, which must be reasonably estimable.

Contingent assets and liabilities are not recognized, but contingent liabilities are disclosed whenever the likelihood of loss is considered possible, including those for which the amount outflow of resources are not reasonably estimable.

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

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

**a) Current income taxes**

Since 2015, the Company has adopted the provisions of law 12.973/14 in order to determine its taxable profit for the year. This law superseded the Transition Tax Regime (*Regime Tributário de Transição-RTT*).

Current tax expense is computed based on taxable profit for the year, calculated using tax rates that have been enacted or substantively enacted at the end of the reporting period.

Current income taxes are offset when they relate to income taxes levied on the same taxable entity and by the same tax authority, when a legal right and intention to set off current tax assets and current tax liabilities exists.

**b) Deferred income taxes**

Deferred income taxes are recognized on temporary differences between the tax base of an asset or liability and its carrying amount. Deferred income tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences and carryforward of unused tax losses or credits to the extent that it is probable that taxable profit will be available against which those deductible temporary differences can be utilized. When there are insufficient taxable temporary differences relating to the same taxation authority and the same taxable entity, a deferred tax is recognized to the extent that it is probable that the entity will have sufficient taxable profit in future periods, based on projections approved by management and supported by the Company's Business and Management Plan.

Deferred tax assets and deferred tax liabilities are measured at the tax rates that have been enacted or substantively enacted by the end of the reporting period, and they are offset when they relate to income taxes levied on the same taxable entity, when a legally enforceable right to set off current tax assets and current tax liabilities exists and when the deferred tax assets and deferred tax liabilities relate to taxes levied by the same tax authority on the same taxable entity.

**4.17. Employee benefits (Post-Employment)**

Actuarial commitments related to post-employment defined benefit plans and health-care plans are recognized as liabilities in the statement of financial position based on actuarial calculations which are revised annually by an independent qualified actuary (updating for material changes in actuarial assumptions and estimates of expected future benefits), using the projected unit credit method, net of the fair value of plan assets, when applicable, from which the obligations are to be directly settled.

Actuarial assumptions include demographic assumptions, financial assumptions, medical costs estimates, historical data related to benefits paid and employee contributions.

Under the projected credit unit method, each period of service gives rise to an additional unit of benefit entitlement and each unit is measured separately to determine the final obligation.

Changes in the net defined benefit liability (asset) are recognized when they occur, as follows: i) service cost and net interest cost in the statement of income; and ii) remeasurements in other comprehensive income.

Service cost comprises: (i) current service cost, which is the increase in the present value of the defined benefit obligation resulting from employee service in the current period; (ii) past service cost, which is the change in the present value of the defined benefit obligation for employee service in prior periods, resulting from a plan amendment (the introduction, modification, or withdrawal of a defined benefit plan) or a curtailment (a significant reduction by the entity in the number of employees covered by a plan); and (iii) any gain or loss on settlement.

Net interest on the net defined benefit liability (asset) is the change during the period in the net defined benefit liability (asset) that arises from the passage of time.

Remeasurement of the net defined benefit liability (asset) is recognized in shareholders' equity, in other comprehensive income, and comprises: (i) actuarial gains and losses and; (ii) the return on plan assets, less interest income earned on these assets.

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

#### **4.18. Share capital and distributions to shareholders**

Share capital comprises common shares and preferred shares. Incremental costs directly attributable to the issue of new shares (share issuance costs) are presented (net of tax) in shareholders' equity as a deduction from the proceeds.

To the extent the Company proposes distributions to shareholders, such dividends and interest on capital are determined in accordance with the limits defined in the Brazilian Corporation Law and in the Company's bylaws.

Interest on capital is a form of dividend distribution, which is deductible for tax purposes in Brazil to the entity distributing interest on capital. Tax benefits from the deduction of interest on capital are recognized in the statement of income.

#### **4.19. Other comprehensive income**

Other comprehensive income includes: i) changes in fair value of available-for-sale financial instruments; ii) effective portion of cash flow hedge; iii) remeasurement of defined benefit plans; and iv) cumulative translation adjustment.

#### **4.20. Government grants**

A government grant is recognized when there is reasonable assurance that the grant will be received and the Company will comply with the conditions attached to the grant.

#### **4.21. Recognition of revenue, costs and expenses**

Revenue is recognized when it is probable that the economic benefits associated with the transaction will flow to the Company and the amount of revenue and the costs incurred or to be incurred in the transaction can be measured reliably. Revenue is measured at the fair value of the consideration received or receivable for products sold and services provided in the normal course of business, net of returns, discounts and sales taxes.

Revenues from the sale of crude oil and oil products, petrochemical products, natural gas, biofuels and other related products are recognized when the Company retains neither continuing managerial involvement nor effective control over the products sold and the significant risks and rewards of ownership have been transferred to the customer, which is usually when legal title passes to the customer, pursuant to the terms of the sales contract. Sales revenues from freight and other services provided are recognized based on the stage of completion of the transaction.

Finance income and expense mainly comprise interest income on financial investments and government bonds, interest expense on debt, gains or losses on marketable securities measured at fair value, as well as net foreign exchange and inflation indexation charges. Finance expense does not include borrowing costs which are capitalized as part of the costs of these assets.

Revenue, costs and expenses are recognized on the accrual basis.

## **5. Critical accounting policies: key estimates and judgments**

The preparation of the consolidated financial information requires the use of estimates and judgments for certain transactions and their impacts on assets, liabilities, income and expenses. The assumptions are based on past transactions and other relevant information and are periodically reviewed by management, although the actual results could differ from these estimates.

Information about those areas that require the most judgment or involve a higher degree of complexity in the application of the accounting practices and that could materially affect the Company's financial condition and results of operations is set out as follows:

### **5.1. Oil and gas reserves**

Oil and gas reserves are estimated based on economic, geological and engineering information, such as well logs, pressure data and drilling fluid sample data and are used as the basis for calculating unit-of-production depreciation, depletion and amortization rates, impairment testing, decommissioning costs estimates and for projections of high probable future exports subject to cash flow hedge.

These estimates require the application of judgment and are reviewed at least annually based on a re-evaluation of already available geological, reservoir or production data and new geological, reservoir or production data, as well as changes in prices and costs that are used in the estimation of reserves. Revisions can also result from significant changes in the Company's development strategy or in the production capacity.

The Company determines its oil and gas reserves both pursuant to the U.S. Securities and Exchange Commission - SEC and the ANP/SPE (Brazilian Agency of Petroleum, Natural Gas and Biofuels / Society of Petroleum Engineers) criteria. The main differences between the two criteria are: selling price of crude oil (ANP/SPE establishes the use of the Company's forecasted price, while SEC determines the use of an average price considering each first day of the last 12 months); concession period (ANP permission for the use of reserve quantities after the concession period). Additionally, pursuant to the SEC criteria, only proved reserves are determined, while proved and unproved reserves are determined pursuant to the ANP/SPE criteria.

According to the definitions prescribed by the SEC, proved oil and gas reserves are the estimated quantities which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions (i.e., prices and costs as of the date the estimate is made). Proved reserves are subdivided into developed and undeveloped reserves.

Proved developed oil and gas reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods.

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

Detailed information on reserves is presented as supplementary information.

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

Depreciation, depletion and amortization are measured based on estimates of reserves prepared by the Company's technicians in a manner consistent with SEC definitions. Reviews to the Company's proved developed and undeveloped reserves impact prospectively the amounts of depreciation, depletion and amortization recognized in the statement of income and the carrying amounts of oil and gas properties assets.

Therefore, considering all other variables being constant, a decrease in estimated proved reserves would increase, prospectively, depreciation, depletion and amortization expense, while an increase in reserves would reduce depreciation, depletion and amortization.

Notes 4.8 and 12 provide more detailed information on depreciation, amortization and depletion.

**b) Impacts of oil and gas reserves on impairment testing**

The Company assesses the recoverability of the carrying amounts of oil and gas exploration and development assets based on their value in use, as defined in note 4.10. In general, analyses are based on proved reserves and probable reserves pursuant to the ANP/SPE definitions.

**c) Impacts of oil and gas reserves on decommissioning costs estimates**

The timing of abandonment and dismantling of on shore and offshore areas is based on the length of reserves depletion, in accordance with ANP/SPE definitions. Therefore, the review of the timing of reserves depletion may impact the provision for decommissioning cost estimates.

**d) Impacts of oil and gas reserves on highly probable future exports subject to cash flow hedge accounting**

The Company estimates highly probable future exports in accordance with future exports forecasted in the scope of its Business and Management Plan - BMP and its Strategic Plan projections, which are driven by proved and probable reserves estimates. Reviews in such reserves may impact future exports forecasts and, consequently, hedge relationship designations may also be impacted. For example, whenever future exports for which a hedging relationship has been designated are no longer considered as highly probable, the Company revokes this designation and the cumulative foreign exchange gains or losses recognized in other comprehensive income remain in shareholders' equity until the forecast exports occur. Additionally, if the future exports are also no longer expected to occur, the cumulative foreign exchange recognized in other comprehensive income is immediately recycled from shareholders' equity to the statement of income.

**5.2. Main assumptions for impairment testing**

Impairment testing involves uncertainties mainly related to its key assumptions: average Brent prices and Real/U.S. dollar average exchange rate. These assumptions are relevant to virtually all of the Company's business segments and a significant number of interdependent variables are derived from these key assumptions and there is a high degree of complexity in their application in determining value in use for impairment tests.

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

Projections relating to the key assumptions are derived from the Business and Management Plan for the first five years and consistent with the Strategic Plan for the following years. These assumptions are consistent with market evidence, such as independent macro-economic forecasts, industry commentators and experts. Back testing analysis and feedback process in order to continually improve forecast techniques are also performed.

The Company's oil price forecast model is based on a nonlinear relationship between variables reflecting market supply and demand fundamentals. This model also takes into account other relevant factors, such as historical idle capacity, industry costs, oil and gas production forecasted by specialized firms, the relationship between the oil price and the U.S. dollar exchange rate, as well as the impact of OPEC on the oil market.

Changes in the economic environment may result in changing assumptions and, consequently, the recognition of impairment charges on certain assets or CGUs. For example, the Brent price directly impacts the Company's sales revenue and refining margins, while the Real/U.S. dollar exchange rate mainly impacts our capital and operating expenditures.

Changes in the economic and political environment may also result in higher country risk projections that would increase discount rates for impairment testing.

In addition, changes in reserve volumes, production curve expectations and lifting costs could trigger the need for impairment assessment, as well as capital expenditure decisions, which are also affected by the Company's plan to reduce its leverage, may result in postponement or termination of projects, reducing their economic feasibility.

The recoverable amount of certain assets was not substantially in excess of their carrying amounts and, therefore, it is reasonably possible that outcomes in future periods that are different from the current assumptions may result in the recognition of additional impairment charges on these assets, as described in note 14.1.1.

Further information on impairment testing is set out in notes 4.10, 5.3 and 14.

### **5.3. Identifying cash-generating units for impairment testing**

Identifying cash-generating units (CGUs) requires management assumptions and judgment, based on the Company's business and management model.

Changes in the aggregation of assets into Cash-Generating units (CGUs) could result in additional impairment charges or reversals. Such changes may occur when investment, strategic or operational factors result in changes in the interdependencies between those assets and, consequently, alter the aggregation of assets into CGUs.

The assumptions set out below have been consistently applied by the Company:

#### **Exploration and Production CGUs:**

i) Crude oil and natural gas producing properties CGU: comprises exploration and development assets related to crude oil and natural gas fields and groups of fields in Brazil and abroad. In September 2016, the aggregations of assets for the Fazenda Cedro and Lagoa Suruaca groups, both located in Espírito Santo, were reviewed and impairment tests were run separately for those individual fields due to the discontinuation of a relevant shared infrastructure in the production process, as approved in the 2017-2021 BMP; and

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

**Refining, transportation and marketing CGUs:**

i) Downstream CGU: comprises refineries and associated assets, terminals and pipelines, as well as logistics assets operated by Transpetro, with a combined and centralized operation of logistical and refining assets in Brazil. These assets are managed with a common goal of achieving efficiency, profitability and strategic value long term on a nationwide basis. They are not operated for the generation of profit by asset/location. The operational planning is made in a centralized manner and these assets are not managed, measured or evaluated by their individual results. The refineries do not have autonomy to choose the oil to be processed, the mix of oil products to produce, the markets in which these products will be traded, which amounts will be exported, which intermediaries will be received and to decide the sales prices of oil products. The operational decisions are analyzed through an integrated model of operational planning for market supply. This model evaluates the solutions to supply the market considering all the options for production, importing, exporting, logistics and inventories seeking a comprehensive optimum of Petrobras and not the profit of each unit. The decision regarding a new investment is not based on the profitability of the project for the asset where it will be installed, but for the Petrobras Group. The model in which the entire planning is based, used in the studies of technical and economic feasibility of new investments in refining, may, in its indications, allocate a lower economic kind of oil to a certain refinery or define a lower economic mix of products to it, or even force it to supply more distant markets (area of influence), leading it to operate with reduced margins if seen individually, in case this is the best for the integrated system as a whole. Pipelines and terminals are an integral part and interdependent portion of the refining assets, required to supply the market.

ii) CGU Comperj – comprises assets under construction of the first refining unit of Petrochemical Complex of Rio de Janeiro. In 2014, the Company decided to postpone this project for an extended period of time;

iii) CGU Second Refining Unit of RNEST – comprises assets under construction of second refining unit of Abreu e Lima refinery. In 2014, the Company decided to postpone this project for an extended period of time;

iv) Petrochemical CGU: This CGU was composed of the *Petroquímica Suape* and *Citepe* petrochemical plants until November 2016. In December 2016, the Company's Board of Directors approved the sale of these plants and, consequently, these assets were not aggregated as a CGU as of December 31, 2016, pursuant to their reclassification to assets held for sale.

v) Transportation CGU: comprises assets relating to Transpetro's fleet of vessels. Recurrent delays in the construction of support vessels for transporting ethanol over the Tietê River led the management of the wholly-owned subsidiary Transpetro, in September 2016, to terminate the construction contracts for a new group of support vessels in the scope of Hidrovias project. As a result, this project was postponed and its completed assets were reviewed and tested for impairment separately;

vi) SIX CGU: shale processing plant; and

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

**Gas & Power CGUs:**

i) Natural gas CGU: comprises natural gas pipelines, natural gas processing plants and fertilizers and nitrogen products plants other than the Fertilizer Plant UFN III, which is assessed for impairment separately. In September 2016, the Board of Directors approved the disposal of interest in the subsidiary NTS and, as a consequence, its pipelines were removed from this CGU.

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

iii) Power CGU: comprises the thermoelectric power generation plants. In December 2016, the Company's Board of Directors approved the strategic alliance with Total that, among other matters, outlines the share of 50% interests in the power plants Celso Furtado and Rômulo Almeida. Accordingly, these assets were removed from this CGU; and

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

**Distribution CGU:**

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

**Biofuels CGUs:**

An integrated unit of biodiesel plants defined based on the production planning and operation process, that takes into consideration domestic market conditions, the production capacity of each plant, as well as the results of biofuels auctions and raw materials supply. Due to the decision to discontinue operations of Quixadá Biofuel Plant, as approved by the Board of Directors of the subsidiary Petrobras Biocombustível in September 2016, impairment test for this Biofuel Plant was run separately.

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

#### **5.4. Pension and other post-retirement benefits**

The actuarial obligations and net expenses related to defined benefit pension and health care post-retirement plans are computed based on several financial and demographic assumptions, of which the most significant are:

Discount rate: comprises the projected future inflation in addition to an equivalent real interest rate that matches the duration of the pension and health care obligations with the future yield curve of long-term Brazilian Government Bonds; and

Medical costs: comprise the projected growth rates based on per capita health care benefits paid over the last five years, which are used as a basis for projections, converged to the general price inflation index within 30 years.

These and other estimates are reviewed at least annually and may differ materially from actual results due to changing market and financial conditions, as well as actual results of actuarial assumptions.

The sensitivity analysis of discount rates and changes in medical costs as well as additional information about actuarial assumptions are set out in note 22.

#### **5.5. Estimates related to contingencies and legal proceedings**

The Company is a defendant in numerous legal proceedings involving tax, civil, labor, corporate and environmental issues arising from the normal course of its business for which it estimates the amounts of the obligations and the probability that an outflow of resources will be required. Those estimates are based on legal counsel and management's best estimates.

Note 30 provides further detailed information about contingencies and legal proceedings.

## 5.6. Decommissioning costs estimates

The Company has legal and constructive obligations to remove equipment and restore onshore and offshore areas at the end of operations at production sites. Its most significant asset removal obligations involve removal and disposal of offshore oil and gas production facilities in Brazil and abroad. Estimates of costs for future environmental cleanup and remediation activities are based on current information about costs and expected plans for remediation.

These estimates require performing complex calculations that involve significant judgment since: i) the obligations are long-term; ii) the contracts and regulations contain subjective definitions of the removal and remediation practices and criteria involved when the events actually occur; and iii) asset removal technologies and costs are constantly changing, along with regulations, environmental, safety and public relations considerations.

The Company is constantly conducting studies to incorporate technologies and procedures to optimize the operations of abandonment, considering industry best practices. However, the timing and amounts of future cash flows are subject to significant uncertainty.

Notes 4.14 and 20 provide further detailed information about the decommissioning provisions.

## 5.7. Deferred income taxes

The recognition of deferred tax liabilities and deferred tax assets involves significant estimates and judgments by the Company. Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which a deductible temporary difference can be utilized or it is probable that the entity will have sufficient taxable profit in future periods. In evaluating whether it will have sufficient taxable profit in future periods to support the recognition of deferred tax assets, the Company uses future projections and estimates based on its Business and Management Plan (BMP), which is approved by the Board of Directors annually. Future taxable profits projections are mainly based on the following assumptions: i) Brent crude oil prices; ii) foreign exchange rates; and iii) the Company's projected net finance expenses (income).

Changes in deferred tax assets and liabilities are presented in note 21.6.

## 5.8. Cash flow hedge accounting involving the Company's future exports

The Company determines its future exports as "highly probable future exports" based on its Business and Management Plan – BMP and its Strategic Plan. The highly probable future exports are determined by a percentage of projected exports revenue over the mid and long term, taking into account the Company's operational and capital expenditure optimization model which considers future uncertainties, such as oil price and production, as well as products demand. Future exports forecasts are reviewed whenever the Company reviews its BMP and Strategic Plan assumptions. The approach for determining exports as highly probable future exports is reviewed annually, at least.

See note 33.2 for more detailed information about cash flow hedge accounting and a sensitivity analysis of the cash flow hedge involving future exports.

## 5.9. Write-off – overpayments incorrectly capitalized

As described in note 3, in the third quarter of 2014, the Company wrote off US\$2,527 of capitalized costs representing the estimated amounts that Petrobras had overpaid for the acquisition of property, plant and equipment.

To account for these overpayments, the Company developed an estimation methodology, as set out in note 3. Petrobras acknowledges the degree of uncertainty involved in the estimation methodology and continues to monitor the ongoing investigations and the availability of other information concerning the amounts it may have overpaid in the context of the payment scheme. If reliable information becomes available that indicates with sufficient precision that the Company's estimate should be modified, it will evaluate materiality and, if so, adjust.

However, as previously discussed, the Company believes it has used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized and there is no evidence that would indicate the possibility of a material change in the amounts written-off.

### **5.10. Allowance for impairment of trade receivables**

Management continuously assesses whether there is objective evidence that trade receivables are impaired and recognizes allowances for impairment of trade receivables to cover losses. Such evidence includes insolvency, defaults, judicial recovery claims, a significant probability of a debtor filing for bankruptcy and others.

See note 8 for more detailed information about allowance for impairment of trade receivables.

## 6. New standards and interpretations

### a) IASB - International Accounting Standards Board

The main standards issued by the IASB and not effective as of December 31, 2016 are set out below. The Company did not adopt those standards early.

Standards	Brief Description	Effective Date
IFRS 15 – “Revenue from Contracts with Customers”	<p>Sets out requirements for recognition, measurement and disclosure of revenue from contracts with customers</p> <p>According to IFRS 15, revenue is recognized when a customer obtains control of a good or service sold. It changes the current model, based on which revenue is recognized when significant risks and rewards of ownership are transferred. In addition IFRS 15 provides guidance for revenue recognition in more complex cases. Upon adoption of the standard, certain freight services may be identified as a distinct performance obligation from the related products which may change its timing of revenue recognition. The company continues to evaluate the effect of the standard on its financial statements.</p>	January 1, 2018
IFRS 9 - “Financial Instruments”	<p>Establishes a new model of financial assets classification, based on their cash flow characteristics and entity's business model objective for them. This standard also changes the assumptions of financial assets impairment recognition based on expected losses and adds new requirements regarding hedge accounting.</p> <p>The Company continues to evaluate the effect of the standard on its financial statements, such as possible changes when classifying and measuring its financial assets based on their contractual cash flows and the business model in which they are held. The Company is also assessing effects on the recoverable amount of its financial assets that may arise from the expected losses approach.</p> <p>The Company also qualifies certain transaction for cash flow hedge accounting and the evaluation of effects on this accounting policy is ongoing.</p>	January 1, 2018
IFRIC 22 – “Foreign Currency Transactions and Advance Consideration”	<p>Establishes that the date of the transaction, for the purpose of determining the exchange rate in foreign currency transactions, is the date of initial recognition of the non-monetary prepayment asset or deferred income liability.</p> <p>The company continues to evaluate the effect of the standard on its financial statements.</p>	January 1, 2018

### IFRS 16 – “Leases”

On January 13, 2016, the IASB issued IFRS 16 “Leases”, which will become effective for the financial report period beginning on or after January 1, 2019, superseding IAS 17 “Leases” and related interpretations.

IFRS 16 provides requirements for leases identification, recognition, measurement, presentation and disclosure according to the lessee and lessor perspectives.

Among the changes for lessees, IFRS 16 eliminates classification between financial and operating leases, required by IAS 17. Therefore, it will be a single model in which all leases will result in the recognition of assets related to the use of rights of assets leased. If the payments provided for in the commercial lease are due over time, financial liabilities should be recognized as well.

For lessors, IFRS 16 will maintain the classification as either financial or operating leases as required by IAS 17. IFRS 16 will not substantially change the way leases will be accounted for lessors when compared to IAS 17.

The Company is assessing the impacts of this new standard and believes that the adoption of IFRS 16 may cause a significant increase in assets and liabilities presented in its consolidated statement of financial position. Accordingly, the Company may also need to negotiate some covenants in its loan agreements with BNDES – (Brazilian Development Bank) when a reliable estimate of these impacts can be made.

## 7. Cash and cash equivalents and Marketable securities

### Cash and cash equivalents

	12.31.2016	12.31.2015
Cash at bank and in hand	591	808
Short-term financial investments		
- In Brazil		
Single-member funds (Interbank Deposit) and other short-term deposits	1,180	922
Other investment funds	131	11
	1,311	933
- Abroad		
Time deposits	3,085	13,276
Automatic investing accounts and interest checking accounts	9,780	8,828
U.S. Treasury bills	5,217	-
Other financial investments	1,221	1,213
	19,303	23,317
Total short-term financial investments	20,614	24,250
<b>Total cash and cash equivalents</b>	<b>21,205</b>	<b>25,058</b>

Short-term financial investments in Brazil comprise investment in funds, with maturities of three months or less, holding Brazilian Federal Government Bonds. Short-term financial investments abroad comprise time deposits with maturities of three months or less, highly-liquid automatic investing accounts, interest checking accounts and other short-term fixed income instruments, including U.S. Treasury bills.

### Marketable securities

	12.31.2016			12.31.2015		
	In Brazil	Abroad	Total	In Brazil	Abroad	Total
Trading securities	784	-	784	779	-	779
Available-for-sale securities	-	-	-	5	1	6
Held-to-maturity securities	90	-	90	69	14	83
<b>Total</b>	<b>874</b>	<b>-</b>	<b>874</b>	<b>853</b>	<b>15</b>	<b>868</b>
Current	784	-	784	779	1	780
Non-current	90	-	90	74	14	88

Trading securities refer mainly to investments in Brazilian Federal Government Bonds. These financial investments have maturities of more than three months and are mostly classified as current assets due to their maturity or the expectation of their realization in the short term.

## 8. Trade and other receivables

### 8.1. Trade and other receivables, net

	12.31.2016	12.31.2015
Trade receivables		
Third parties	6,499	7,262
Related parties		
Investees (note 19.1)	555	533
Receivables from the electricity sector (note 8.4)	4,922	3,415
Petroleum and alcohol accounts -receivables from Brazilian Government (note 19.2)	268	219
Other receivables	2,502	1,699
	14,746	13,128
Allowance for impairment of trade and other receivables	(5,426)	(3,656)
<b>Total</b>	<b>9,320</b>	<b>9,472</b>
Current	4,769	5,554
Non-current	4,551	3,918

### 8.2. Trade receivables overdue - Third parties

	12.31.2016	12.31.2015
Up to 3 months	403	315
From 3 to 6 months	67	180
From 6 to 12 months	411	803
More than 12 months	2,650	1,735
<b>Total</b>	<b>3,531</b>	<b>3,033</b>

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

	12.31.2016	12.31.2015
Opening balance	3,656	3,372
Additions (*)	1,325	2,060
Write-offs	(9)	(17)
Reversals	(171)	(788)
Cumulative translation adjustment	625	(971)
<b>Closing balance</b>	<b>5,426</b>	<b>3,656</b>
Current	2,010	1,690
Non-current	3,416	1,966

(\*) In 2016, includes additions mainly related to: US\$ 345 from electricity sector and US\$ 621 from losses on advances to suppliers, debts assumptions and termination costs relating to agreement with Ecovix shipyard. In 2015, includes additions mainly related to electricity sector, US\$ 1,218 and losses on fines executed amounting to US\$ 374.

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

	As of 12.31.2015	Sales	Amounts received	Transfers (* <sup>1</sup> )	Allowance for impairment		Inflation indexation	CTA	As of 31.12.2016
					Recognition , net of reversals	Transfers (* <sup>1</sup> )			
<b>Related parties (Eletrobras Group)</b>									
AME (**)	1,996	490	(736)	708	(304)	(358)	277	402	2,475
Ceron (***)	285	48	(65)	-	-	-	44	57	369
Others	76	90	(99)	-	(3)	-	13	18	95
<b>Subtotal</b>	<b>2,357</b>	<b>628</b>	<b>(900)</b>	<b>708</b>	<b>(307)</b>	<b>(358)</b>	<b>334</b>	<b>477</b>	<b>2,939</b>
<b>Third parties</b>									
Cigás	143	669	(307)	(708)	(39)	358	-	27	143
Others	43	323	(363)	-	1	-	-	-	4
<b>Subtotal</b>	<b>186</b>	<b>992</b>	<b>(670)</b>	<b>(708)</b>	<b>(38)</b>	<b>358</b>	<b>-</b>	<b>27</b>	<b>147</b>
<b>Trade receivables, net</b>	<b>2,543</b>	<b>1,620</b>	<b>(1,570)</b>	<b>-</b>	<b>(345)</b>	<b>-</b>	<b>334</b>	<b>504</b>	<b>3,086</b>
<b>Trade receivables - Eletrobras Group</b>									
	3,415	628	(900)	708	-	-	334	737	4,922
(-) Allowance for impairment	(1,058)	-	-	-	(307)	(358)	-	(260)	(1,983)
<b>Subtotal</b>	<b>2,357</b>	<b>628</b>	<b>(900)</b>	<b>708</b>	<b>(307)</b>	<b>(358)</b>	<b>334</b>	<b>477</b>	<b>2,939</b>
<b>Trade receivables - Third parties</b>									
	773	992	(670)	(708)	-	-	-	128	515
(-) Allowance for impairment	(587)	-	-	-	(38)	358	-	(101)	(368)
<b>Subtotal</b>	<b>186</b>	<b>992</b>	<b>(670)</b>	<b>(708)</b>	<b>(38)</b>	<b>358</b>	<b>-</b>	<b>27</b>	<b>147</b>
<b>Trade receivables - Total</b>									
	4,188	1,620	(1,570)	-	-	-	334	865	5,437
(-) Allowance for impairment	(1,645)	-	-	-	(345)	-	-	(361)	(2,351)
<b>Trade receivables, net</b>	<b>2,543</b>	<b>1,620</b>	<b>(1,570)</b>	<b>-</b>	<b>(345)</b>	<b>-</b>	<b>334</b>	<b>504</b>	<b>3,086</b>

(\*<sup>1</sup>) Transfer of overdue receivables from Cigás to AME, pursuant to the purchase and sale agreement of natural gas (upstream and downstream) entered into by Petrobras, Cigás and AME.

(\*\*) Amazonas Distribuidora de Energia

(\*\*\*) Centrais Elétricas do Norte

The Company supplies fuel oil, natural gas, and other products to entities that operate in the isolated electricity system in the northern region of Brazil, such as thermoelectric power plants controlled by Eletrobras, state-owned natural gas distribution companies and independent electricity producers (*Produtores Independentes de Energia – PIE*). The isolated electricity system provides the public service of electricity distribution in the northern region of Brazil, as the Brazilian National Interconnected Power Grid (*Sistema Interligado Nacional*) has not yet met the demand for electricity due to technical or economic reasons.

A significant portion of the funds used by those companies to pay for products supplied by the Company came from the Fuel Consumption Account (*Conta de Consumo de Combustível – CCC*), which provides funds to cover a portion of the costs related to the supply of fuel to thermoelectric power plants located in the northern region of Brazil (operating in the isolated electricity system). However, as a result of changes in the CCC regulations over time, principally relating to the Provisional Measure 579/2012 which significantly changed the sources of funds that were used to cover the cost of electricity generated in the Isolated Electricity System, funds transferred from the CCC to these electricity companies have not been sufficient for them to meet their financial obligations and, as a result, some have not been able to pay the total amount for the products supplied by the Company, increasing the default rate of those customers to the Company.

The Company intensified negotiations with the state-owned natural gas distribution companies, the independent electricity producers (PIEs), other private companies and entities controlled by Eletrobras. As a result, on December 31, 2014, the Company entered into a debt acknowledgement agreement with subsidiaries of Eletrobras with respect to the balance of its receivables as of November 30, 2014. Eletrobras acknowledged it owed US\$ 2,202 to the Company, of which US\$ 1,889 were collateralized by payables from the Brazilian Energy Development Account (Conta de Desenvolvimento Energético - CDE) to the CCC. This amount has been adjusted by the Selic interest rate (Brazilian short-term interest rate) on a monthly basis. Under this agreement, the first of 120 monthly installments was paid in February 2015 and these payments have continued.

In order to mitigate an increase in default rates, on September 1, 2015 the Brazilian National Electricity Agency (Agência Nacional de Energia Elétrica - ANEEL) enacted the Normative Instruction 679 enabling the Company to receive funds directly from the CCC, as these funds would be paid directly from the CCC for products supplied in the prior month with a limit of 75% of the average payments made by the CCC in the previous three months.

The Company had expected that the abovementioned rule would have strengthened the financial situation of the companies in the electricity sector. However, this has not occurred and the level of these defaults increased. Accordingly, in 2015 the Company recognized US\$ 564 as allowance for impairment of trade receivables (net of reversals) with respect to uncollateralized receivables outstanding as of December 31, 2015.

In 2016, the Company recognized an allowance for impairment of trade receivables (net of reversals) in the amount of US\$ 345 mainly relating to new supplies of: (i) fuel oil by legal enforcement (injunction) in the first quarter of 2016; and (ii) natural gas. Accordingly, the Company has adopted the following measures:

- judicial collection of overdue receivables with respect to natural gas supplied to Amazonas Distribuidora de Energia (AME), Eletrobras and Cigás;
- judicial collection of overdue receivables with respect to fuel oil supplied by the wholly-owned subsidiary BR Distribuidora to companies of Eletrobras Group (Amazonas, Acre, Rondônia and Roraima);
- partial suspension of gas supply;
- suspension of fuel oil supply on credit, except when legally enforced; and
- registration of entities controlled by Eletrobras as delinquent companies in the Brazilian Central Bank files and registration of AME as a delinquent company in ANEEL files.

Excluding the effects of foreign exchange translation, the amount of trade receivables from the electricity sector remained relatively flat mainly due to contractual clauses of amortization established in the debt acknowledgement agreement, which determine the payment of 15% of the amount of renegotiated debt within 36 months and the remaining 85% to be paid in 84 installments beginning in January 2018. Therefore, the Company expects the balance of trade receivables from the electricity sector will decrease from 2018 onwards as the amounts to be received will be higher than sales and inflation indexation on debt acknowledgement agreements.

## 9. Inventories

	12.31.2016	12.31.2015
Crude oil	3,524	2,895
Oil products	2,649	2,206
Intermediate products	700	612
Natural gas and LNG (*)	134	253
Biofuels	211	158
Fertilizers	26	61
Total products	7,244	6,185
Materials, supplies and others	1,243	1,272
<b>Total</b>	<b>8,487</b>	<b>7,457</b>
Current	8,475	7,441
Non-current	12	16

(\*) Liquid Natural Gas

Inventories are presented net of a US\$ 28 allowance reducing inventories to net realizable value (US\$ 155 as of December 31, 2015), mainly due to changes in international prices of crude oil and oil products. In 2016, the Company recognized as cost of sales a US\$ 343 allowance charge (net of reversals) reducing inventories to net realizable value (US\$ 430 in 2015).

A portion of the crude oil and/or oil products inventories have been pledged as security for the Terms of Financial Commitment (TFC) signed by Petrobras and Petros in the amount of US\$ 1,979 (US\$ 1,719 as of December 31, 2015), as set out in note 22.1.

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

### 10.1. Disposal of Assets

#### Termination of the contract for the sale of Bijupirá and Salema fields (BJS)

On February 26, 2016, Petro Rio S.A. terminated the contracts signed with the Company on July 1, 2015, for the sale of 20% interest in Bijupirá and Salema concessions (BJS) and in the Dutch joint operation BJS Oil Operations B.V. (BJSOO BV). Accordingly, the amounts relating to these fields were reclassified from assets and liabilities held for sale back to property, plant and equipment (US\$ 148) and to provision for decommissioning costs (US\$ 126, respectively).

Due to the aforementioned reclassification, the respective assets were depreciated based on their historical data and their recoverable amounts were reassessed. As a result, the Company recognized, in the first quarter of 2016, an impairment loss as set out in note 14.1.

#### Sale of Petrobras Argentina

On May 12, 2016, the Board of Directors approved the disposal of the Company's entire 67.19% interest in Petrobras Argentina - PESA, owned through the subsidiary Petrobras Participaciones S.L. ("PPSL"), to Pampa Energía.

On July 27, 2016, the amount of US\$ 897 was disbursed by Pampa Energia and, on December 14, 2016, additional US\$ 3 was paid due to contractual clauses. Accordingly, the Company recognized a gain of US\$ 207 on this sale, as other expenses, net. In addition, the amount of US\$ 1,428 was reclassified from shareholders' equity to other expenses within the income statement, reflecting the reclassification of cumulative translation adjustment resulting from the depreciation of Argentinian Peso against the U.S Dollar from the acquisition of this investment to its disposal (see note 23.4).

On October 28, 2016, as expected, the Company concluded this transaction with the acquisition of 33.6% of the concession of Rio Neuquén in Argentina and 100% of Colpa Caranda asset in Bolivia for the amount of US\$ 56, after adjustments relating to Colpa Caranda asset.

#### **Disposal of distribution assets in Chile**

On July 22, 2016, the Company signed a sale and purchase agreement with the Southern Cross Group for the sale of 100% of Petrobras Chile Distribución Ltda (PCD), held through Petrobras Caribe Ltda.

Pursuant to this disposal approved by the Board of Directors, the respective assets were classified as held for sale and measured at their estimated exit price and, as a result, the Company recognized impairment charges as set out in note 14.2.

This transaction was concluded on January 4, 2017 and the net proceeds from this deal were US\$ 470, of which US\$ 90 were received via distribution of dividends after taxes on December 9, 2016 and the remaining US\$ 380 were paid by Southern Cross in the transaction closing.

#### **Disposal of interest in exploratory block BM-S-8**

On July 28, 2016 the Board of Directors of Petrobras approved the disposal of the Company's 66% interest in the exploratory block BM – S-8 to Statoil Brasil Óleo e Gás Ltda, which includes the Carcará area located in the pre-salt layer of Santos Basin, for the amount of US\$ 2.5 billion.

The Brazilian Antitrust Regulator (*Conselho Administrativo de Defesa Econômica – CADE*) and the Brazilian Agency of Petroleum, Natural Gas and Biofuels (*Agência Nacional de Petróleo, Gás Natural e Biocombustíveis – ANP*) approved this transaction on September 8, 2016 and November 10, 2016, respectively.

After performing all conditions precedent established in the agreement, on November 22, 2016 the Company received the first installment in the amount of US\$ 1.25 billion, corresponding to 50% of the transaction and, as a result of the transaction closing, the Company recognized a gain in the amount of US\$ 881 as other expenses, net. The remaining amount will be recognized based on two contingent payments relating to future events: the bid for an extended adjacent area of the Carcará reservoir (US\$ 300) and the signing of the unitization agreement (US\$ 950).

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

After a corporate restructuring intended to concentrate the transportation assets of the southeastern region in NTS (Rio de Janeiro, Minas Gerais and São Paulo), the Company's Board of Directors approved on September 22, 2016 the sale of 90% interest in Nova Transportadora do Sudeste (NTS) to Brookfield Infrastructure Partners (BIP) and its affiliates, through a Private Equity Investment Fund (FIP) whose other shareholders are British Columbia Investment Management Corporation (BCIMC), CIC Capital Corporation (wholly-owned subsidiary of China Investment Corporation - CIC) and GIC Private Limited (GIC).

The following changes in organizational structure occurred as part of this process:

- The Extraordinary General Meeting of NTS, held on October 21, 2016, approved an increase to its share capital in the amount of US\$ 711, based on an independent expert report dated on October 14, 2016, through net assets of the Company's subsidiary TAG. This capital increase approval depended on ANP permission through the issuance of Permissions of Provisional Operation (Autorizações de Operação Provisórias);
- The Extraordinary General Meeting of the TAG, held on October 21, 2016, approved a reduction to its share capital, via capital surplus, in the amount of its investment in NTS (US\$ 800) and transfer of all its interest in NTS to Petrobras, as occurred on October 24, 2016 pursuant to the Permissions of Provisional Operation (Autorizações de Operação Provisórias), as occurred on October 24, 2016.

The Shareholder's General Meeting held on November 30, 2016 approved this transaction in the amount of US\$ 5.19 billion, of which US\$ 3.55 billion correspond to 90% interest in NTS and US\$ 1.64 billion correspond to the NTS debt settlement with the Company's wholly-owned subsidiary PGT. FIP will subscribe convertible debentures issued by NTS for the replacement of this debt. The first installment, in the amount of US\$ 4.34 billion will be paid at the closing of the transaction, and the remaining amount (US\$ 850) will be paid in the fifth year, bearing annual interests at a fixed rate, as established in the purchase and sale agreement.

This transaction prescribes the maintenance of charge capacity and also the same terms of five Firm Gas Transportation Agreements including 100% ship-or-pay clauses. These agreements have terms of 20 years from 2016 and their rates are indexed to the Brazilian General Market Price Index (IGP-M) and regulated by Brazilian Petroleum, Natural Gas and Biofuels Agency (ANP).

The completion of the transaction is subject to certain customary conditions precedent, including approval by relevant regulators. Thus, the related assets and liabilities were classified as held for sale as of December 31, 2016.

On February 10, 2017, the federal court in the state of Sergipe determined the interruption of this disposal by ordering an injunction based on a civil action. However, on March 9, 2017, this injunction was dismissed, enabling the progress of this transaction.

#### **Disposal of Nansei Sekiyu (NSS)**

On October 17, 2016 the Company's Board of Directors approved the disposal of the Company's interests in Nansei Sekiyu Kabushiki Kaisha (NSS) to Taiyo Oil Company ("Taiyo").

On December 28, 2016, this disposal was closed after the fulfillment of all conditions precedent in the sales and purchase agreement. Accordingly, Taiyo disbursed US\$ 165 to the Company and, as a result, the Company recognized as other expenses, net a gain on this transaction amounting to US\$ 132. This transaction is still subject to price adjustments.

In addition, a loss of US\$ 29 was reclassified from shareholders equity to other expenses within the income statement reflecting the reclassification of cumulative translation adjustment resulting from the depreciation of Japanese Yen against the U.S Dollar from the time of the acquisition of this investment to its disposal (see note 23.4).

#### **Disposal of Liquigás**

On November 17, 2016 the Company's Board of Directors approved the disposal of its wholly-owned subsidiary Liquigás Distribuidora S.A. to Companhia Ultragas S.A., a subsidiary of Ultrapar Participações S.A.

At December 31, 2016, the related assets and liabilities were classified as held for sale as conditions precedent were not yet performed, such as the transaction approval at Shareholders' Meetings of Ultrapar and Petrobras, as well as the approval of the Brazilian Antitrust Regulator (CADE).

On January 31, 2017, the sale of Petrobras's entire interests in Liquigás in the amount of US\$ 828 was approved at Petrobras' Shareholders' Meeting.

#### **Disposal of Guarani**

On December 28, 2016, the Company's wholly-owned subsidiary Petrobras Biocombustível S.A. (PBIO) disposed of its interests in the associate Guarani S.A. (45,97% of share capital) to Tereos Participations SAS, an entity of the French group Tereos.

As of December 31, 2016, this investment was classified as held for sale as this transaction was still subject to certain conditions precedent. As a result, the Company recognized an impairment charge in the amount of US\$ 67 accounted for within results in equity-accounted investments.

On February 3, 2017 this transaction was concluded pursuant to the payment of US\$ 203, after all conditions precedent were performed by Tereos Participations SAS.

**Disposal of Suape and Citepe petrochemical plants**

On December 28, 2016, the Company's Board of Directors approved the disposal of its interests in the wholly-owned subsidiaries Companhia Petroquímica de Pernambuco (PetroquímicaSuape) and Companhia Integrada Têxtil de Pernambuco (Citepe) to Grupo Petrotekem S.A. de C.V. and Dak Americas Exterior, S.L., both subsidiaries of Alpek, S.A.B. de C.V., which is a company from Grupo Alfa S.A.B. de C.V. (a Mexican public company), in the amount of US\$ 385, which will be totally disbursed pursuant to the transaction closing. This amount is still subject to adjustments relating to working capital, net debt and recoverable taxes.

This transaction closing is subject to the approval at Petrobras Shareholder's General Meeting, Grupo Alfa's Board of Directors and Brazilian Antitrust Regulator (CADE), as well as to the fulfillment of certain other customary conditions precedent.

As the conditions precedent to this transaction were not performed at December 31, 2016, the respective assets were reclassified as held for sale and measured at their estimated exit price. As a result, the Company recognized impairment losses as described in notes 14.1 and 14.2.

On January 31, 2017, the federal court in the state of Sergipe determined the interruption of this disposal by ordering an injunction based on in a civil action. However, on February 22, 2017, this injunction was dismissed, enabling the progress of this transaction.

**Strategic alliance with Total**

On December 21, 2016, the Company entered into a master agreement with Total, in connection with the Strategic Alliance established in the Memorandum of Understanding signed on October 24, 2016. Accordingly, certain assets were classified as held for sale at December 31, 2016 due to the share of interests established in this agreement, as described below:

- Transfer of the Company's 22.5% stake in the concession area named as 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% interests and is located in the Block BM-S-11);
- Transfer of the Company's 35% stake in the concession area of Lapa field, located in the Block BM-S-9. Total will also become the operator and the Company will remain holding 10% interests in this area; and
- Transfer of the Company's 50% interests in the power plants Celso Furtado and Rômulo Almeida. The Company recognized an impairment loss on this transaction as described in note 14.2.

On February 28, 2017, the Company and Total signed the purchase and sale agreements with respect to the aforementioned assets. Total will pay to the Company the total amount of US\$ 2,225 with respect to these transactions, comprising US\$ 1,675 in cash for assets and services, a line of credit in the amount of US\$ 400 that can be used by the Company for investments in the lara fields, as well as US\$ 150 relating to contingent payments.

These transactions are still subject to the relevant authorities' approvals, to the potential exercise of preemptive rights by current lara partners, as well as other customary conditions precedent.

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

## 10.2. Other changes in organizational structure

### Merger of Nova Fronteira Bioenergia

On December 15, 2016, the Company's wholly-owned subsidiary Petrobras Biocombustível S.A. (P BIO) entered into an agreement with São Martinho group which establishes the merger of P BIO interests in Nova Fronteira Bioenergia S.A. (49%) into São Martinho.

As of December 31, 2016, the related assets were classified as held for sale due to certain conditions precedent and the Company recognized a loss on this transaction in the amount of US\$ 30 within results in equity-accounted investments.

On February 23, 2017, this transaction was concluded as São Martinho granted to P BIO an additional 24 million of its common shares, corresponding to 6.593% of its voting and total paid in capital, in exchange and in proportion to the shares that P BIOs held in Nova Fronteira. These shares will not be subject to any kind of lock-up and their sale will occur in 4 years through a structured process.

## 10.3. Assets classified as held for sale

						12.31.2016	12.31.2015
	E&P	Distribution	RT&M	Gas & Power	Biofuel	Total	Total
<b>Assets classified as held for sale (*)</b>							
Cash and Cash Equivalents	-	101	8	-	-	109	3
Trade receivables	-	76	129	-	-	205	11
Inventories	-	52	120	-	-	172	-
Investments	-	27	6	-	345	378	-
Property, plant and equipment	1,037	196	283	2,904	-	4,420	138
Others	-	35	307	102	-	444	-
<b>Total</b>	<b>1,037</b>	<b>487</b>	<b>853</b>	<b>3,006</b>	<b>345</b>	<b>5,728</b>	<b>152</b>
<b>Liabilities on assets classified as held for sale(*)</b>							
Trade Payables	-	75	51	9	-	135	-
Finance debt	-	-	14	-	-	14	125
Provision for decommissioning costs	52	-	-	-	-	52	-
Others	10	29	79	173	-	291	-
<b>Total</b>	<b>62</b>	<b>104</b>	<b>144</b>	<b>182</b>	<b>-</b>	<b>492</b>	<b>125</b>

(\*) As of December 31, 2016, the amounts mainly refer to assets and liabilities transferred by the disposal of Petrobras Chile Distribución LTDA (PCD), Nova Transportadora do Sudeste, Liquegás, Petroquímica Suape and Citepe, Guarani S.A, Nova Fronteira, transfer of interest in the concession areas named as Iara and Lapa, as well as the share of interest in the thermoelectric power generation plants Rômulo Almeida and Celso Furtado.

## 10.4. Civil action filed by the Brazilian Federal Audit Court (TCU)

On December 7, 2016, the Brazilian Federal Audit Court (*Tribunal de Contas da União – TCU*) filed a civil action prohibiting Petrobras from commencing additional divestment projects and entering into sales agreements relating to the ongoing disposal projects while it assesses the Company's divestments decision-making methodology. This action does not impact five deals which were under their final stages of negotiation when this civil action was filed, including the sale of Guarani, sale of Suape and Citepe petrochemical plants, as well as the merger of Nova Fronteira Bioenergia, as described in note 10.1.

The Company reviewed its divestments decision-making methodology and, on March 15, 2017, this civil action was dismissed, which enabled the Company to progress with two ongoing deals (sale of interests in *Baúna* and *Tartaruga Verde* fields and Saint Malo field located in U.S. Gulf of Mexico) and also to commence new divestment projects based on the reviewed methodology.

## 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	21,672	137	Netherlands
Petrobras International Braspetro - PIB BV (i) (ii)	Several segments (iii)	99.99	99.99	6,689	-1365	Netherlands
Transportadora Associada de Gás S.A. - TAG	Gas & Power	100.00	100.00	2,727	2119	Brazil
Petrobras Distribuidora S.A. - BR	Distribution	100.00	100.00	2,274	-90	Brazil
Petrobras Logística de Exploração e Produção S.A. - PB-LOG	E&P	100.00	100.00	1,290	351	Brazil
Nova Transportadora do Sudeste S.A. - NTS	Gas & Power	100.00	100.00	1,258	136	Brazil
Petrobras Transporte S.A. - Transpetro	RT&M	100.00	100.00	1,230	82	Brazil
Petrobras Gás S.A. - Gaspetro	Gas & Power	51.00	51.00	574	90	Brazil
Petrobras Biocombustível S.A.	Biofuels	100.00	100.00	413	-254	Brazil
Petrobras Logística de Gás - Logiqás	Gas & Power	100.00	100.00	365	130	Brazil
Liquigás Distribuidora S.A.	RT&M	100.00	100.00	297	57	Brazil
Termomacacê Ltda.	Gas & Power	99.99	99.99	216	8	Brazil
Breitener Energética S.A.	Gas & Power	93.66	93.66	207	5	Brazil
Termobahia S.A.	Gas & Power	98.85	98.85	176	26	Brazil
Braspetro Oil Services Company - Brasoil (i)	Corporate	100.00	100.00	167	6	Cayman Islands
Baixada Santista Energia S.A.	Gas & Power	100.00	100.00	70	-18	Brazil
Araucária Nitrogenados S.A.	Gas & Power	100.00	100.00	60	-178	Brazil
Fundo de Investimento Imobiliário RB Logística - FII	E&P	99.20	99.20	34	13	Brazil
Petrobras Comercializadora de Energia Ltda. - PBEN	Gas & Power	99.91	99.91	29	4	Brazil
Petrobras Negócios Eletrônicos S.A. - E-Petro	Corporate	99.95	99.95	10	0	Brazil
Termomacacê Comercializadora de Energia Ltda	Gas & Power	99.99	99.99	5	2	Brazil
Downstream Participações Ltda.	Corporate	99.99	99.99	1	0	Brazil
5283 Participações Ltda.	Corporate	100.00	100.00	-	-	Brazil
Companhia Integrada Têxtil de Pernambuco S.A. - CITEPE	RT&M	100.00	100.00	(38)	(356)	Brazil
Companhia Petroquímica de Pernambuco S.A. - PetroquímicaSuape	RT&M	100.00	100.00	(147)	-377	Brazil
<b>Joint operations</b>						
Ibiritermo S.A.	Gas & Power	50.00	50.00	72	14	Brazil
Fábrica Carioca de Catalizadores S.A. - FCC	RT&M	50.00	50.00	70	20	Brazil
<b>Non-consolidated entities</b>						
<b>Joint ventures</b>						
Loqum Logística S.A.	RT&M	15.10	15.10	189	-52	Brazil
Cia Energética Manauara S.A.	Gas & Power	40.00	40.00	49	13	Brazil
Refinaria de Petróleo Riograndense S.A.	RT&M	33.20	33.33	46	25	Brazil
Petrocoque S.A. Indústria e Comércio	RT&M	50.00	50.00	44	12	Brazil
Brentech Energia S.A.	Gas & Power	30.00	30.00	26	1	Brazil
Brasympe Energia S.A.	Gas & Power	20.00	20.00	24	1	Brazil
Eólica Mangue Seco 4 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	14	1	Brazil
Eólica Mangue Seco 3 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	13	1	Brazil
Metanol do Nordeste S.A. - Metanor	RT&M	34.54	34.54	12	-3	Brazil
Eólica Mangue Seco 1 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	12	1	Brazil
Eólica Mangue Seco 2 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	51.00	51.00	12	1	Brazil
Companhia de Coque Calcinado de Petróleo S.A. - Coquepar	RT&M	45.00	45.00	1	-1	Brazil
Participações em Complexos Bioenergéticos S.A. - PCBIOS	Biofuels	50.00	50.00	-	-	Brazil
<b>Associates</b>						
Braskem S.A.	RT&M	36.20	47.03	837	-130	Brazil
UEG Araucária Ltda.	Gas & Power	20.00	20.00	175	-49	Brazil
Deten Química S.A.	RT&M	27.88	27.88	106	31	Brazil
Energética SUAPE II	Gas & Power	20.00	20.00	82	25	Brazil
Termoelétrica Potiguar S.A. - TEP	Gas & Power	20.00	20.00	30	3	Brazil
Fundo de Investimento em Participações de Sondas - FIP Sondas	E&P	4.59	4.59	-	-971	Brazil
Nitroclor Ltda.	RT&M	38.80	38.80	-	0	Brazil
Bioenergética Britarumã S.A.	Gas & Power	30.00	30.00	-	-	Brazil
Sete Brasil Participações S.A.	E&P	5.00	5.00	(6,682)	(113)	Brazil

(i) Companies abroad with financial statements prepared in foreign currencies.

(ii) 5283 Participações Ltda holds 0.0050% interest.

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

## 11.2. Investments in associates and joint ventures

	Balance at 12.31.2015	Investments	Restructuring, capital decrease and others	Results in equity- accounted investments (*)	CTA	OCI	Dividends	Transfer to assets as held for sale	Balance at 12.31.2016
<b>Joint Ventures</b>									
Petrobras Oil & Gas B.V. - PO&G	1,545	-	-	33	(1)	-	(149)	-	1,428
State-controlled natural gas distributors	251	-	-	70	50	-	(41)	-	330
Nova Fronteira Bionergia	119	-	-	30	23	-	-	(172)	-
Compañía Mega S.A. - MEGA	45	-	-	26	(4)	-	(31)	-	36
Compañía de Inversiones de Energía S.A. - CIESA	44	-	3	3	(4)	-	(1)	(45)	-
Other petrochemical investees	21	-	-	5	4	-	(5)	-	25
Other joint ventures	97	26	-	(29)	19	1	(11)	-	103
<b>Associates</b>									
Braskem S.A.	805	-	-	(120)	223	261	(135)	-	1,034
Investees in Venezuela	218	-	14	(2)	2	-	-	(232)	-
Guarani S.A.	194	68	(23)	(150)	98	79	-	(266)	-
Other petrochemical associates	24	-	-	10	5	-	(9)	-	30
UEG Araucária	43	-	-	(45)	8	-	(6)	-	-
Other associates	109	-	1	39	(16)	-	(27)	(56)	50
Other investees	12	-	(2)	-	6	-	-	-	16
<b>Total</b>	<b>3,527</b>	<b>94</b>	<b>(7)</b>	<b>(130)</b>	<b>413</b>	<b>341</b>	<b>(415)</b>	<b>(771)</b>	<b>3,052</b>

(\*) Does not include results in investees transferred to assets held for sale, in the amount US\$ 88.

## 11.3. Investments in listed companies

Company	Thousand-share lot		Type	Quoted stock exchange prices (US\$ per share)		Market value	
	12.31.2016	12.31.2015		12.31.2016	12.31.2015	12.31.2016	12.31.2015
<b>Indirect subsidiary</b>							
Petrobras Argentina S.A. (*)	-	1,356,792	Common	-	0.61	-	827
							827
<b>Associate</b>							
Braskem S.A.	212,427	212,427	Common	9.20	4.07	1,955	866
Braskem S.A.	75,762	75,762	Preferred A	10.51	7.07	796	536
						2,751	1,402

(\*) Investment disposed of as set out in note 10.1.

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

## 11.4. Non-controlling interest

The total amount of non-controlling interest at December 31, 2016 is US\$ 771 (US\$ 819 in 2015), of which US\$ 281 and US\$ 99 relate to non-controlling interest of the subsidiaries Gaspetro and Transportadora Brasileira Gasoduto Brasil-Bolívia (TBG), respectively (US\$ 234, US\$ 55 and US\$ 367 related to Gaspetro, TBG and Petrobras Argentina, respectively, at December 31, 2015) and US\$ 175 refer to Consolidated Structured Entities (US\$ 39 at December 31, 2015).

Condensed financial information is set out as follows:

	Gaspetro		Consolidated Structured entities (*)		TBG		Petrobras Argentina
	2016	2015	2016	2015	2016	2015	2015
Current assets	83	81	745	543	329	190	795
Long-term receivables	84	59	1,673	1,914	1	1	72
Investments	392	303	-	-	-	-	276
Property, plant and equipment	1	1	85	73	640	565	1,084
Other non-current assets	93	80	-	-	3	2	3
	<b>653</b>	<b>524</b>	<b>2,503</b>	<b>2,530</b>	<b>973</b>	<b>758</b>	<b>2,230</b>
Current liabilities	46	18	508	455	394	141	541
Non-current liabilities	33	27	1,820	2,114	377	505	571
Shareholders' equity	574	479	175	(39)	202	112	1,118
	<b>653</b>	<b>524</b>	<b>2,503</b>	<b>2,530</b>	<b>973</b>	<b>758</b>	<b>2,230</b>
Sales revenues	96	208	-	-	423	442	243
Net income	72	147	287	(213)	243	80	119
Increase (decrease) in cash and cash equivalents	1	(165)	11	(94)	187	-	71

(\*) Comprises Charter Development LLC - CDC, Companhia de Desenvolvimento e Modernização de Plantas Industriais - CDMPI and PDET Offshore.

Gaspetro, a Petrobras' subsidiary, holds interests in several state distributors of natural gas in Brazil. Petrobras concluded the sale of 49% of its interest in Gaspetro on December 28, 2015.

TBG is an indirect subsidiary which operates in natural gas transmission activities mainly through Bolivia-Brazil Gas Pipeline. The Company holds 51% of interests in this indirect subsidiary.

## 11.5. Summarized information on joint ventures and associates

The Company invests in joint

2016

2015

	Joint ventures			Associates		Joint ventures			Associates	
	In Brazil	PO&G (*)	Other companies	In Brazil	In Brazil	PO&G (*)	Other companies	In Brazil	Abroad	
			abroad				abroad			
Current assets	1,016	835	152	5,214	1,106	934	327	5,358	2,240	
Non-current assets	558	35	21	1,647	343	50	21	2,697	199	
Property, plant and equipment	867	3,304	19	9,344	1,206	2,790	488	9,599	1,815	
Other non-current assets	720	1	-	958	554	4	4	2,831	78	
	<b>3,161</b>	<b>4,175</b>	<b>192</b>	<b>17,163</b>	<b>3,209</b>	<b>3,778</b>	<b>840</b>	<b>20,485</b>	<b>4,332</b>	
Current liabilities	1,226	391	84	4,296	1,331	228	213	4,880	3,607	
Non-current liabilities	499	1,819	1	18,613	640	1,327	303	12,522	1,057	
Shareholders' equity	1,436	1,965	107	(4,788)	1,108	2,223	178	3,268	(332)	
Non-controlling interest	-	-	-	(958)	130	-	146	(185)	-	
	<b>3,161</b>	<b>4,175</b>	<b>192</b>	<b>17,163</b>	<b>3,209</b>	<b>3,778</b>	<b>840</b>	<b>20,485</b>	<b>4,332</b>	
Sales revenues	2,696	770	331	14,156	3,825	2,259	284	15,805	196	
Net Income (loss) for the year	185	63	68	(1,292)	155	245	47	1,036	(1,639)	
Ownership interest - %	20 to 83%	50%	34 to 50%	5 to 49%	20 to 83%	50%	34 to 50%	5 to 49%	11 to 49%	

(\*) Petrobras Oil & Gas (PO&G) is a joint venture located in the Netherlands, with 50% share of Petrobras International BV (PIBBV), for exploration and production of oil and gas in Africa.

## 12. Property, plant and equipment

### 12.1. By class of assets

	Land, buildings and improvement	Equipment and other assets	Assets under construction (*)	Exploration and development costs (oil and gas producing properties)	Total
Balance at January 1, 2015	8,035	97,996	52,943	59,756	218,730
Additions	210	1,296	18,349	512	20,367
Additions to / review of estimates of decommissioning costs	-	-	-	4,147	4,147
Capitalized borrowing costs	-	-	1,768	-	1,768
Write-offs	(8)	(56)	(1,797)	(407)	(2,268)
Transfers	1,153	8,726	(16,477)	8,468	1,870
Depreciation, amortization and depletion	(468)	(6,374)	-	(4,596)	(11,438)
Impairment recognition	(238)	(3,837)	(3,008)	(5,220)	(12,303)
Impairment reversal	-	11	5	23	39
Cumulative translation adjustment	(2,584)	(23,869)	(14,173)	(18,989)	(59,615)
<b>Balance at December 31, 2015</b>	<b>6,100</b>	<b>73,893</b>	<b>37,610</b>	<b>43,694</b>	<b>161,297</b>
Cost	8,595	112,307	37,610	67,220	225,732
Accumulated depreciation, amortization and depletion	(2,495)	(38,414)	-	(23,526)	(64,435)
<b>Balance at December 31, 2015</b>	<b>6,100</b>	<b>73,893</b>	<b>37,610</b>	<b>43,694</b>	<b>161,297</b>
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
<b>Balance at December 31, 2016</b>	<b>6,982</b>	<b>78,724</b>	<b>38,569</b>	<b>51,195</b>	<b>175,470</b>
Cost	9,999	127,539	38,569	80,662	256,769
Accumulated depreciation, amortization and depletion	(3,017)	(48,815)	-	(29,467)	(81,299)
<b>Balance at December 31, 2016</b>	<b>6,982</b>	<b>78,724</b>	<b>38,569</b>	<b>51,195</b>	<b>175,470</b>
Weighted average of useful life in years	40 (25 to 50) (except land)	20 (3 to 31) (**)		Units of production method	

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

(\*\*) Includes exploration and production assets depreciated based on the units of production method.

(\*\*\*) Includes amounts transferred to assets held for sale.

At December 31, 2016, property, plant and equipment include assets under finance leases of US\$ 125 (US\$ 48 as of December 31, 2015).

## 12.2. Estimated useful life

Estimated useful life	Buildings and improvements, equipment and other assets		
	Cost	Accumulated depreciation	Balance at 2016
5 years or less	4,064	(3,017)	1,047
6 - 10 years	15,791	(9,656)	6,135
11 - 15 years	2,061	(1,114)	947
16 - 20 years	39,701	(13,241)	26,460
21 - 25 years	20,315	(6,565)	13,750
25 - 30 years	14,661	(3,684)	10,977
30 years or more	24,188	(6,266)	17,922
Units of production method	16,406	(8,289)	8,117
<b>Total</b>	<b>137,187</b>	<b>(51,832)</b>	<b>85,355</b>
Buildings and improvements	9,648	(3,017)	6,631
Equipment and other assets	127,539	(48,815)	78,724

## 12.3. Concession for exploration of oil and natural gas - Assignment Agreement (“Cessão Onerosa”)

Petrobras and the Brazilian Federal Government entered into the Assignment Agreement in 2010, which grants the Company the right to carry out prospection and drilling activities for oil, natural gas and other liquid hydrocarbons located in the pre-salt area limited to the production of five billion barrels of oil equivalent in up to 40 years and renewable for a further five years subject to certain conditions. As of December 31, 2016, the Company’s property, plant and equipment include the amount of US\$ 22,954 related to the Assignment Agreement (US\$ 19,158 as of December 31, 2015).

Petrobras has already declared commerciality in fields of all six blocks in the scope of this agreement: Franco (Búzios), Florim (Itapu), Nordeste de Tupi (Sépia), Entorno de Iara (Norte de Berbigão, Sul de Berbigão, Norte de Sururu, Sul de Sururu, Atapu), Sul de Guarã (Sul de Sapinhoá) and Sul de Tupi (Sul de Lula).

The agreement establishes that the review procedures of the agreement will commence immediately after the declaration of commerciality for each area and must be based on reports by independent experts engaged by Petrobras and ANP. The review of the Assignment Agreement will be concluded after the assessment of all the areas.

If the review of the Assignment Agreement determines that the value of acquired rights is greater than the amount initially paid, the Company may be required to pay the difference to the Brazilian Federal Government, or may proportionally reduce the total volume of barrels acquired under the agreement. If the review determines that the value of the acquired rights is lower than initially paid by the Company, the Brazilian Federal Government will reimburse the Company for the difference by delivering cash or bonds or equivalent means of payment, subject to budgetary regulations.

The formal review procedures for each block are based on costs incurred over the exploration phase and estimated costs and production for the development period. The review of the Assignment Agreement may result in changes in: (i) the amount of the agreement; (ii) the total volume (in barrels of oil) to be produced; (iii) the term of the agreement; and (iv) the minimum percentages of local content.

Currently, the settlement form and the final amount to be established for this agreement are not defined. The beginning of negotiation with the Brazilian Federal Government still depends on the conclusion of the appraisals by independent experts engaged by both parties, and the issuance of the respective reports.

With respect to the negotiation with the Brazilian Federal Government, on October 21, 2016 the Company's Board of Directors approved the creation of the minority shareholders committee responsible for monitoring the agreement review process and providing support to the board decisions through opinions about related matters. This committee will be composed of two members nominated by the minority shareholders and an independent member with recognized expertise in technical-financial analysis of investment projects.

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

In 2016 the following oil and gas fields were returned to ANP: Tiziu, Japuaçu, Rio Joanes, part of Golfinho and part of Tambuatá. These fields were returned to ANP mainly due to their uneconomic feasibility and, as a consequence, the Company wrote off the amount of US\$ 4 as other expenses, net.

In 2015, the oil and gas fields Itaparica, Camaçari, Carapicú, Baúna Sul, Salema Branca, Nordeste Namorado, part of Rio Preto, Pirapitanga, Piracucá, Catuá and part of Mangangá were returned to ANP and the Company wrote-off the amount of US\$ 264 as other expenses, net.

In 2014, the oil and gas fields returned to ANP were: Cação, Carapiá, Moréia, Caravela, Cavalo Marinho, Estrela do Mar, Tubarão, Rio Mariricu, Rio Mariricu Sul, Lagoa Parada Sul, Urutau, Iraúna and Mosquito Norte and the Company wrote-off the amount of US\$ 283 as other expenses.

## 13. Intangible assets

### 13.1. By class of assets

	Rights and Concessions	Software		Goodwill	Total
		Acquired	Developed in-house		
Balance at January 1, 2015	3,592	119	432	366	4,509
Addition	17	22	78	-	117
Capitalized borrowing costs	-	-	5	-	5
Write-offs	(163)	-	(2)	-	(165)
Transfers	71	6	11	-	88
Amortization	(23)	(33)	(97)	-	(153)
Impairment recognition	(32)	-	-	-	(32)
Cumulative translation adjustment	(1,024)	(34)	(137)	(82)	(1,277)
Balance at December 31, 2015	2,438	80	290	284	3,092
Cost	2,696	435	963	284	4,378
Accumulated amortization	(258)	(355)	(673)	-	(1,286)
Balance at December 31, 2015	2,438	80	290	284	3,092
Addition	11	15	59	-	85
Capitalized borrowing costs	-	-	5	-	5
Write-offs	(160)	-	(1)	-	(161)
Transfers	(15)	(4)	(1)	(99)	(119)
Amortization	(22)	(35)	(98)	-	(155)
Impairment recognition	(3)	-	-	-	(3)
Cumulative translation adjustment	429	12	52	35	528
Balance at December 31, 2016	2,678	68	306	220	3,272
Cost	2,875	487	1,209	220	4,791
Accumulated amortization	(197)	(419)	(903)	-	(1,519)
Balance at December 31, 2016	2,678	68	306	220	3,272
Estimated useful life in years	(*)	5	5	Indefinite	

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

### 13.2. Exploration rights returned to the Brazilian Agency of Petroleum, Natural Gas and Biofuels - Agência Nacional de Petróleo, Gás Natural e Biocombustíveis (ANP)

Exploration areas returned to the ANP in 2016, totaling US\$ 8 (US\$ 25 in 2015) are set out below:

Area	Exploratory phase	
	Exclusive	Partnership
Campos Basin	1	-
Santos Basin	1	-
Potiguar Basin	1	-
Recôncavo Basin	-	2
Tucano Sul Basin	-	3
Foz do Amazonas Basin	2	-
Amazonas Basin	-	1
Parecis Basin	2	-

### 13.3. Exploration rights - production sharing contract

Following the first pre-salt public auction held in October, 2013, the Libra consortium, composed of Petrobras (40% interest), Shell (20% interest), Total (20% interest), CNPC (10% interest), CNOOC (10% interest) and the *Pré-Sal Petróleo S.A.* (PPSA) as the manager of the agreement, entered into a production sharing contract with the Federal Government on December 2, 2013.

The contract granted rights and obligations to explore and operate oil and gas production in a strategic pre-salt area known as the Libra block, comprising an area of around 1,550 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.

Libra reservoir was discovered in 2010 following the drilling of 2-ANP-2A-RJS well. The Libra consortium offered a 41.65% stake of profit oil to the Brazilian Government, according to the rules of the first pre-salt public auction. This stake refers to the profit oil on a baseline scenario of price ranging from 100.01 US\$/bbl to 120 US\$/bbl, and production per producing well from 10 thousand bbl/d to 12 thousand bbl/d. This stake may vary with the international oil price and the productivity of the wells, as established by the Brazilian Agency of Petroleum, Natural Gas and Biofuels (ANP).

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

Currently, the project is in its initial stage in the exploration phase (4 years), and its minimum work program have been partially performed and comprises a 3D seismic acquisition for the whole block, two exploratory wells and the extended well test (EWT) to be performed in 2017. The results confirmed oil reservoirs at depth of up to 410 meters with high porosity and permeability. The production tests confirmed the high productivity and oil quality of these reservoirs.

In September 2016, the Libra consortium commenced the process of hiring its second FPSO for the Northwest area (the FPSO of Libra Pilot Project), with expected start-up in 2020 and capacity of producing 180 thousands of barrels per day and processing 12 million cubic meters of gas.

A FPSO will be allocated to 3 parts in the Northwest area of this block in order to perform extended well tests and early production systems.

The start-up of Libra Pioneer is expected to occur in 2017 with capacity of processing 50 thousand barrels per day and compressing 4 million cubic meters per day of associated gas. The Company also intends to mitigate risks and optimize producing systems in Libra through this FPSO.

At the end of 2016, the first two wells completions of Libra Block were concluded. These wells have intelligent completion systems in two zones, enabling real time data monitoring and control and will commence operation in 2017 interconnected to Libra Pioneer.

In 2020, four definitive systems will be installed in Libra northwest. The pilot system is planned to be concluded in September 2020 and the remaining systems in the following 3 years. The size of wells and subsea systems to be concluded after the pilot project will be based on extended well test data.

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

As of December 31, 2016, intangible assets include service concession agreements related to piped natural gas distribution in Brazil, in the amount of US\$ 177 (US\$ 149 in 2015), maturing between 2029 and 2043, which may be renewed. According to the distribution agreements, service is provided to customers in the industrial, residential, commercial, automotive, air conditioning and transport sectors, among others.

The consideration receivable is a factor of a combination of operating costs and expenses, and return on capital invested. The rates charged for gas distribution are subject to periodic reviews by the state regulatory agency.

The agreements establish an indemnity clause for investments in assets which are subject to return at the end of the service agreement, to be determined based on evaluations and appraisals.

On February 2, 2016, the state of Espírito Santo enacted the Law No. 10,493/2016 under which the service concession agreements related to piped natural gas distribution are considered ineffective pursuant Brazilian Federal Law 8,987/1995. This concession is accounted for as intangible assets totaling US\$ 84 as of December 31, 2016 (US\$ 69 as of December 31, 2015) and the Company has not recognized any provision on this matter based on indemnity established by law.

## 14. Impairment

The Company's assets are tested for impairment on December 31, annually, or when there is an indication that their carrying amount may not be recoverable. During September 2016 such indication was identified for certain assets and triggered their impairment assessment due to changes mainly driven by a slower recovery of oil prices, a decrease in future capital expenditures, reflecting the Company's plan to reduce current debt levels and optimize its investment portfolio, as well as changes in Brazilian political and economic scenario. These changes impacted the medium and long term assumptions used in our updated Business and Management Plan that was finalized and approved in the third quarter of 2016 and also impacted the key assumptions for impairment testing. Changes in the political and economic scenario in Brazil also resulted in increases in discount rates applied for impairment testing purposes in 2016.

At December 31, 2016, the company reassessed the existence of any new indication of impairment in assets previously tested in the third quarter of 2016. Accordingly, additional impairment charges were recognized in the last quarter of 2016 with respect to producing properties relating to oil and gas activities in Brazil, COMPERJ, Transpetro's fleet of vessels, as well as reversals of impairment previously recognized for the Thermoelectric power generation plants, mainly as a result of: (i) Company's annual review of oil and gas reserves; (ii) annual review of decommissioning cost estimates; (iii) the work in progress relating to the infrastructure shared by Comperj's first refining unit and the natural gas processing plant (UPGN); (iv) changes in the Power CGU as described in note 5.3; and (v) the commencement of 5 vessels constructions, as part of Transportation CGU, following the signing of funding contracts which have enabled these projects funding.

In addition, the company also recognized in the last quarter of 2016 impairment charges relating to divestments and assets of certain subsidiaries that were tested for impairment based on their annual review at December 31, 2016.

For 2015, impairment losses were principally recognized in its fourth quarter pursuant to the annual tests in December, mainly due to changes in international crude oil prices, a downward review of proved and probable reserves estimates, a decrease in capex projections and an increase in Brazil's risk premium.

For 2014, the company recognized impairment losses mainly as a result of higher specific risk premium, planning deficiencies and postponements of COMPERJ and the 2nd refining unit of RNEST, as well as the fall in international crude oil prices, which impacted the cash flows of E&P assets.

The table below shows the impairment losses, net of reversals, recognized within the statement of income in 2016, 2015 and 2014:

# 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
					2016
Producing properties relating to oil and gas activities in Brazil (several CGUs)	12,788	10,718	2,268	E&P - Brazil	item (a1)
Oil and gas production and drilling equipment in Brazil	918	64	854	E&P - Brazil	item (b1)
Second refining unit in RNEST	2,488	1,708	780	RTM - Brazil	item (c1)
Suape Petrochemical Complex	1,099	480	619	RTM - Brazil	item (d1)
Comperj	403	-	403	RTM - Brazil	item (e1)
Fertilizer Plant - UFN III	523	370	153	Gas & Power - Brazil	item (f1)
Araucária (fertilizers plant)	197	57	140	Gas & Power - Brazil	item (g)
Transpetro's fleet of vessels	1,793	1,549	244	RTM - Brazil	item (h)
Quixada Power plant	28	-	28	Biofuel, Brazil	
Others	614	424	148	Several Segments	
			5,637		
Assets classified as held for sale					item 14.2
Suape Petrochemical Complex	816	381	435	RTM - Brazil	
Petrobras Chile Distribución	546	464	82	Distribution- Abroad	
Power Plants Celso Furtado and Rômulo Almeida	120	72	47	RTM - Brazil	
Others	96	104	(8)	Several Segments	
			556		
<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 (a2)
Oil and gas production and drilling equipment in Brazil	750	243	507	E&P - Brazil	item (b2)
Suape Petrochemical Complex	1,143	943	200	RTM - Brazil	item (d2)
Comperj	1,586	234	1,352	RTM - Brazil	item (e2)
Fertilizer Plant - UFN III	935	434	501	Gas & Power - Brazil	item (f2)
Oil and gas producing properties abroad	1,548	918	637	E&P - Abroad	item (i1)
Nitrogen Fertilizer Plant - UFN-V	190	-	190	Gas & Power - Brazil	
Biodiesel plants	134	88	46	Biofuel - Brazil	
Others	341	156	210	Several segments	
<b>Total</b>			<b>12,296</b>		
					<b>2014</b>
Producing properties relating to oil and gas activities in Brazil (several CGUs)	6,425	4,863	1,562	E&P - Brazil	item (a3)
Oil and gas production and drilling equipment in Brazil	1,091	555	536	E&P - Brazil	item (b3)
Second refining unit in RNEST	6,207	2,765	3,442	RTM - Brazil	item (c2)
Suape Petrochemical Complex	2,847	1,726	1,121	RTM - Brazil	item (d3)
Comperj	9,721	1,501	8,220	RTM - Brazil	item (e3)
Oil and gas producing properties abroad	3,126	1,458	1,668	E&P - Abroad	item (i2)
Araucária (fertilizers plant)	367	251	116	Gas & Power - Brazil	
Nansei Sekiyu K.K. refinery	129	-	129	RTM -Abroad	
Others	26	32	(6)		
<b>Total</b>			<b>16,788</b>		

(\*) Impairment losses and reversals.

(\*\*) In 2015 and 2014 does not include impairment on assets classified as held for sale in the amount of US\$ 3 and US\$ 35, respectively, as set out in note 14.2.

(\*\*\*) CGUs only tested for impairment at September 30, 2016 are presented based information prevailing at this period.

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

For impairment testing purposes, the Company uses the value in use of its property, plant and equipment and intangible assets (individually or grouped into cash-generating units - CGUs) as their recoverable amount. In measuring value in use the Company bases its cash flow projections on:

- The estimated useful life of the asset or assets grouped into the CGU, based on the expected use of those assets, considering the Company's maintenance policy;
- Assumptions and financial budgets/forecasts approved by management for the period corresponding to the expected life cycle of each different business; and
- A pre-tax discount rate, which is derived from the Company's post-tax weighted average cost of capital (WACC).

Information on key assumptions for impairment testing and the definition of Company's CGUs are presented in notes 5.2 and 5.3, respectively. Management assumptions and judgements, which are based on the Company's business and management model, are required on these matters.

The cash flow projections used to measure the value in use of the CGUs in 2016 were mainly based on the following estimates of key assumptions for impairment testing:

	2017	2018	2019	2020	2021	Long term Average
Average Brent (US\$/bbl)	48	56	68	71	71	70
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	3.46	3.54	3.48	3.42	3.38	3.36

For comparative purposes, estimates of key assumptions for impairment testing in 2015 and 2014 are shown below:

#### 2015

	2016	2017	2018	2019	2020	Long term Average
Average Brent (US\$/bbl)	45	59	61	64	67	71
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	4.06	3.73	3.66	3.60	3.60	3.06

#### 2014

	2015	2016	2017	2018	2019	Long term Average
Average Brent (US\$/bbl)	52	65	70	70	70	85
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	2.85	2.85	2.75	2.75	2.75	2.64

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

**a1) Producing properties in Brazil – 2016**

Impairment losses of US\$ 2,268 were recognized for certain oil and gas fields in Brazil under E&P concessions. Cash flow projections were based on: financial budgets/forecasts approved by Management and the post-tax discount rates (excluding inflation) derived from the WACC for the E&P business of 9.1% p.a. at September 30, 2016, which decreased to 8.6% p.a. at December 31, 2016 mainly reflecting improvement in Brazil's risk premium. The impairment losses were related primarily to the following fields and groups of fields: North group (US\$ 1,178), *Ceará Mar* Group (US\$ 210), *Guaricema* (US\$ 126), *Dourado* (US\$ 88), *Maromba* (US\$ 86), *Bijupirá* and *Salema* (US\$ 82), *Papa-Terra* (US\$ 72), *Trilha* (US\$ 69), *Uruguá* group (US\$ 62), *Pampo* (US\$ 67), *Frade* (US\$ 65), *Badejo* (US\$ 56), *Bicudo* (US\$ 49), *Riachuelo* (US\$ 44), *Fazenda Bálamo* (US\$ 41) and *Água Grande* group (US\$ 31). These impairment losses were mainly due to the appreciation of the Brazilian Real against the U.S. Dollar, price assumptions review, Company's annual reviews of oil and gas reserves and decommissioning cost estimates, as well a higher discount rate following the increase in Brazil's risk premium. In addition, an impairment reversal relating to *Centro Sul* group, amounting to US\$ 415, was recognized due to increased estimate of reserves and production, as well as lower operating expenses estimates based on a review of its fields operations, as set forth in 2017-2021 BMP, considering the decommissioning of a unit which had high operational costs and replacing another unit with an investment in a new processing plant which was committed to during the third quarter of 2016.

**a2) Producing properties in Brazil - 2015**

In 2015, impairment losses of US\$ 8,653 were recognized for certain oil and gas fields in Brazil under E&P concessions. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.3% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the E&P business. The impairment losses were related primarily to the following fields: *Papa-Terra* (US\$ 2,234), *Centro Sul* group (US\$ 1,179), *Uruguá* group (US\$ 986), *Espadarte* (US\$ 593), *Linguado* (US\$ 489), *CVIT – Espírito Santo* group (US\$ 375), *Piranema* (US\$ 341), *Lapa* (US\$ 317), *Bicudo* (US\$ 240), *Frade* (US\$ 198), *Badejo* (US\$ 190), *Pampo* (US\$ 91) and *Trilha* (US\$ 84). These impairment losses are mainly due to the impact of the decline in international crude oil prices on the Company's price assumptions, the use of a higher discount rate, as well as the geological revision of *Papa-Terra* reservoir.

**a3) Producing properties in Brazil - 2014**

In 2014, impairment losses of US\$ 1,562 were recognized, mainly with respect to certain oil and gas fields under E&P concessions, whose recoverable amount was determined to be below their carrying amount. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the E&P business. The impairment losses were mainly related to the impact of the decline in international crude oil prices on the Company's price assumptions and were principally recognized for the following fields: *Frade*, *Pirapitanga*, *Tambuatã*, *Carapicu* and *Piracucá*.

**b1) Oil and gas production and drilling equipment in Brazil – 2016**

Impairment losses of US\$ 854 were recognized for oil and gas production and drilling equipment which were not directly related to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 9.9% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. These impairment losses were mainly related to uncertainties over the ongoing hulls construction of the FPSOs P-71, P-72 and P-73, amounting to US\$ 593 as set out in note 14.4.

**b2) Oil and gas production and drilling equipment in Brazil - 2015**

In 2015, impairment losses of US\$ 507 were recognized for oil and gas production and drilling equipment which were not directly related to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 9.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. The impairment losses were mainly related to the planned idle capacity of drilling rigs in the future and the use of a higher discount rate.

**b3) Oil and gas production and drilling equipment in Brazil - 2014**

In 2014, impairment losses of US\$ 536 were recognized in oil and gas production and drilling equipment, unrelated to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. The impairment losses are mainly related to idle capacity of two drilling rigs in the future and to the demobilization of two oil platforms, which were not deployed in any oil and gas property as of December 31, 2014.

**c1) Second refining unit in RNEST - 2016**

An impairment loss of US\$ 780 was recognized for the second refining unit in RNEST. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.7% p.a. (8.1% p.a. in 2015) post-tax discount rate (excluding inflation) derived from the WACC for the refining business, reflecting a specific risk premium for the postponed project. The impairment loss was mainly attributable to: (i) the use of a higher discount rate and (ii) a delay in expected future cash inflows to 2023 resulting from postponing the project, considering the completion of this project with the Company's own capital resources as set forth in the 2017-2021 Business and Management Plan.

**c2) Second refining unit in RNEST - 2014**

In 2014, an impairment loss of US\$ 3,442 was recognized in the second refining unit in RNEST. Cash flow projections are based on: financial budgets/forecasts approved by Management; and a 7% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business. The impairment loss was mainly attributable to: (i) project planning deficiencies; (ii) the use of a higher discount rate, reflecting a specific risk premium for the postponed projects; (iii) a delay in expected future cash inflows resulting from postponing the project; and (iv) the Company's business context of lower projected economic growth.

**d1) Suape Petrochemical Complex - 2016**

An impairment loss of US\$ 619 was recognized for *Companhia Integrada Têxtil de Pernambuco S.A. - CITEPE* and *Companhia Petroquímica de Pernambuco S.A. – PetroquímicaSuape* at September 31, 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.

**d2) Suape Petrochemical Complex - 2015**

In 2015, an impairment loss of US\$ 200 was recognized for *Companhia Integrada Têxtil de Pernambuco S.A. - CITEPE* and *Companhia Petroquímica de Pernambuco S.A. – PetroquímicaSuape*. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the petrochemical business. The impairment loss was mainly attributable to changes in market and price assumptions resulting from a decrease in economic activity in Brazil, a reduction in the spread for petrochemical products in the international market and the use of a higher discount rate.

**d3) Suape Petrochemical Complex - 2014**

In 2014, an impairment loss of US\$ 1,121 was recognized in Companhia Integrada Têxtil de Pernambuco S.A. - CITEPE and Companhia Petroquímica de Pernambuco S.A. – PetroquímicaSuape. Cash flow projections were based on: 30-year period and zero-growth rate perpetuity; financial budgets/forecasts approved by Management; and a 6.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the petrochemical business. The impairment loss is mainly attributable to changes in market assumptions and forecasts resulting from a decrease in economic activity, a reduction in the spread for petrochemical products in the international market and modifications in tax regulations.

**e1) Comperj - 2016**

Following a reassessment of COMPERJ project in the second quarter of 2016 confirming the postponement of its first refining unit until December 2020, with continuous efforts to seek new partnerships to resume the project, the Company recognized an impairment charge on the remaining balance of this project. However, the construction of Comperj's first refining unit facilities that will also support the natural gas processing plant (UPGN) are still in progress as the facilities are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in Santos Basin. Nevertheless, due to the interdependence between such infrastructure and Comperj first refining unit, the Company recognized additional impairment charges, totaling US\$ 403 of impairment losses in 2016.

**e2) Comperj - 2015**

In 2015, an impairment loss of US\$ 1,352 was recognized for refining assets of Comperj. Cash flow projections were based on: financial budgets/forecasts approved by Management, and; an 8.1% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business reflecting a specific risk premium for the postponed projects. This impairment loss was mainly attributable to: (i) the use of a higher discount rate; and (ii) the delay in expected future cash inflows resulting from postponing construction.

**e3) Comperj - 2014**

In 2014, an impairment loss of US\$ 8,220 was recognized in Comperj. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business. The impairment loss was mainly attributable to: (i) project planning deficiencies; (ii) the use of a higher discount rate, reflecting a specific risk premium for the postponed projects; (iii) a delay in expected future cash inflows resulting from postponing the project; and (iv) the Company's business context of lower projected economic growth.

**f1) Fertilizer Plant - UFN III - 2016**

An impairment loss of US\$ 153 was recognized for the fertilizer plant UFN III (*Unidade de Fertilizantes e Nitrogenados III*). Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.3% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the fertilizer business, reflecting a specific risk premium for the postponed projects. This impairment loss mainly relates to: (i) the use of a higher discount rate, (ii) the appreciation of Brazilian Real against the US Dollar.

**f2) Fertilizer Plant - UFN III - 2015**

In 2015, an impairment loss of US\$ 501 was recognized for the fertilizer plant UFN III (*Unidade de Fertilizantes e Nitrogenados III*). Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.1% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the Gas & Power business, reflecting a specific risk premium for the postponed projects. The impairment losses were mainly related to: (i) the use of a higher discount rate; and (ii) the delay in expected future cash inflows resulting from postponing the project.

**g) Araucaria - 2016**

An impairment loss of US\$ 140 was recognized for *Araucária Nitrogenados S.A.* Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.8% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the fertilizer business (6.6% p.a. in 2015). The impairment loss was mainly attributable to (i) the use of a higher discount rate, (ii) the appreciation of Brazilian Real against the U.S. Dollar and (iii) an increase in estimated production costs.

**h) Transpetro's fleet of vessels - 2016**

In 2016, an impairment loss of US\$ 244 was recognized for Transpetro's fleet of vessels. Cash flow projections were based on: financial budgets/forecasts approved by Management; and post-tax discount rates (excluding inflation) ranging from 4.53% p.a. to 9.97% p.a. (3.92% p.a. to 8.92% p.a. in 2015) derived from the WACC for the transportation industry, considering financial leverage and the respective tax benefits. The impairment loss recognized in the third quarter mainly relates to a group of support vessels of Hidrovias project that were removed from this CGU due to the postponements and suspension of constructions projects, as well as the use of a higher discount rate. In the last quarter of 2016, additional impairment charges were accounted for due to the commencement of construction on 5 vessels after securing the projects funding, which avoided the possibility of future claims by alleging breach of contracts, as well as a further increase in discount rate.

**i1) Producing properties abroad – 2015**

In 2015, impairment losses of US\$ 637 were recognized in E&P assets abroad. Cash flow projections were based on: financial budgets/forecasts approved by Management; and 5.6% p.a. to 10.4% p.a. post-tax discount rates (excluding inflation) derived from the WACC for the E&P business in different countries. The impairment losses were mainly in producing properties located in the United States (US\$ 448) and Bolivia (US\$ 157), attributable to the decline in international crude oil prices.

**i2) Producing properties abroad – 2014**

In 2014, impairment losses of US\$ 1,668 were recognized in international E&P assets. Cash flow projections were based on: financial budgets/forecasts approved by Management; and 5.4% p.a. to 11.2% p.a. post-tax discount rates (excluding inflation) derived from the WACC for the E&P business in different countries. The impairment losses were mainly in Cascade and Chinook producing properties located in the United States (US\$ 1,567) and were mainly attributable to the decline in international crude oil prices.

**14.1.1. Carrying amounts of assets not substantially lower than their recoverable amounts**

In 2016, the recoverable amounts of certain mature producing fields in Brazil were not substantially in excess of their carrying amounts. The carrying amounts of these assets totaled US\$ 143 as of December 31, 2016. Changes in material assumptions for impairment testing may result in the recognition of additional impairment charges on such assets in future periods.

**14.2. Assets classified as held for sale**

In 2016, the Company recognized impairment losses amounting to US\$ 556 pursuant to certain sales of interests in investees approved by the Board of Directors, as described in note 10, mainly due to the following investments:

- Suape Petrochemical Complex - Impairment losses amounting to US\$ 435 following the sale of Suape and Citepe petrochemical plants, which is aligned to the Company's Strategic Plan that foresees the entire withdrawal from petrochemical interests. These losses are attributable to the lower the exit price of these investments when compared to their carrying amount adjusted by the debt to be settled by the Company, as part of the transaction closing.

- Petrobras Chile Distribución - Impairment loss of US\$ 82 was recognized for distribution assets in Chile, as the sales price of this disposal was lower than the respective carrying amount.
- Power plants *Romulo Almeida and Celso Furtado* - Impairment losses amounting to US\$ 47 were accounted for due to the difference between the exit price and the respective carrying amounts, A portion of this impairment (US\$ 7) was recognized in the third quarter of 2016 when these assets were part of the Power CGU.

For 2015, impairment losses were recognized in E&P assets classified as held for sale. The Board of Directors approved the disposal of the Bijupirá and Salema fields, PI, PIII and PIV drilling rigs and PXIV platform. As their fair values were below their carrying amount, impairment losses in the amount of US\$ 3 were recognized.

For 2014, impairment losses were recognized in E&P assets classified as held for sale. The Board of Directors approved the disposal of PI, PIII, PIV and PV drilling rigs and PXIV platform and their fair value was below their carrying amount. Therefore, impairment losses in the amount of US\$ 35 were recognized.

### 14.3. Investments in associates and joint ventures (including goodwill)

Value in use is generally used for impairment test of investments in associates and joint ventures (including goodwill). The basis for estimates of cash flow projections includes: projections covering a period of 5 to 12 years, zero-growth rate perpetuity, budgets, forecasts and assumptions approved by management and a pre-tax discount rate derived from the WACC or the Capital Asset Pricing Model (CAPM), when applicable.

The carrying amount and the value in use of the investments in associates and joint ventures which include goodwill as of December 31, 2016 are set out below:

Investment	Segment	% Post-tax discount rate (excluding inflation)	Value in use	Carrying Amount
		p.a.		
Braskem S.A. (*)	RTM	11.6	3,885	1,033
Natural Gas Distributors	Gas & Power	6.0	440	330

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

#### 14.3.1. Investment in publicly traded associate (Braskem S.A.)

Braskem's shares are publicly traded on stock exchanges in Brazil and abroad. As of December 31, 2016 the quoted market value of the Company's investment in Braskem was US\$ 2,751 based on the quoted values of both Petrobras' interest in Braskem's common stock (47% of the outstanding shares), and preferred stock (22% of the outstanding shares). However, there is extremely limited trading of the common shares, since non-signatories of the shareholders' agreement hold approximately 3% of the common shares.

Given the operational relationship between Petrobras and Braskem, the recoverable amount of the investment for impairment testing purposes was determined based on value in use, considering future cash flow projections and the manner in which the Company can derive value from this investment via dividends and other distributions to arrive at its value in use. As the recoverable amount was higher than the carrying amount, no impairment losses were recognized for this investment.

Cash flow projections to determine the value in use of Braskem were based on the following key assumptions:

- Estimated average exchange rate of R\$ 3.46 to U.S.\$1.00 in 2017 (converging to R\$ 3.36 in the long run);

- Average Brent crude oil price at US\$ 48 in 2017, converging to US\$ 70 in the long run;
- Prices of feedstock and petrochemical products reflecting projected international prices;
- Petrochemical products sales volume estimates reflecting projected Brazilian and global G.D.P growth; and
- Increases in the EBITDA margin during the growth cycle of the petrochemical industry in the next years and declining in the long run.

### **14.3.2. Impairment losses on equity-method investments**

In 2016, impairment losses on equity-method investments in the amount of US\$ 182 were recognized in the statement of income as results in equity-accounted investments, substantially attributable to investees of biofuels segment, mainly relating to:

- Guarani S.A. – At September 30, 2016, impairment losses in the amount of US\$ 111 were recognized mainly due to an increase in post-tax discount rate (real rate) from 9.3% p.a. in 2015 to 10.2% p.a. and lower sugar prices forecasts. In addition, the company also recognized an impairment charge amounting to US\$ 67 made up of the difference between the exit price and the carrying amount following the disposal of interests in this associate approved in the last quarter of 2016.
- Nova Fronteira S.A. – The company recognized an impairment charge in the amount of US\$ 30 made up of the difference between the exit price and the carrying amount following the disposal of interests in this joint venture approved in the last quarter of 2016.

For 2015, impairment losses on equity-method investments in the amount of US\$ 550 (US\$ 251 in 2014) were recognized in the statement of income as results in equity-accounted investments, mainly due to (i) losses in investees abroad reflecting the fall in international crude oil price (US\$ 276); (ii) higher discount rates and capital expenditure decisions relating to the biofuels segment (US\$ 139); (iii) the deteriorated economic and financial conditions of the associate Sete Brasil (US\$ 88); and (iv) losses relating to the associate Arpoador Drilling B.V, an entity indirectly controlled by Sete Brasil (US\$ 14).

### **14.4. Construction of platform hulls by Ecovix and Enseada shipyards**

The Company entered into contracts with the suppliers Ecovix-Engevix Construções Oceânicas S.A and Enseada Industria Naval S.A. for supplying eight hulls for the FPSOs P-66 to P-73 and for hulls conversion of four FPSOs (P-74 to P-77), respectively.

Considering the relevance of these assets in the context of the Business and Management Plan and due to the financial difficulties faced by the suppliers, escrow accounts relating to these projects were created in the last quarter of 2015 in order to ensure the ongoing performance of the services hired.

These escrow accounts have comprised funds transferred in advance for payments to be made by the shipyards, restricted to the scope of the contracts and limited to their total balance. The deposits would be offset to the extent that services rendered or equipment delivered, with the remaining balance being reimbursed. This strategy was considered effective as the projects achieved significant progress up to September 2016, enabling the delivery of P-67 hull to a shipyard in China for integration services, the recommence of the work in progress of P-69 hull also in China, the continuity of the work in progress of P-68 hull in Rio Grande shipyard, as well as the progress on priority activities for the conclusion of minimum scope of P-74 and P-76 hulls, delivering these units to shipyards in China for integration services and for setting up topsides.

During the third quarter of 2016, the Company reassessed the progress of the hulls project and the continuity of the escrow accounts related to the projects. Consequently, significant delays on projects progress were detected and the Company concluded that this strategy, which in its beginning avoided the work in progress discontinuation, was not as effective as it was previously.

Due to uncertainties regarding the FPSOs P-71, P-72 and P-73 hulls construction continuity after significant delays on projects progress, the Company recognized, in the third quarter of 2016, impairment charges amounting to US\$ 593 as set out in note 14.1. Impacts in the Company's production curve are not expected in case of the discontinuation of this work in progress, as the 2017-2021 Business and Management Plan includes other options and additional budget funds.

Based on management evaluation, the Company recognized allowances for impairment amounting to US\$ 689 within other expenses, net with respect to the remaining balance of advances to these suppliers in the context of the escrow accounts (US\$ 352) and debts assumption relating to Ecovix and Enseada (US\$ 337), in which legal procedures to recover them are being assessed.

In addition, the Company wrote-off capital expenditures related to the right of use the Rio Grande shipyard in the amount of US\$ 155, as well as other investments related to the P-71, P-72 and P-73 amounting to US\$ 146.

The effects of the negotiation with each shipyard are presented below:

#### **Negotiations with Ecovix**

Pursuant the reassessment made by the Company in the third quarter of 2016 in order to verify the effectiveness of the escrow account approach implemented to ensure access to P-66 to P-73 hulls, a provision in the amount of US\$ 115 was recognized within other expenses, net.

On December 9, 2016, the Company, through its investees TUPI BV and Petrobras Netherlands BV, entered into agreements with Ecovix Construções Oceânicas S.A establishing the termination of EPC contracts signed in 2010 for the construction of eight FPSO hulls. Therefore, the Company has assumed certain liabilities from Ecovix as the most adequate solution for Petrobras Group: ensure the access to the hulls of platforms P-66 to P-70 and the achievement of the 2017-2021 Business and Management Plan production targets. These debts were recognized in 2016 within other expenses, net in the amount of US\$ 234.

Along with those agreements signed in the last quarter of 2016, the Company assessed investments carried out for the construction of the P-71, P-72 and P-73 hulls to determine the best option for their allocation. As a result, the amount of US\$ 146 were written-off and accounted for as other expenses, net.

The negotiations with Ecovix in the last quarter of 2016 also resulted in a transfer of the right of use of Rio Grande shipyard from Ecovix to the Company pursuant to a finance lease agreement. The Company reassessed the recoverable amount of this right of use and related improvements totaling US\$ 155 and, as a consequence, these assets were written-off.

#### **Negotiations with Enseada**

With the escrow accounts, the Company eliminated any risk of non-delivery of the P-74 to P-77 hulls. In 2016, PNBV transferred funds in advance amounting to US\$ 237 for the payment in the name of Enseada of certain liabilities relating to the hull construction of these platforms. Due to financial difficulties faced by this supplier, the Company recognized a provision for impairment on this entire amount within other expenses, net.

In addition, as part of the Company's strategy of ensuring the continuity of FPSOs P-75 and P-77 hulls construction, the Company approved the transfer of the contract entered into by Enseada and COSCO (Dalian) Shipyard Co., Ltd to its wholly-owned subsidiary Petrobras Netherlands B.V. (PNBV), resulting in the recognition of payables within the scope of this contract. As a result, the Company recognized a provision in the amount of US\$ 103 within other expenses in the third quarter of 2016.

In addition, the Company also assessed the recoverable amount of improvements made for the hulls conversion of FPSOs P-74 to P-77 in the Inhaúma Shipyard, as well as the right of use of this shipyard. Accordingly, the Company did not accounted for any additional write-off related to these assets at December 31, 2016 based on the use of this location as a logistic center mainly dedicated to Santos Basin operations.

## 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:

<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs (*)</b>	<b>12.31.2016</b>	<b>12.31.2015</b>
Property plant and equipment		
Opening Balance	5,201	7,000
Additions to capitalized costs pending determination of proved reserves	1,009	2,282
Capitalized exploratory costs charged to expense	(1,054)	(882)
Transfers upon recognition of proved reserves	(966)	(960)
Cumulative translation adjustment	943	(2,239)
Closing Balance	5,133	5,201
Intangible Assets	2,236	2,048
<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs</b>	<b>7,369</b>	<b>7,249</b>

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

Exploration costs recognized in the statement of income and cash used in oil and gas exploration and evaluation activities are set out in the following table:

<b>Exploration costs recognized in the statement of income</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Geological and geophysical expenses	371	416	830
Exploration expenditures written off (includes dry wells and signature bonuses)	1,281	1,441	2,178
Other exploration expenses	109	54	50
<b>Total expenses</b>	<b>1,761</b>	<b>1,911</b>	<b>3,058</b>

  

<b>Cash used in :</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Operating activities	435	470	879
Investment activities	1,075	2,736	4,899
<b>Total cash used</b>	<b>1,510</b>	<b>3,206</b>	<b>5,778</b>

### 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 (\*)**

	2016	2015
Exploratory well costs capitalized for a period of one year	806	1,387
Exploratory well costs capitalized for a period greater than one year	4,327	3,814
<b>Total capitalized exploratory well costs</b>	<b>5,133</b>	<b>5,201</b>
Number of projects relating to exploratory well costs capitalized for a period greater than one year	57	70

	Capitalized costs (2016)	Number of wells
2015	932	20
2014	1,126	23
2013	675	13
2012	717	12
2011 and previous years	877	20
<b>Exploratory well costs that have been capitalized for a period greater than one year</b>	<b>4,327</b>	<b>88</b>

(\*) Amounts paid for obtaining rights and concessions for exploration of oil and gas (capitalized acquisition costs) are not included.

Exploratory well costs that have been capitalized for a period greater than one year since the completion of drilling amount to US\$ 4,327. Those costs relate to 57 projects comprising (i) US\$ 4,094 for wells in areas in which there has been ongoing drilling or firmly planned drilling activities in the near term and for which an evaluation plan (“Plano de Avaliação”) has been submitted for approval by ANP; and (ii) US\$ 233 relate to costs incurred to evaluate the reserves and their potential development.

## 16. Trade payables

	12.31.2016	12.31.2015
Third parties in Brazil	3,280	3,331
Third parties abroad	2,019	2,566
Related parties	463	476
<b>Balance on current liabilities</b>	<b>5,762</b>	<b>6,373</b>

## 17. Finance debt

The Company obtains funding through debt financing for capital expenditures to develop crude oil and natural gas producing properties, construct vessels and pipelines, construct and expand industrial plants, among other uses.

The Company has covenants that were not in default at December, 31 2016 in its loan agreements and notes issued in the capital markets requiring, among other obligations, the presentation of interim financial statements within 90 days of the end of each quarter (not reviewed by Independent Registered Public Accounting Firm) and audited financial statements within 120 days of the end of each fiscal year. Non-compliance with these obligations do not represent immediate events of default and the grace period in which the Company has to deliver these financial statements ranges from 30 to 60 days, depending on the agreement. The Company also has covenants with respect to debt level in some of its loan agreements with the Brazilian Development Bank (*Banco Nacional de Desenvolvimento - BNDES*).

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

	Export Credit Agencies	Banking Market	Capital Market	Others	Total
<b>Non-current</b>					
In Brazil					
Opening balance at January 1, 2015	-	29,288	1,301	28	30,617
Additions (new funding obtained)	-	4,918	989	-	5,907
Interest incurred during the period	-	289	-	-	289
Foreign exchange/inflation indexation charges	-	3,001	80	2	3,083
Transfer from long-term to short-term	-	(2,389)	(149)	(4)	(2,542)
Cumulative translation adjustment (CTA)	-	(10,410)	(496)	(9)	(10,915)
Balance as of December 31, 2015	-	24,697	1,725	17	26,439
Abroad					
Opening balance at January 1, 2015	5,244	29,898	53,810	649	89,601
Additions (new funding obtained)	163	5,753	2,045	-	7,961
Interest incurred during the period	5	34	48	8	95
Foreign exchange/inflation indexation charges	442	1,342	(1,092)	56	748
Transfer from long-term to short-term	(767)	(4,183)	(5,770)	(45)	(10,765)
Cumulative translation adjustment (CTA)	(442)	(1,877)	(222)	(56)	(2,597)
Balance as of December 31, 2015	4,645	30,967	48,819	612	85,043
<b>Total Balance as of December 31, 2015</b>	<b>4,645</b>	<b>55,664</b>	<b>50,544</b>	<b>629</b>	<b>111,482</b>
<b>Non-current</b>					
In Brazil					
Opening balance at January 1, 2016	-	24,697	1,725	17	26,439
Additions (new funding obtained)	-	448	-	-	448
Interest incurred during the period	-	302	-	-	302
Foreign exchange/inflation indexation charges	-	(1,408)	54	1	(1,353)
Transfer from long-term to short-term	-	(7,254)	(135)	(2)	(7,391)
Transfer to liabilities associated with assets classified as held for sale	-	(7)	-	-	(7)
Cumulative translation adjustment (CTA)	-	4,389	337	3	4,729
Balance as of December 31, 2016	-	21,167	1,981	19	23,167
Abroad					
Opening balance at January 1, 2016	4,645	30,967	48,819	612	85,043
Additions (new funding obtained)	-	7,392	9,758	-	17,150
Interest incurred during the period	4	17	52	9	82
Foreign exchange/inflation indexation charges	(165)	(1,133)	(609)	(21)	(1,928)
Transfer from long-term to short-term	(980)	(4,326)	(10,145)	(115)	(15,566)
Transfer to liabilities associated with assets classified as held for sale	-	-	(302)	-	(302)
Cumulative translation adjustment (CTA)	163	768	(227)	21	725
Balance as of December 31, 2016	3,667	33,685	47,346	506	85,204
<b>Total Balance as of December 31, 2016</b>	<b>3,667</b>	<b>54,852</b>	<b>49,327</b>	<b>525</b>	<b>108,371</b>
<b>Current</b>				<b>12.31.2016</b>	<b>12.31.2015</b>
Short-term debt				358	1,523
Current portion of long-term debt				7,779	11,500
Accrued interest				1,618	1,660
<b>Total</b>				<b>9,755</b>	<b>14,683</b>

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

Maturity in	up to 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	5 years and onwards	Total (*)	Fair value
<b>Financing in Brazilian Reais (R\$):</b>	2,463	2,439	4,348	6,005	3,325	5,595	24,175	20,899
Floating rate debt	1,860	1,985	3,907	5,583	2,908	3,765	20,008	
Fixed rate debt	603	454	441	422	417	1,830	4,167	
Average interest rate	10.2%	9.0%	8.6%	7.2%	6.3%	5.2%	7.9%	
<b>Financing in U.S.Dollars (US\$):</b>	6,648	7,328	14,998	9,928	14,493	29,824	83,219	87,839
Floating rate debt	4,835	6,317	11,601	5,941	2,474	12,347	43,515	
Fixed rate debt	1,813	1,011	3,397	3,987	12,019	17,477	39,704	
Average interest rate	5.1%	5.3%	5.3%	5.6%	5.2%	6.6%	6.0%	
<b>Financing in R\$ indexed to US\$:</b>	273	176	173	173	173	764	1,732	1,683
Floating rate debt	23	22	19	19	19	16	118	
Fixed rate debt	250	154	154	154	154	748	1,614	
Average interest rate	6.2%	6.4%	6.4%	6.5%	6.6%	6.9%	6.6%	
<b>Financing in Pound Sterling (£):</b>	57	-	-	-	-	2,120	2,177	1,593
Fixed rate debt	57	-	-	-	-	2,120	2,177	
Average interest rate	6.2%	-	-	-	-	6.3%	6.2%	
<b>Financing in Japanese Yen (¥):</b>	88	88	-	-	-	-	176	198
Floating rate debt	88	88	-	-	-	-	176	
Average interest rate	0.5%	0.4%	-	-	-	-	0.5%	
<b>Financing in Euro (€):</b>	219	1,185	1,379	207	786	2,864	6,640	6,549
Floating rate debt	1	-	-	160	-	-	161	
Fixed rate debt	218	1,185	1,379	47	786	2,864	6,479	
Average interest rate	3.7%	3.9%	4.2%	4.5%	4.6%	4.7%	4.3%	
<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, 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%	
<b>Total as of December 31, 2015</b>	<b>14,683</b>	<b>11,397</b>	<b>16,091</b>	<b>22,596</b>	<b>15,537</b>	<b>45,861</b>	<b>126,165</b>	<b>109,168</b>
Average interest rate	5.9%	6.4%	5.6%	5.8%	6.9%	6.7%	6.3%	

\* The average maturity of outstanding debt as of December 31, 2016 is 7.46 years (7.14 years as of December 31, 2015).

The fair value of the Company's finance debts is mainly determined and categorized into a fair value hierarchy as follows:

Level 1– quoted prices in active markets for identical liabilities, when applicable, amounting to US\$ 46,510 as of December 31, 2016 (US\$ 42,929 as of December 31, 2015); and

Level 2 –discounted cash flows based on discount rate determined by interpolating spot rates considering financing debts indexes proxies, taking into account their currencies and also the Petrobras' credit risk, amounting to US\$ 72,258 as of December 31, 2016 (US\$ 66,239 as of December 31, 2015). The fair value of finance debts categorized into level 2 were previously determined using a discounted cash flow based on a theoretical curve derived from the yield curve of the Company's most liquid bonds.

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

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

The capitalization rate used to determine the amount of borrowing costs eligible for capitalization was the weighted average of the borrowing costs applicable to the borrowings that were outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. In 2016 the capitalization rate was 5.80% p.a. (5.03% p.a. in 2015).

## 17.3. Lines of credit

Company	Financial institution	Date	Maturity	Amount		
				Available (Lines of Credit)	Used	Balance
<b>Abroad</b>						
Petrobras	JBIC	7/16/2013	12/31/2018	1,500	-	1,500
PGT BV	CHINA EXIM	10/24/2016	Not defined	1,000	-	1,000
PGT BV	SACE	12/22/2016	12/22/2017	300	-	300
<b>PGT BV</b>				<b>2,800</b>	<b>-</b>	<b>2,800</b>
<b>In Brazil</b>						
Petrobras	FINEP	4/16/2014	12/26/2017	78	74	4
PNBV	BNDES	9/3/2013	3/26/2018	3,031	704	2,327
Transpetro	BNDES	1/31/2007	Not defined	689	195	494
Transpetro	Banco do Brasil	7/9/2010	4/10/2038	49	21	28
Transpetro	Caixa Econômica Federal	11/23/2010	Not defined	101	-	101
<b>Total</b>				<b>3,948</b>	<b>994</b>	<b>2,954</b>

## 17.4. Collateral

Most of the Company's debt is unsecured, but certain specific funding instruments to promote economic development are collateralized. In addition, financing agreements with China Development Bank (CDB) maturing in 2019 and 2026 are also collateralized based on future oil exports for specific buyers limited to 300 thousand barrels per day up to 2019 and 100 thousand barrels per day from 2020 to 2026. This collateral may not exceed the amount of the related debt.

The loans obtained by structured entities are collateralized based on the projects' assets, as well as liens on receivables of the structured entities. Certain wholly-owned subsidiaries issue securities that are fully and unconditionally guaranteed by Petrobras.

The global notes issued by the Company in the capital market through its wholly-owned subsidiary Petrobras Global Finance B.V. – PGF are unsecured. However, Petrobras fully, unconditionally and irrevocably guarantees these notes, as set out in note 36.

## 18. Leases

### 18.1. Future minimum lease payments / receipts – finance leases

Estimated lease payments / receivable	Receipts			Payments		
	Future value	Annual interest	Present value	Future value	Annual interest	Present value
2017	214	(123)	91	43	(25)	18
2018-2021	784	(419)	365	170	(87)	83
2022 and thereafter	1,371	(353)	1,018	388	(245)	143
As of December 31, 2016	2,369	(895)	1,474	601	(357)	244
Current			91			18
Non-current			1,383			226
As of December 31, 2016			1,474			244
Current (*)			66			19
Non-current (*)			1,393			78
As of December 31, 2015			1,459			97

(\*) For comparative purposes, the present value of payments in the amount of US\$ 6 was reclassified from trade payables in current liabilities and the amount of US\$ 38 was reclassified from others in non-current liabilities.

### 18.2. Future minimum lease payments – operating leases

Operating leases mainly include oil and gas production units, drilling rigs and other exploration and production equipment, vessels and support vessels, helicopters, land and building leases.

2017	11,395
2018	8,749
2019	7,861
2020	7,560
2021	7,103
2022 and thereafter	54,250
As of December 31, 2016	96,918
As of December 31, 2015	99,194

As of December 31, 2016, the balance of estimated future minimum lease payments under operating leases includes US\$ 49,671 (US\$ 60,628 as of December 31, 2015) with respect to assets under construction, for which the lease term has not commenced.

During 2016, the Company recognized expenditures of US\$ 9,920 (US\$ 9,898 in 2015) for operating leases installments.

## 19. Related-party transactions

The Company has a related-party transactions policy, which is applicable to all the Petrobras Group, in accordance with the Company's by-laws.

This policy provide for guidance to Petrobras and its workforce while entering into related-party transactions and dealing with potential conflicts of interest on these transactions, in order to ensure the goals of the Company and align them with transparency of processes and corporate governance best practices, such as: (i) Audit Committee prior assessment of transactions between the Company and its associates, the Brazilian Federal Government (including its agencies or similar bodies and controlled entities), as well as transactions with entities controlled by key management personnel or by their close family members; and (ii) prior approval of, at least, 2/3 of board members with respect to transactions with the Brazilian Federal Government.

The Related-Party Transactions Policy also aims to ensure an adequate and diligent decision-making process for the Company's key management.

### 19.1. Transactions with joint ventures, associates, government entities and pension plans

The Company has engaged, and expects to continue to engage, in the ordinary course of business in numerous transactions with joint ventures, associates, pension plans, as well as with the Company's controlling shareholder, the Brazilian federal government, which includes transactions with banks and other entities under its control, such as financing and banking, asset management and others.

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

	2016	12.31.2016		2015	12.31.2015		2014
	Income (expense)	Assets	Liabilities	Income (expense)	Assets	Liabilities	Income (expense)
<b>Joint ventures and associates</b>							
State-controlled gas distributors	1,740	246	69	3,021	255	72	4,507
Petrochemical companies	3,578	131	27	3,676	144	45	7,703
Other associates and joint ventures	462	178	382	571	134	453	537
<b>Subtotal</b>	<b>5,780</b>	<b>555</b>	<b>478</b>	<b>7,268</b>	<b>533</b>	<b>570</b>	<b>12,747</b>
<b>Government entities</b>							
Government bonds	130	1,113	-	342	1,115	-	662
Banks controlled by the Brazilian Government	(3,073)	4,114	19,860	(4,121)	2,607	24,336	(3,246)
Receivables from the Electricity sector (note 8.4)	962	4,922	2	1,618	3,415	-	2,364
Petroleum and alcohol account - receivables from Brazilian Government (note 19.2)	5	268	-	5	219	-	3
Federal Government (Dividends and interest on capital)	-	-	-	-	-	-	22
Others	200	408	333	14	306	316	73
<b>Subtotal</b>	<b>(1,776)</b>	<b>10,825</b>	<b>20,195</b>	<b>(2,142)</b>	<b>7,662</b>	<b>24,652</b>	<b>(122)</b>
Pension plans	-	48	99	-	36	110	1
<b>Total</b>	<b>4,004</b>	<b>11,428</b>	<b>20,772</b>	<b>5,126</b>	<b>8,231</b>	<b>25,332</b>	<b>12,626</b>
Revenues, mainly sales revenues	6,558	-	-	8,544	-	-	14,297
Foreign exchange and inflation indexation charges, net	(284)	-	-	(1,486)	-	-	(465)
Finance income (expenses), net	(2,270)	-	-	(1,932)	-	-	(1,206)
Current assets	-	3,062	-	-	2,255	-	-
Non-current assets	-	8,366	-	-	5,976	-	-
Current liabilities	-	-	4,037	-	-	3,248	-
Non-current liabilities	-	-	16,735	-	-	22,084	-
<b>Total</b>	<b>4,004</b>	<b>11,428</b>	<b>20,772</b>	<b>5,126</b>	<b>8,231</b>	<b>25,332</b>	<b>12,626</b>

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

As of December 31, 2016, the balance of receivables related to the Petroleum and Alcohol accounts was US\$ 268 (US\$ 219 as of December 31, 2015). Pursuant to Provisional Measure 2,181 of August 24, 2001, the Federal Government may settle this balance by using National Treasury Notes in an amount equal to the outstanding balance, or allow the Company to offset the outstanding balance against amounts payable to the Federal Government, including taxes payable, or both.

The Company has provided all the information required by the National Treasury Secretariat (*Secretaria do Tesouro Nacional - STN*) in order to resolve disputes between the parties and conclude the settlement with the Brazilian Federal Government.

Following several negotiation attempts at the administrative level, the Company filed a lawsuit in July 2011 to collect the receivables.

On October 28, 2016, the court ruled in favor of the Company, disallowing the use of an alleged debt from the liquidated company of the group, Petrobras Comércio Internacional S.A. – Interbrás, by the Brazilian Federal Government, when offsetting the outstanding balance. However, the parties are still able to file appeals at this stage.

### 19.3. Compensation of employees and key management personnel

The criteria for compensation of employees and officers are established based on the relevant labor legislation and the Company's Positions, Salaries and Benefits Plan (*Plano de Cargos e Salários e de Benefícios e Vantagens*).

The compensation of employees (including those occupying managerial positions) and officers in the months of December 2016 and December 2015 were:

Compensation of employees, excluding officers (amounts in U.S. dollars)	Dez/2016	Dez/2015
Lowest compensation	934.64	731.99
Average compensation	5,376.73	4,315.36
Highest compensation	27,996.49	23,442.18
<b>Compensation of highest paid Petrobras officer</b>	<b>35,453.09</b>	<b>27,780.21</b>

The total compensation of Petrobras' key management personnel is set out as follows:

	2016			2015		
	Officers	Board (members and alternates)	Total	Officers	Board (members and alternates)	Total
Wages and short-term benefits	3.4	0.4	3.8	3.9	0.4	4.3
Social security and other employee-related taxes	1.0	0.1	1.1	1.0	0.1	1.1
Post-employment benefits (pension plan)	0.4	-	0.4	0.4	-	0.4
Benefits due to termination of tenure	0.2	-	0.2	-	-	-
<b>Total compensation recognized in the statement of income</b>	<b>5.0</b>	<b>0.5</b>	<b>5.5</b>	<b>5.3</b>	<b>0.5</b>	<b>5.8</b>
Total compensation paid	5.0	0.5	5.5	5.3	0.5	5.8
Average number of members in the period (*)	7.67	11.00	18.67	8.00	13.67	21.67
Average number of paid members in the period (**)	7.67	9.33	17.00	8.00	11.33	19.33

(\*) Monthly average number of members.

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

In 2016 the board members and executive officers of the Petrobras group received US\$ 22.2 as compensation (US\$ 20.3 in 2015).

The compensation of the Advisory Committees to the Board of Directors is apart from the fixed compensation set for the Board members and, therefore, has not been classified under compensation of Petrobras' key management personnel.

In 2016, the alternates of Board members, who were also members of these committees up to April 2016, received the amount of US\$ 14 thousand as compensation in 2016 (US\$ 17 thousand including related charges).

## 20. Provision for decommissioning costs

<b>Non-current liabilities</b>	<b>2016</b>	<b>2015</b>
Opening balance	9,150	8,267
Adjustment to provision	(564)	4,493
Transfers related to liabilities held for sale (*)	(35)	(125)
Payments made	(730)	(1,242)
Interest accrued	660	231
Others	(41)	121
Cumulative translation adjustment	1,812	(2,595)
<b>Closing balance</b>	<b>10,252</b>	<b>9,150</b>

(\*) Includes US\$ 126 relating to the termination of sales contract of Bijupira and Salema fields, US\$ 52 relating to the intention to sell interest in Lapa, Sururu, Berbigão and Oeste de Atapu fields, and US\$ 109 transferred pursuant to the sale of the subsidiary PESA.

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

In 2016, the adjustment to this provision was mainly due to a higher risk-adjusted discount rate (7.42% and 6.73% for 2016 and 2015, respectively), partially offset by an increase in cost estimates mainly due to additional drilling wells and other equipments.

## 21. Taxes

### 21.1. Income taxes and other taxes

<b>Income taxes</b>	<b>Current assets</b>		<b>Current liabilities</b>	
	<b>12.31.2016</b>	<b>12.31.2015</b>	<b>12.31.2016</b>	<b>12.31.2015</b>
Taxes in Brazil	595	959	112	62
Taxes abroad	7	24	15	43
<b>Total</b>	<b>602</b>	<b>983</b>	<b>127</b>	<b>105</b>

<b>Other taxes</b>	<b>Current assets</b>		<b>Non-current assets</b>		<b>Current liabilities</b>		<b>Non-current liabilities (*)</b>	
	<b>12.31.2016</b>	<b>12.31.2015</b>	<b>12.31.2016</b>	<b>12.31.2015</b>	<b>12.31.2016</b>	<b>12.31.2015</b>	<b>12.31.2016</b>	<b>12.31.2015</b>
Taxes in Brazil								
Current / Deferred ICMS (VAT)	969	807	676	605	1,078	1,045	-	-
Current / Deferred PIS and COFINS	710	746	2,262	2,026	463	487	-	-
CIDE	22	18	-	-	118	115	-	-
Production taxes	-	-	-	-	1,232	622	-	-
Withholding income taxes	-	-	-	-	486	435	-	15
REFIS and PRORELIT	-	-	-	-	28	274	-	11
Others	165	150	191	184	190	244	20	-
<b>Total in Brazil</b>	<b>1,866</b>	<b>1,721</b>	<b>3,129</b>	<b>2,815</b>	<b>3,595</b>	<b>3,222</b>	<b>20</b>	<b>26</b>
Taxes abroad	34	44	12	6	33	143	-	-
<b>Total</b>	<b>1,900</b>	<b>1,765</b>	<b>3,141</b>	<b>2,821</b>	<b>3,628</b>	<b>3,365</b>	<b>20</b>	<b>26</b>

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

## **21.2. Tax amnesty and refinancing program - Programa de Recuperação Fiscal (REFIS)**

On July 16, 2015 Petrobras paid US\$ 514 (US\$ 385 in cash and US\$ 129 using tax credits) to settle a definitive ruling at the administrative stage with respect to a tax deficiency notice issued by the Brazilian Federal Tax Authorities. The notice is related to the tax on financial operations (Imposto sobre operações financeiras - IOF) applied to intercompany loans made by Petrobras to foreign subsidiaries in 2008.

In addition, Joint Ordinance 1,064 (Portaria Conjunta RFB/PGFN 1.064) issued by the Brazilian Federal Tax Authorities and by the Brazilian Federal Tax Attorney General's Office, and Normative Instruction 1,576/15 (Instrução Normativa RFB 1.576/15) issued by the Brazilian Federal Tax Authorities, on August 3, 2015, provided taxpayers an option for partial relief from existing federal tax debts, through a tax amnesty program created under Law 12,996/14 – Programa de Recuperação Fiscal (REFIS). The Company elected to join the REFIS to settle the tax liabilities as follows:

a) Pay amounts due under the tax deficiency notices related to the tax on financial operations (IOF) applicable to intercompany loans made by Petrobras to its foreign subsidiaries in 2007, 2009 and 2010, and to pay amounts due related to the IOF applicable to similar intercompany loans made in other periods, for which a tax deficiency notice has not been issued (2011 and 2012), in the amount of US\$ 1,049. The Company had modified its procedures with respect to the payment of the IOF applicable to transactions from 2013 and, therefore, does not expect any additional tax deficiency notices.

b) Pay the tax deficiency notices issued by the Brazilian Federal Tax Authorities related to the alleged failure to pay withholding income tax (Imposto de Renda Retido na Fonte- IRRF) on amounts Petrobras paid to its former subsidiary Petrobras International Finance Company (PifCo) with respect to crude oil and oil product imports between 1999 and 2002, 2004, 2005 and 2007 to 2012, in the amount of US\$ 800.

c) Penalties for noncompliance with customs clearance procedures on crude oil and oil product imports from 2008 to 2013, in the amount of US\$ 13; and

d) Indexation charges related to REFIS balance of US\$ 9 recognized in the last quarter of 2015.

The Company has agreed to pay those federal tax liabilities in 30 monthly installments, which are updated by the Selic interest rate, following an immediate down payment of 20% of the total amount due (after the discounts provided under the REFIS) and using tax credits (tax loss carryforwards) to pay for interest and penalties.

As a result, the Company recognized a total charge of US\$ 2,334 in 2015, of which US\$ 1,566 was recognized as other taxes expenses and US\$ 768 as finance expenses, of which the Company has already settled a total amount of US\$ 1,833: US\$ 971 was paid in cash, US\$ 509 by using tax credits and US\$ 353 by using judicial deposits. The remaining amount was settled in January 2017.

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

In 2016, the Company elected to settle taxes in cash through an amnesty settlement programs administered by the State of São Paulo pursuant to the Decree No. 61,625/2015 and Decree No. 61,788/2016, as well as Complementary Law 333/2016 enacted by the State of Pernambuco. In 2015, the Company decided to benefit from tax amnesty programs relating to the states of Rio de Janeiro, Espírito Santo, Bahia, Pará and the Brazil Federal District.

In 2016 the Company charged to income US\$ 44 (US\$ 370 in 2015), of which US\$ 34 (US\$314 in 2015) was recognized as other taxes and US\$ 8 (US\$ 56 in 2015) as finance expense within Statement of Income.

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#### **21.4. Reduction tax litigation program (Programa de Redução de Litígios Tributários – PRORELIT)**

On October 30, 2015, Petrobras joined the PRORELIT, established by Law No. 13,202 / 15 (Measure Conversion Act No. 685/15) paying US\$ 17, US\$ 5 in cash and US\$ 12 in tax credits debts and customs fines against the Company from 2014 and 2015 and to tax penalties for improper deduction of tax bases in 2003 and 2004. In 2015 the Company charged to income US\$ 17, of which US\$ 7 was recognized in other taxes expenses and US\$ 10 in finance expenses in the Statement of Income.

## 21.5. Brazilian Tax Law

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

- Law No. 7,182 – establishes a Rate Control, Monitoring and Supervision of Research, Mining, Oil and Gas Exploration and Utilization Activities tax (Taxa de Controle, Monitoramento e Fiscalização das Atividades de Pesquisa, Lavra, Exploração e Aproveitamento de Petróleo e Gás – TFPG) over each barrel of crude oil or equivalent unit of natural gas extracted in the State of Rio de Janeiro, and
- Law No. 7,183 – establishes a VAT (ICMS) tax over transactions involving crude oil operations.

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.

## 21.6. Deferred income taxes - non-current

### a) The changes in the deferred income taxes are presented as follows:

Income taxes in Brazil comprise corporate income tax (IRPJ) and social contribution on net income (CSLL). Brazilian statutory corporate tax rates are 25% and 9%, respectively.

	Property, Plant and Equipment		Loans, trade and other receivables / payables and financing	Finance leases	Provision for legal proceedings	Tax losses	Inventories	Employee Benefits	Others	Total
	Oil and gas exploration costs	Others (*)								
Balance at January 1, 2015	(13,647)	(224)	3,823	(592)	526	5,718	490	2,022	(141)	(2,025)
Recognized in the statement of income for the year	(1,284)	1,382	(525)	44	471	2,166	42	(157)	(96)	2,043
Recognized in shareholders' equity	-	14	6,490	(14)	-	(152)	-	(14)	65	6,389
Cumulative translation adjustment	4,608	223	(2,275)	206	(204)	(2,019)	(182)	(645)	180	(108)
Use of tax credits - REFIS and PRORELIT	-	-	-	-	-	(521)	-	-	-	(521)
Others	-	(104)	100	6	(1)	23	3	(7)	(14)	6
<b>Balance at December 31, 2015</b>	<b>(10,323)</b>	<b>1,291</b>	<b>7,613</b>	<b>(350)</b>	<b>792</b>	<b>5,215</b>	<b>353</b>	<b>1,199</b>	<b>(6)</b>	<b>5,784</b>
Recognized in the statement of income of 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>
Deferred tax assets										6,016
Deferred tax liabilities										(232)
<b>Balance at December 31, 2015</b>										<b>5,784</b>
Deferred tax assets										4,307
Deferred tax liabilities										(263)
<b>Balance at December 31, 2016</b>										<b>4,044</b>

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

(\*\*) Includes US\$ 77 transferred to liabilities associated with assets held for sale due to the disposal of subsidiaries Liquigás, PESA and NTS.

**b) Timing of reversal of deferred income taxes**

Deferred tax assets were recognized based on projections of taxable profit in future periods supported by the Company's 2017-2021 Business and Management Plan (BMP). The main goals and objectives outlined in its business plan include business restructuring, a divestment plan, demobilization of assets and reducing operating expenses.

Management considers that the deferred tax assets will be realized to the extent the deferred tax liabilities are reserved and expected taxable events occur, based on its 2017-2021 BMP.

The estimated schedule of recovery/reversal of net deferred tax assets (liabilities) recoverable (payable) as of December 31, 2016 is set out in the following table:

	<b>Assets</b>	<b>Liabilities</b>
2017	2,050	115
2018	326	9
2019	449	13
2020	544	14
2021	323	68
2022	239	-
2023 and thereafter	376	44
<b>Recognized deferred tax credits</b>	<b>4,307</b>	<b>263</b>
Brazil	483	-
Abroad	2,532	-
<b>Unrecognized deferred tax credits</b>	<b>3,015</b>	<b>-</b>
<b>Total</b>	<b>7,322</b>	<b>263</b>

At December 31, 2016, the Company had tax loss carryforwards arising from offshore subsidiaries, for which no deferred tax assets had been recognized. These tax losses totaling US\$ 2,532 (US\$ 2,437 as of December 31, 2015) arose mainly from oil and gas exploration and production and refining activities in the United States of US\$ 2,276 (US\$ 2,002 as of December 31, 2015), as well as activities in Spain in the amount of US\$ 256 (US\$ 435 as of December 31, 2015).

An aging of the unrecognized tax carryforwards, from companies abroad, classified by lapse of the applicable statute of limitations is set out below:

<b>Lapse of Statute of Limitations</b>	<b>Unrecognized deferred tax credits</b>
2020	38
2021	133
2022	5
2023	48
2024	32
2025	6
2026	113
2027	130
2028	147
2029	162
2030 and thereafter	1,718
<b>Total</b>	<b>2,532</b>

## 21.7. Reconciliation between statutory tax rate and effective tax expense rate

The following table provides the reconciliation of Brazilian statutory tax rate to the Company's effective rate on income before income taxes:

	2016	2015	2014
Loss before income taxes	(3,665)	(9,748)	(8,824)
Nominal income taxes computed based on Brazilian statutory corporate tax rates (34%)	1,247	3,314	3,000
Adjustments to arrive at the effective tax rate:			
· Different jurisdictional tax rates for companies abroad	(157)	(251)	559
· Brazilian income taxes on income of companies incorporated outside Brazil (*)	(320)	(751)	-
· Tax incentives	51	11	26
· Tax loss carryforwards (unrecognized tax losses)	(265)	(554)	(1,289)
· Write-off - overpayments incorrectly capitalized (note 3)	-	-	(907)
· Non-taxable income (non-deductible expenses), net (**)	(1,080)	(658)	(338)
· Others	(160)	(28)	270
<b>Income taxes benefit (expense)</b>	<b>(684)</b>	<b>1,137</b>	<b>1,321</b>
Deferred income taxes	912	2,043	3,045
Current income taxes	(1,597)	(906)	(1,724)
<b>Total</b>	<b>(684)</b>	<b>1,137</b>	<b>1,321</b>
Effective tax rate of income taxes	(18.7)%	11.7%	15.0%

(\*) Relates to Brazilian income taxes on earnings of offshore investees generated up to December 31, 2016, as established by Law No. 12,973/2014.

(\*\*) Includes results in equity-accounted investments and CTA transferred to income statement due to the disposal of Pesa and Nansei as set out in note 10.1.

## 22. Employee benefits (Post-Employment)

	2016	2015
<b>Liabilities</b>		
Petros Pension Plan	10,752	5,938
Petros 2 Pension Plan	293	71
AMS Medical Plan	11,214	6,753
Other plans	38	88
<b>Total</b>	<b>22,297</b>	<b>12,850</b>
Current	820	655
Non-current	21,477	12,195
<b>Total</b>	<b>22,297</b>	<b>12,850</b>

### 22.1. Petros Plan and Petros 2 Plan

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

#### a) Petros Plan - Fundação Petrobras de Seguridade Social

The Petros Plan was established by Petrobras in July 1970 as a defined-benefit pension plan and currently provides post-retirement benefits for employees of Petrobras and Petrobras Distribuidora S.A., in order to complement government social security benefits. The Petros Plan has been closed to new participants since September 2002.

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

On July 31, 2016, Petros Plan announced a deficit in the amount of US\$ 6,934. The deficit exceeds by US\$ 4,909 the ceiling amount of US\$ 2,025 as established in the Resolution 22/2015 enacted by the Post-Retirement Benefit Federal Council - CNPC, which outlines the terms of equating plans. Accordingly, participants of the plan and their employers (sponsors) would be called to cover this deficit based on their respective proportions of regular contributions and in accordance with an equation plan guideline in a period totaling 1.5 times the duration of the liabilities under the plan, which is estimated to be 18 years.

Pursuant to the aforementioned rule, Petros should have developed and approved by December 31, 2016, an equating plan to be implemented within 60 calendar days following the Executive Council approval. However, due to managerial and technical reasons, the Pension Plan requested a Conduct Adjustment Declaration (TAC) before Superintendency of Post-retirement Benefits – PREVIC, in order to postpone the implementation of its equating plan for 2015 within approximately 210 calendar days after the TAC approval. Therefore, the Company, as sponsor of this pension plan, expects to make additional contributions only after the term established in the TAC.

As of December 31, 2016, the balance of the Terms of Financial Commitment (TFC), signed by Petrobras and Petros in 2008 is US\$ 3,630. The TCF is a financial commitment agreement to cover obligations under the pension plan, which amounts are due in 20 years, with 6% p.a. semiannual coupon payments based on the updated balance. The Company has provided crude oil and oil products pledged as security for the TFC totaling US\$ 1,979 which are being reviewed.

The employers' expected contributions to the plan for 2017 are US\$ 191 and interest payments on TCF US\$ 221.

The average duration of the actuarial liability related to the plan, as of December 31, 2016, is 11.42 years (10.06 years as of December 31, 2015).

#### **b) Petros 2 Plan - Fundação Petrobras de Seguridade Social**

Petros 2 Plan was established in July 2007 by Petrobras and certain subsidiaries as a variable contribution plan recognizing past service costs for contributions for the period from August 2002 to August 29, 2007. The Petros 2 Plan currently provides post-retirement benefits for employees of Petrobras, Petrobras Distribuidora S.A., Stratura Asfaltos, Termobahia, Termomacaé, Transportadora Brasileira Gasoduto Brasil-Bolívia S.A. – TBG, Petrobras Transporte S.A. – Transpetro and Petrobras Biocombustível and e Araucária Nitrogenados. The plan is open to new participants although there will no longer be payments relating to past service costs.

Certain elements of the Petros 2 Plan have defined benefit characteristics, primarily the coverage of disability and death risks and the guarantee of minimum defined benefit and lifetime income. These actuarial commitments are treated as defined benefit components of the plan and are accounted for by applying the projected unit credit method. Contributions paid for actuarial commitments that have defined contribution characteristics are accrued monthly in the statement of income and are intended to constitute a reserve for programmed retirement. The contributions for the portion of the plan with defined contribution characteristics were US\$ 267 in 2016.

The defined benefit portion of the contributions was suspended from July 1, 2012 to June 30, 2017, as determined by the Executive Council of Petros, based on advice of the actuarial consultants from Petros. Therefore, the entire contributions are being applied to the individual accounts of plan participants.

For 2017 the employers' expected contributions to the defined contribution portion of the plan are US\$ 262.

The average duration of the actuarial liability related to the plan, as of December 31, 2016 is 43.20 years (29.58 years as of December 31, 2015).

## **22.2. Other plans**

The Company also sponsors other pension and health care plans of certain of its Brazilian and international subsidiaries. Most of these plans are unfunded and their assets are held in trusts, foundations or similar entities governed by local regulations.

Following the disposals of Petrobras Argentina and Nansei Sekiyu, the Company is not a sponsor of their pension and health care plans at December 31, 2016. In addition, the Company's Board of Directors approved the disposal of its interest in the subsidiary Liquigás and, accordingly, the related actuarial liabilities were reclassified as held for sale. Further information on these divestments is presented in note 10.1.

## **22.3. Pension Plans assets**

Pension plans assets follow a long term investment strategy based on the risks assessed for each different class of assets and provide for diversification, in order to lower portfolio risk. The portfolio profile must comply with the Brazilian National Monetary Council (Conselho Monetário Nacional – CMN) regulations.

Petros establishes investment policies for 5-year periods, reviewed annually. Petros uses an asset liability management model (ALM) to address net cash flow mismatches of the benefit plans, based on liquidity and solvency parameters, simulating a 30-year period.

Portfolio allocation limits for the period between 2017 and 2021 for the Petros Plan of the Petrobras Group are 40% to 75% in fixed-income securities, 10% to 35% in variable-income securities, 4% to 8% in real estate, 2% to 8% in loans to participants, as well as 0% to 7% in structured finance projects. Allocation limits for Petros 2 Plan for the same period are: 60% to 100% in fixed-income securities, 0% to 20% in variable-income securities, 0% to 5% in real estate, 2% to 8% in loans to participants, 0% to 4% in structured finance projects and 0% to 2% in investments abroad.

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

Type of asset	2016				2015	
	Quoted prices in active markets	Unquoted prices	Total fair value	%	Total fair value	%
<b>Fixed income</b>	6,606	1,166	7,772	50%	5,451	43%
Corporate bonds	-	68	68	-	159	-
Government bonds	6,606	-	6,606	-	4,362	-
Other investments	-	1,098	1,098	-	930	-
<b>Variable income</b>	4,949	113	5,062	33%	4,478	36%
Common and preferred shares	4,949	-	4,949	-	4,309	-
Other investments	-	1,098	1,098	-	169	-
<b>Structured investments</b>	-	773	773	5%	978	8%
Private equity funds	-	670	670	-	894	-
Venture capital funds	-	17	17	-	9	-
Real estate Funds	-	86	86	-	75	-
<b>Real estate properties</b>	-	1,243	1,243	8%	1,075	9%
	11,555	3,295	14,850	96%	11,982	96%
Loans to participants			695	4%	531	4%
			15,545	100%	12,513	100%

As of December 31, 2016, the investment portfolio included Petrobras' common and preferred shares in the amount of US\$ 11 and US\$ 45, respectively, and real estate properties leased by the Company in the amount of US\$ 457.

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

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

Petrobras, Petrobras Distribuidora S.A., Petrobras Transporte S.A. – Transpetro, Petrobras Biocombustível and Transportadora Brasileira Gasoduto Brasil-Bolívia - TBG operate a medical benefit plan for their employees in Brazil (active and retired) and their dependents: the AMS health care plan. The plan is managed by the Company based on a self-supporting benefit assumption and includes health prevention and health care programs. The plan is mainly exposed to the risk of an increase in medical costs due to new technologies, new types of coverage and to a higher level of usage of medical benefits. The Company continuously improves the quality of its technical and administrative processes, as well as the health programs offered to beneficiaries in order to hedge such risks.

The employees make fixed monthly contributions to cover high-risk procedures and variable contributions for a portion of the cost of the other procedures, both based on the contribution tables of the plan, which are determined based on certain parameters, such as salary and age levels. The plan also includes assistance towards the purchase of certain medicines in registered drugstores throughout Brazil. There are no health care plan assets. Benefits are paid and recognized by the Company based on the costs incurred by the participants.

The average duration of the actuarial liability related to this health care plan, as of December 31, 2016, is 22.04 years (21,54 as of December 31, 2015).

#### 22.5. Net actuarial liabilities and expenses calculated by independent actuaries and fair value of plans assets

Aggregate information is presented for other plans, whose total assets and liabilities are not material.

**a) Changes in the actuarial liabilities, in the fair value of the assets and in the amounts recognized in the statement of financial position**

	2016				
	Pension Plan		Medical Plan	Other plans	Total
	Petros	Petros 2	AMS		
<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	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>

	2015				
	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	27,709	543	9,019	167	37,438
Interest expense:	2,847	56	933	19	3,855
Term of financial commitment (TFC)	454	-	-	-	454
Actuarial	2,393	56	933	19	3,401
Current service cost	77	35	58	12	182
Contributions paid by participants	102	-	-	-	102
Benefits paid	(1,213)	(5)	(347)	(4)	(1,569)
Remeasurement: Experience (gains) / losses	(521)	4	(764)	(4)	(1,285)
Remeasurement: (gains) / losses - demographic assumptions	(46)	(49)	3	(1)	(93)
Remeasurement: (gains) / losses - financial assumptions	(2,025)	(95)	853	(7)	(1,274)
Others	-	-	-	23	23
Cumulative Translation Adjustment	(8,760)	(192)	(3,002)	(62)	(12,016)
<b>Obligations at the end of the year</b>	<b>18,170</b>	<b>297</b>	<b>6,753</b>	<b>143</b>	<b>25,363</b>
<b>Changes in the fair value of plan assets</b>					
Fair value of plan assets at the beginning of the year	19,835	256	-	60	20,151
Interest income	2,046	27	-	4	2,077
Contributions paid by the sponsor (Company)	193	-	349	7	549
Contributions paid by participants	102	-	-	-	102
Term of financial commitment (TFC) paid by the Company	165	-	-	-	165
Benefits Paid	(1,213)	(5)	(347)	(4)	(1,569)
Remeasurement: Return on plan assets due to lower interest income	(2,744)	40	-	(1)	(2,705)
Others	-	-	-	13	13
Cumulative Translation Adjustment	(6,151)	(92)	(2)	(25)	(6,270)
<b>Fair value of plan assets at the end of the year</b>	<b>12,233</b>	<b>226</b>	<b>-</b>	<b>54</b>	<b>12,513</b>
<b>Amounts recognized in the Statement of Financial Position</b>					
Present value of obligations	18,170	297	6,753	143	25,363
(-) Fair value of plan assets	(12,233)	(226)	-	(54)	(12,513)
<b>Net actuarial liability as of December 31,</b>	<b>5,937</b>	<b>71</b>	<b>6,753</b>	<b>89</b>	<b>12,850</b>
<b>Changes in the net actuarial liability</b>					
Balance as of January 1,	7,874	287	9,019	107	17,287
Remeasurement effects recognized in other comprehensive	152	(180)	92	(11)	53
Costs incurred in the period	878	64	991	27	1,960
Contributions paid	(193)	-	(349)	(7)	(549)
Payments related to Term of financial commitment (TFC)	(165)	-	-	-	(165)
Others	-	-	-	10	10
Cumulative Translation Adjustment	(2,609)	(100)	(3,000)	(37)	(5,746)
<b>Balance as of December 31,</b>	<b>5,937</b>	<b>71</b>	<b>6,753</b>	<b>89</b>	<b>12,850</b>

**b) Defined benefit costs**

					<b>2016</b>
	<b>Pension Plans</b>		<b>Medical Plan</b>		
	<b>Petros</b>	<b>Petros 2</b>	<b>AMS</b>	<b>Other Plans</b>	<b>Total</b>
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>
	<b>Pension Plans</b>		<b>Medical Plan</b>		
	<b>Petros</b>	<b>Petros 2</b>	<b>AMS</b>	<b>Other Plans</b>	<b>Total</b>
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>
					<b>2014</b>
	<b>Pension Plans</b>		<b>Medical Plan</b>		
	<b>Petros</b>	<b>Petros 2</b>	<b>AMS</b>	<b>Other Plans</b>	<b>Total</b>
Service cost	58	33	176	11	278
Interest on net liabilities (assets)	736	16	969	13	1,734
Others	-	-	10	-	10
<b>Net expenses for the year</b>	<b>794</b>	<b>49</b>	<b>1,155</b>	<b>24</b>	<b>2,022</b>
Related to active employees:					
Included in the cost of sales	255	26	347	(1)	627
Operating expenses in statement of income	140	22	179	24	365
Related to retirees	399	1	629	1	1,030
<b>Net expenses for the year</b>	<b>794</b>	<b>49</b>	<b>1,155</b>	<b>24</b>	<b>2,022</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:

	Discount Rate				Medical Cost	
	Pension Benefits		Medical Benefits		Medical Benefits	
	+100 bps	-100 bps	+100 bps	-100 bps	+100 bps	-100 bps
Pension Obligation	(2,503)	3,047	(1,334)	1,659	1,676	(1,376)
Current Service cost and interest cost	(4)	183	(75)	91	228	(184)

### d) Actuarial assumptions

Assumptions	2016	2015
Discount rate - (real rate)	5.74% (1) / 5.69% (2) / 5.72% (3)	7.33% (1) / 7.28% (2) / 7.32% (3)
Expected Inflation (Brazilian price index-IPCA)	4.87% (1) (2) (3) (4)	6.87% (1) (2) (3) (4)
Nominal discount rate (real rate + inflation)	10.89% (1) / 10.84% (2) / 10.87% (3)	14.70% (1) / 14.65% (2) / 14.69% (3)
Expected salary growth - real rate	1.53% (1)(5) / 2.58% (2)(5)	1.48% (1)(5) / 2.79% (2)(5)
Expected salary growth - nominal (real rate + Inflation)	6.47% (1)(5) / 7.57% (2) (5)	8.45% (1) (5) / 9.85% (2) (5)
Medical plan turnover	0.597% a.a (6)	0.753% p.a (6)
Pension plan turnover	Null	Null
Expected changes in medical and hospital Mortality table	13.91% to 4.00%a.a (7) EX-PETROS 2013 (both genders) (1) (3) AT-2000 female, smoothed in a 10% coefficient (2)	14.92% to 3.70% p.a (7) EX-PETROS 2013 (both genders) (1) (3) AT-2000 female, smoothed in a 10% coefficient (2)
Disability table	TASA 1927 (1) (3) / LIGHT-low (2) AT-49 male, amplified in a 10% coefficient (1) (3)	TASA 1927 (1) (3) / Álvaro Vindas (2) AT-49 male, amplified in a 10% coefficient (1)
Mortality table for disabled participants	IAPB 1957 low (2)	(3) IAPB 1957 low (2)
Age of retirement	Male, 57 years / Female, 56 years (8)	Male, 57 years / Female, 56 years (8)

(1) Petros Plan for Petrobras Group.

(2) Petros 2 Plan.

(3) AMS Plan.

(4) Inflation reflects market projections: 4.87% for 2017 and converging to 4.00% in 2026 onwards.

(5) Expected salary growth only of Petrobras, the sponsor, based on the Salaries and Benefits Plan.

(6) Average turnover (only of Petrobras, the sponsor) according to age and employment term.

(7) Decreasing rate, converging in 30 years to the long-term expected inflation. Refers only to Petrobras (sponsor) rate.

(8) Except for Petros 2 Plan, for which it was used the eligibility as the rules of Regime Geral de Previdência Social (RGPS) and the rules

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

	2016				Total
	Pension Plan		Medical Plan		
	Petros	Petros 2	AMS	Other plans	
Up to 1 Year	1,800	23	409	1	2,233
1 To 2 Years	1,581	23	430	1	2,035
2 To 3 Years	1,521	24	450	1	1,996
3 To 4 Years	1,469	24	465	1	1,959
Over 4 Years	19,501	584	9,460	74	29,619
<b>Total</b>	<b>25,872</b>	<b>678</b>	<b>11,214</b>	<b>78</b>	<b>37,842</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\$ 5 in 2016 were recognized in the statement of income.

## 22.7. Voluntary Separation Incentive Plan

From January 2014 to December 31, 2016 the Company implemented voluntary separation incentive plans (PIDV) as described below:

- Petrobras (PIDV 2014) – the enrollment period lasted from February 12 to March 31, 2014. This plan was re-opened for eligible employees from November 30 to December 18, 2015, resulting in 7,634 enrollments with 6,878 separations and 415 cancellations;
- Petrobras Distribuidora S.A. (PIDV BR 2014) – the enrollment period lasted from February 12 to March 31, 2014, resulting in 712 enrollments with 656 separations and 55 cancellations;
- Petrobras Distribuidora S.A. (PIDV BR 2015) – the enrollment period lasted from October 13 to December 30, 2015, resulting in 345 enrollments with 316 separations and 29 cancellations;
- Petrobras PIDV 2016 – the enrollment period lasted from April 1 to August 31, 2016 resulting in 11,866 enrollments with 5,312 separations and 393 cancellations; and
- Petrobras Distribuidora S.A. (PIDV BR 2016) – the enrollment period lasted from November 1 to December 30, 2016, resulting in 1,105 enrollments. The separation period commenced on January 17, 2017.

Accordingly, 13,162 voluntary separations of employees who enrolled in these plans were made.

As of December 31, 2016 changes in the provision are set out as follows:

Balance as of December 31, 2015	199
New enrolments PIDV Petrobras 2016	1,239
Revision of provisions	(11)
Separations in the period	(656)
Cumulative translation adjustment	40
<b>Balance as of December 31, 2016</b>	<b>811</b>
Current	811
Non-current	-

## 23. Shareholders' equity

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

As of December 31, 2016 subscribed and fully paid share capital was US\$ 107,380 and share issuance costs were US\$ 279, represented by 7,442,454,142 outstanding common shares and 5,602,042,788 outstanding preferred shares, all of which are registered, book-entry shares with no par value.

Preferred shares have priority on returns of capital, do not grant any voting rights and are non-convertible into common shares.

## 23.2. Capital transactions

### a) Incremental costs directly attributable to the issue of new shares

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

### b) Change in interest in subsidiaries

Includes any excess of amounts paid/received over the carrying value of the interest acquired/disposed. Changes in ownership interest in subsidiaries that do not result in loss of control of the subsidiary are equity transactions. Information on interest in subsidiaries is set out in note 11.

## 23.3. Profit reserves

### a) Legal reserve

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

### b) Statutory reserve

Appropriated by applying a minimum of 0.5% of the year-end share capital and is retained to fund technology research and development programs. The balance of this reserve may not exceed 5% of the share capital, pursuant to article 55 of the Company's bylaws.

### c) Tax incentives reserve

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

The effect of the tax incentives in the north and northeast regions of Brazil from *Superintendência de Desenvolvimento do Nordeste* (SUDENE) and *Superintendência de Desenvolvimento da Amazônia* (SUDAM) were not allocated to the tax incentives reserve. However, the impact of tax incentives will be allocated to the tax incentives reserve in future periods, pursuant to Chapter I of Law 12,973/14.

The accumulated amount of tax incentives derived from the statements of income for the years 2014, 2015 and 2016, to be allocated to the tax incentives reserve in upcoming periods, is US\$ 31 (US\$ 16 for 2016, US\$ 7.5 for 2015 and US\$ 7.5 for 2014).

### d) Profit retention reserve

Includes funds intended for capital expenditures, primarily in oil and gas exploration and development activities, as per the capital budget of the Company, pursuant to article 196 of the Brazilian Corporation Law.

The accumulated deficit balance of US\$ 4,838 as of December 31, 2016 will be allocated to the profit retention reserve.

## 23.4. Other comprehensive income

In 2016 the Company principally recognized as other comprehensive income the following effects:

- Cumulative translation adjustment of US\$ 10,986. As set out in note 10.1, this amount was impacted by the disposal of the Company's interests in the subsidiaries Petrobras Participaciones S.L. ("PPSL") and Nansei Seikyu (NSS) that triggered the reclassification of US\$ 1.457 to income statement within other expenses, net of the cumulative translation adjustment resulted from the depreciation of Argentinian Peso and Japanese Yen against the U.S Dollar since the acquisition of these investments to their disposals.
- Actuarial losses on defined benefit plans in the amount of US\$ 5,296, after taxes
- Foreign exchange rate variation gains of US\$ 10,779, after taxes and amounts reclassified to the statement of income, recognized in the Company's shareholders' equity in 2016, as a result of its cash flow hedge accounting policy. The cumulative balance of foreign exchange variation losses as of December 31, 2016 is US\$ 11,297, as set out in note 33.2.

## 23.5. Dividends

Shareholders are entitled to receive minimum mandatory dividends (and/or interest on capital) of 25% of the adjusted net income for the year proportional to the number of common and preferred shares, pursuant to Brazilian Corporation Law. To the extent the Company proposes dividend distributions, preferred shares have priority in dividend distribution, which is based on the highest of 3% of the preferred shares' net book value, or 5% of the preferred share capital. Preferred shares participate under the same terms as common shares in capital increases resulting from the capitalization of profit reserves or retained earnings.

Due to the loss recorded in 2016 and 2015, the Board of Directors did not propose dividend distributions for those years.

## 23.6. Earnings (losses) per share

	2016			2015			2014		
	Common	Preferred	Total	Common	Preferred	Total	Common	Preferred	Total
Net income (loss) attributable to shareholders of Petrobras	(2,760)	(2,078)	(4,838)	(4,821)	(3,629)	(8,450)	(4,203)	(3,164)	(7,367)
Weighted average number of common and preferred shares outstanding	7,442,454,142	5,602,042,788	13,044,496,930	7,442,454,142	5,602,042,788	13,044,496,930	7,442,454,142	5,602,042,788	13,044,496,930
Basic and diluted earnings (losses) per common and preferred share (US\$ per share)	(0.37)	(0.37)	(0.37)	(0.65)	(0.65)	(0.65)	(0.56)	(0.56)	(0.56)

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

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

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

## 24. Sales revenues

	2016	2015	2014
Gross sales	102,895	121,490	174,031
Sales taxes (*)	(21,490)	(24,176)	(30,374)
<b>Sales revenues (**)</b>	<b>81,405</b>	<b>97,314</b>	<b>143,657</b>
Diesel	25,524	30,532	42,586
Automotive gasoline	16,263	16,320	23,702
Jet fuel	2,573	3,325	4,357
Liquefied petroleum gas	3,083	2,881	5,622
Naphtha	2,472	2,594	3,729
Fuel oil (including bunker fuel)	1,167	2,297	5,562
Other oil products	3,372	3,468	5,771
<b>Subtotal oil products</b>	<b>54,454</b>	<b>61,417</b>	<b>91,329</b>
Natural gas	3,952	5,894	8,035
Ethanol, nitrogen products and renewables	3,743	3,868	3,862
Electricity, services and others	2,753	4,850	8,384
<b>Domestic market</b>	<b>64,902</b>	<b>76,029</b>	<b>111,610</b>
Exports	8,439	9,692	13,930
<b>Sales abroad (***)</b>	<b>8,064</b>	<b>11,593</b>	<b>18,117</b>
<b>Foreign market</b>	<b>16,503</b>	<b>21,285</b>	<b>32,047</b>
<b>Sales revenues (**)</b>	<b>81,405</b>	<b>97,314</b>	<b>143,657</b>

(\*) Includes, mainly, CIDE, PIS, COFINS and ICMS (VAT).

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

(\*\*\*) Sales revenues from operations outside of Brazil, including trading and excluding exports.

In 2016, sales from transactions with two customers reached approximately 10 % or more of the Company's sales revenue, totaling US\$ 8,640 (US\$ 9,793 in 2015 and US\$ 14,171 in 2014) and US\$ 7,691 (US\$ 8,146 in 2015 and US\$ 11,937 in 2014). These sales revenues mainly impacted the Refining, Transportation and Marketing (RT&M) business segment.

## 25. Other expenses, net

	2016	2015	2014
Unscheduled stoppages and pre-operating expenses	(1,859)	(1,239)	(1,089)
Reclassification of cumulative translation adjustments - CTA	(1,457)	-	-
Pension and medical benefits - retirees	(1,428)	(1,151)	(1,030)
Gains / (losses) related to legal, administrative and arbitration proceedings	(1,393)	(1,569)	(194)
Voluntary Separation Incentive Plan - PIDV	(1,228)	(115)	(1,035)
Allowance for impairment of other receivables	(671)	(374)	(182)
Institutional relations and cultural projects	(253)	(428)	(743)
Provision for debt assumed from suppliers with subcontractors	(105)	-	-
Operating expenses with thermoelectric power plants	(96)	(119)	(304)
Health, safety and environment	(80)	(95)	(143)
Amounts recovered relating to Lava Jato Operation	131	72	-
Government grants	173	17	61
Ship/Take or Pay agreements	282	225	256
Gains / (losses) on disposal/write-offs of assets (*)	293	(758)	(481)
Expenses/Reimbursements from E&P partnership operations	569	530	360
Gains / (losses) on decommissioning of returned/abandoned areas	1,491	(144)	(443)
Others	424	(197)	(770)
<b>Total</b>	<b>(5,207)</b>	<b>(5,345)</b>	<b>(5,737)</b>

(\*) Includes returned areas and cancelled projects.

## 26. Costs and Expenses by nature

	2016	2015	2014
Raw material and products for resale	(18,870)	(29,110)	(58,539)
Materials, third-party services, freight, rent and other related costs	(14,920)	(20,951)	(23,847)
Depreciation, depletion and amortization	(13,965)	(11,591)	(13,023)
Employee compensation	(9,984)	(9,079)	(13,215)
Impairment (losses) / reversals	(6,193)	(12,299)	(16,823)
Production taxes	(4,879)	(6,064)	(13,500)
Unscheduled stoppages and pre-operating expenses	(1,859)	(1,239)	(1,089)
(Losses) /Gains on legal, administrative and arbitration proceedings	(1,393)	(1,569)	(194)
Reclassification of cumulative translation adjustment	(1,457)	-	-
Exploration expenditures written off (includes dry wells and signature bonuses)	(1,281)	(1,441)	(2,178)
Allowance for impairment of trade receivables	(1,131)	(941)	(2,378)
Other taxes	(714)	(2,796)	(760)
Changes in inventories	(437)	(155)	(1,181)
Provision for debt assumed from suppliers with subcontractors	(105)	-	-
Gains and losses on disposal/writte-offs of assets	293	(758)	(924)
Institutional relations and cultural projects	(253)	(428)	(743)
Health, safety and environment	(80)	(95)	(143)
Write-off - overpayments incorrectly capitalized and amounts recovered	131	72	(2,527)
<b>Total</b>	<b>(77,097)</b>	<b>(98,444)</b>	<b>(151,064)</b>
<b>In the Statement of income</b>			-
Cost of sales	(55,417)	(67,485)	(109,477)
Selling expenses	(3,963)	(4,627)	(6,827)
General and administrative expenses	(3,319)	(3,351)	(4,756)
Exploration costs	(1,761)	(1,911)	(3,058)
Research and development expenses	(523)	(630)	(1,099)
Other taxes	(714)	(2,796)	(760)
Impairment	(6,193)	(12,299)	(16,823)
Write-off - overpayments incorrectly capitalized	-	-	(2,527)
Other expenses, net	(5,207)	(5,345)	(5,737)
<b>Total</b>	<b>(77,097)</b>	<b>(98,444)</b>	<b>(151,064)</b>

## 27. Net finance income (expense)

	2016	2015	2014
Debt interest and charges	(7,764)	(6,858)	(6,734)
Foreign exchange gains (losses) and indexation charges on net debt (*)	(2,507)	(3,834)	(561)
Income from investments and marketable securities (Government Bonds)	547	693	1,007
Financial result on net debt	(9,724)	(9,999)	(6,288)
Capitalized borrowing costs	1,729	1,773	3,600
Gains (losses) on derivatives	(111)	256	337
Interest income from marketable securities	5	25	(39)
Unwinding of discount on the provision for decommissioning costs	(662)	(231)	(201)
Other finance expenses and income, net (**)	291	(659)	42
Other foreign exchange gains (losses) and indexation charges, net	717	394	914
<b>Net finance income (expenses)</b>	<b>(7,755)</b>	<b>(8,441)</b>	<b>(1,635)</b>
Income	1,053	1,412	1,949
Expenses	(6,958)	(6,437)	(3,923)
Foreign exchange gains (losses) and indexation charges	(1,850)	(3,416)	339
<b>Total</b>	<b>(7,755)</b>	<b>(8,441)</b>	<b>(1,635)</b>

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

(\*\*) In 2015, includes US\$ 834 of finance expense related to the tax amnesty program (REFIS and State Tax) and PRORELIT, as set out on note 21.

**28. Supplemental information on statement of cash flows**

	<u>2016</u>	<u>2015</u>	<u>2014</u>
<b>Additional information on cash flows:</b>			
<b>Amounts paid/received during the period:</b>			
Withholding income tax paid on behalf of third-parties	932	1,034	1,852
<b>Capital expenditures and financing activities not involving cash</b>			
Purchase of property, plant and equipment on credit	123	171	123
Finance leases	90	-	-
Provision/(reversals) for decommissioning costs	937	4,145	1,999
Use of deferred tax and judicial deposit for the payment of contingency	138	960	147

## 29. Segment information

The Extraordinary General Meeting held on April 28, 2016 approved adjustments to the Company's organization structure and governance and management model, aiming to align the organization with the new conditions faced by the oil and gas industry and to prioritize profitability and capital discipline.

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

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
<b>Consolidated assets by Business Area - 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>

### Consolidated assets by Business Area - 12.31.2015

Current assets	3,640	9,027	2,413	45	2,299	28,866	(3,111)	43,179
Non-current assets	120,157	36,465	17,056	437	2,971	10,589	(333)	187,342
Long-term receivables	6,467	2,384	1,608	3	858	8,398	(292)	19,426
Investments	1,807	879	456	343	34	8	-	3,527
Property, plant and equipment	109,724	33,032	14,674	91	1,868	1,949	(41)	161,297
Operating assets	79,585	28,803	12,193	81	1,581	1,485	(41)	123,687
Under construction	30,139	4,229	2,481	10	287	464	-	37,610
Intangible assets	2,159	170	318	-	211	234	-	3,092
<b>Total Assets</b>	<b>123,797</b>	<b>45,492</b>	<b>19,469</b>	<b>482</b>	<b>5,270</b>	<b>39,455</b>	<b>(3,444)</b>	<b>230,521</b>

# Petróleo Brasileiro S.A. - Petrobras

## Notes to the financial statement

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



### Consolidated Statement of Income by Business Area

Jan-Dec/2016

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	33,675	62,588	9,401	240	27,927	-	(52,426)	81,405
Intersegments	32,195	17,090	2,490	231	420	-	(52,426)	-
Third parties	1,480	45,498	6,911	9	27,507	-	-	81,405
Cost of sales	(24,863)	(48,444)	(6,790)	(264)	(25,757)	-	50,701	(55,417)
Gross profit (loss)	8,812	14,144	2,611	(24)	2,170	-	(1,725)	25,988
Income (expenses)	(6,789)	(5,425)	(1,439)	(62)	(2,084)	(5,968)	87	(21,680)
Selling	(143)	(1,846)	(768)	(2)	(1,309)	10	95	(3,963)
General and administrative	(346)	(442)	(206)	(25)	(271)	(2,029)	-	(3,319)
Exploration costs	(1,761)	-	-	-	-	-	-	(1,761)
Research and development	(198)	(57)	(17)	(1)	-	(250)	-	(523)
Other taxes	(85)	(98)	(220)	(4)	(29)	(278)	-	(714)
Impairment of assets	(3,272)	(2,457)	(375)	(7)	(82)	-	-	(6,193)
Other expenses, net	(984)	(525)	147	(23)	(393)	(3,421)	(8)	(5,207)
Net income / (loss) before financial results and income taxes	2,023	8,719	1,172	(86)	86	(5,968)	(1,638)	4,308
Net finance income (expenses)	-	-	-	-	-	(7,755)	-	(7,755)
Results in equity-accounted investments	32	(75)	80	(265)	10	-	-	(218)
Net income / (loss) before income taxes	2,055	8,644	1,252	(351)	96	(13,723)	(1,638)	(3,665)
Income taxes	(687)	(2,964)	(397)	28	(29)	2,809	556	(684)
<b>Net income (loss)</b>	<b>1,368</b>	<b>5,680</b>	<b>855</b>	<b>(323)</b>	<b>67</b>	<b>(10,914)</b>	<b>(1,082)</b>	<b>(4,349)</b>
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
<b>Net income (loss)</b>	<b>1,368</b>	<b>5,680</b>	<b>855</b>	<b>(323)</b>	<b>67</b>	<b>(10,914)</b>	<b>(1,082)</b>	<b>(4,349)</b>

# Petróleo Brasileiro S.A. - Petrobras

## Notes to the financial statement

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



### Consolidated Statement of Income by Business Area

Jan-Dec/2015

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	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
Net income (loss)	(2,483)	5,713	386	(276)	(141)	(12,110)	300	(8,611)
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)
Net income (loss)	(2,483)	5,713	386	(276)	(141)	(12,110)	300	(8,611)

# Petróleo Brasileiro S.A. - Petrobras

## Notes to the financial statement

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



### Consolidated Statement of Income by Business Area

Jan-Dez/2014

	Exploration and Production	Refining, Transportation & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	68,611	114,431	18,373	266	46,893	-	(104,917)	143,657
Intersegments	66,336	35,484	1,730	238	1,129	-	(104,917)	-
Third parties	2,275	78,947	16,643	28	45,764	-	-	143,657
Cost of sales	(37,220)	(118,350)	(15,698)	(311)	(43,262)	-	105,364	(109,477)
Gross profit (loss)	31,391	(3,919)	2,675	(45)	3,631	-	447	34,180
Income (expenses)	(9,461)	(19,740)	(3,352)	(68)	(2,776)	(6,415)	225	(41,587)
Selling	(77)	(2,275)	(2,239)	(2)	(2,195)	(269)	230	(6,827)
General and administrative	(547)	(591)	(332)	(48)	(360)	(2,877)	(1)	(4,756)
Exploration costs	(3,058)	-	-	-	-	-	-	(3,058)
Research and development	(549)	(192)	(85)	(15)	(1)	(257)	-	(1,099)
Other taxes	(74)	(118)	(136)	-	(33)	(399)	-	(760)
Impairment of assets	(3,800)	(12,912)	(111)	-	-	-	-	(16,823)
Write-off - overpayments incorrectly capitalized	(806)	(1,403)	(266)	-	(11)	(41)	-	(2,527)
Other expenses, net	(550)	(2,249)	(183)	(3)	(176)	(2,572)	(4)	(5,737)
Net income / (loss) before financial results and income taxes	21,930	(23,659)	(677)	(113)	855	(6,415)	672	(7,407)
Net finance income (expenses)	-	-	-	-	-	(1,635)	-	(1,635)
Results in equity-accounted investments	(80)	132	211	(53)	5	3	-	218
Net income / (loss) before income taxes	21,850	(23,527)	(466)	(166)	860	(8,047)	672	(8,824)
Income taxes	(7,674)	7,758	139	39	(295)	1,582	(228)	1,321
Net income (loss)	14,176	(15,769)	(327)	(127)	565	(6,465)	444	(7,503)
Net income (loss) attributable to:								
Shareholders of Petrobras	14,151	(15,761)	(347)	(127)	565	(6,292)	444	(7,367)
Non-controlling interests	25	(8)	20	-	-	(173)	-	(136)
Net income (loss)	14,176	(15,769)	(327)	(127)	565	(6,465)	444	(7,503)

## 30. Provisions for legal proceedings

### 30.1. Provisions for legal proceedings, judicial deposits and contingent liabilities

The Company recognizes provisions based on the best estimate of the costs of proceedings for which it is probable that an outflow of resources embodying economic benefits will be required and that can be reliably estimated. These proceedings mainly include:

- Labor claims, in particular: (i) a review of the methodology by which the minimum compensation based on an employee's position and work schedule (Remuneração Mínima por Nível e Regime - RMNR) is calculated; (ii) lawsuits relating to overtime pay and (iii) individual actions of outsourced employees;
- Tax claims including: (i) claims relating to Brazilian federal tax credits applied that were disallowed; (ii) demands relating to the VAT (ICMS) tax collection on jet fuel sales and (iii) alleged misappropriation of VAT (ICMS) tax credits on import of platforms.
- Civil claims relating to: (i) royalties collection over the shale extraction; (ii) non-compliance with contractual terms relating to oil platform construction; (iii) ongoing agreements to settle Opt-out Claims filed before the United States District Court for the Southern District of New York and (iv) compensation relating to an easement over a property.
- Environmental claims regarding fishermen seeking indemnification from the Company for January 2000 oil spill in the State of Rio de Janeiro.

Provisions for legal proceedings are set out as follows:

	<u>12.31.2016</u>	<u>12.31.2015</u>
<b>Non-current liabilities</b>		
Labor claims	1,226	851
Tax claims	1,528	791
Civil claims	575	530
Environmental claims	60	72
Other claims	2	3
<b>Total</b>	<b>3,391</b>	<b>2,247</b>

	<u>12.31.2016</u>	<u>12.31.2015</u>
Opening Balance	2,247	1,540
Additions	997	1,490
Use of provision	(654)	(272)
Accruals and charges	350	100
Others	(52)	(13)
Cumulative translation adjustment	503	(598)
<b>Closing Balance</b>	<b>3,391</b>	<b>2,247</b>

### 30.2. Judicial deposits

Judicial deposits made in connection with legal proceedings are set out in the table below according to the nature of the corresponding lawsuits:

	12.31.2016	12.31.2015
<b>Non-current assets</b>		
Tax	1,803	1,044
Civil	1,101	690
Labor	1,006	684
Environmental	84	78
Others	5	3
<b>Total</b>	<b>3,999</b>	<b>2,499</b>

### 30.3. Contingent liabilities

Contingent liabilities for which either the Company is unable to make a reliable estimate of the expected financial effect that might result from resolution of the proceeding, or a cash outflow is not probable, are not recognized as liabilities in the financial statements but are disclosed in the notes to the financial statements, unless the likelihood of any outflow of resources embodying economic benefits is considered remote.

The estimated contingent liabilities for legal proceedings as of December 31, 2016, for which the possibility of loss is not considered remote, are set out in the following table:

Nature	
Tax	47,830
Labor	7,225
Civil - General	9,049
Civil - Environmental	2,172
Others	1
<b>Total</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
<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: This claim involves lawsuits in different administrative and judicial stages.	15,479
2) Immediate deduction from the basis of calculation of taxable income (income tax - IRPJ and social contribution - CSLL) of crude oil production development costs. Current status: This claim involves lawsuits in administrative stages.	6,305
3) Requests to compensate federal taxes disallowed by the Brazilian Federal Tax Authority. Current status: This claim involves lawsuits in different administrative and judicial stages.	3,375
4) Income from subsidiaries and associates located outside Brazil not included in the basis of calculation of taxable income (IRPJ and CSLL). Current status: This claim involves lawsuits in different administrative and judicial stages.	3,095
5) Deduction from the basis of calculation of taxable income (income tax - IRPJ and social contribution - CSLL) of amounts paid to Petros Plan, as well as several expenses, related to employee benefits and Petros. Current status: This claim involves lawsuits in different administrative and judicial stages.	2,355
6) Incidence of social security contributions over contingent bonuses paid to employees. Current status: Awaiting the hearing of an appeal at the administrative level.	1,053
7) Collection of Contribution of Intervention in the Economic Domain (CIDE) on transactions with fuel retailers and service stations protected by judicial injunctions determining that fuel sales were made without gross-up of such tax.	

# Petróleo Brasileiro S.A. – Petrobras

## Notes to the financial statements

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Current status: This claim involves lawsuits in judicial stages.	656
<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.	1,703
9) Deferral of payment of VAT (ICMS) taxes on B100 Biodiesel sales and the charge of a 7% VAT rate on B100 on Biodiesel interstate sales, including states in the Midwest, North and Northeast regions of Brazil and the State of Espírito Santo.	
Current status: This claim involves lawsuits at administrative level.	834
<b>Plaintiff: States of RJ and BA 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.	
Current status: This claim involves lawsuits in different administrative and judicial stages.	1,354
<b>Plaintiff: States of RJ, SP, PR, RO and MG Finance Departments</b>	
11) Additional VAT (ICMS) due to differences in rates on jet fuel sales to airlines in the domestic market, among other questions relating to the use of tax benefits.	
Current status: This claim involves lawsuits in different administrative and judicial stages.	1,285
<b>Plaintiff: Municipal governments of the cities of Anchieta, Aracruz, Guarapari, Itapemirim, Marataízes, Linhares, Vila Velha and Vitória</b>	
12) Alleged failure to withhold and pay tax on services provided offshore (ISSQN) in favor of some municipalities in the State of Espírito Santo, under the allegation that the service was performed in their "respective coastal waters".	
Current status: This claim involves lawsuits in administrative and judicial stages.	1,117
<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.	840
<b>Plaintiff: States of SP, RS and SC Finance Departments</b>	
14) Collection of VAT (ICMS) related to natural gas imports from Bolivia, alleging that these states were the final destination (consumers) of the imported gas.	
Current status: This claim involves lawsuits in different administrative and judicial stages, as well as three civil lawsuits in the Federal Supreme Court.	827
<b>Plaintiff: States of RJ, RN, AL, AM, PA, BA, GO, MA and SP Finance Departments</b>	
15) Alleged failure to write-down VAT (ICMS) credits related to exemption or non-taxable sales made by the Company's customers.	
Current status: This claim involves lawsuits in different administrative and judicial stages.	755
<b>Plaintiff: States of SP, CE, PB, RJ, BA and PA Finance Departments</b>	
16) VAT (ICMS) and VAT credits on internal consumption of bunker fuel and marine diesel, destined to chartered vessels.	
Current status: This claim involves several tax notices from the states in different administrative and judicial stages.	566
<b>Plaintiff: States of RJ, SP, ES and BA Finance Departments</b>	
17) Misappropriation of VAT tax credit (ICMS) on the acquisitions of goods that, per the tax authorities, are not related to property, plant and equipment.	
Current status: This claim involves lawsuits in different administrative and judicial stages.	490
<b>Plaintiff: States of RJ, SP, SE and BA Finance Departments</b>	
18) Use of VAT (ICMS) credits on the purchase of drilling rig bits and chemical products used in formulating drilling fluid.	
Current status: This claim involves lawsuits in different administrative and judicial stages.	405
<b>Plaintiff: States of AM, BA, RS and RJ Finance Departments</b>	
19) Disagreement about the basis of calculation of VAT (ICMS) on interstate sales and transfers between different stores from the same contributor.	
Current status: This claim involves lawsuits in different administrative and judicial stages.	351
<b>Plaintiff: States of MG, MT, GO, RJ, PA, CE, BA, PR, SE, AL and RN 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.	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.	312
22) Other tax matters	4,332
<b>Total for tax matters</b>	<b>47,830</b>

# Petróleo Brasileiro S.A. – Petrobras

## Notes to the financial statements

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Description of labor matters	Estimate
<b>Plaintiff: Sindipetro of ES, RJ, BA, MG, SP, PE, SE, RN, CE, 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.	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 per workday, subject to a daily fine. Current status: Awaiting the Superior Labor Court to judge appeals filed by both parties.	369
<b>Plaintiff: Sindipetro of ES, RJ, BA, MG, SP, PR, CE, SC, SE, PE and RS</b>	
3) Class Actions regarding wage underpayments to certain employees due to alleged changes in the methodology used to factor overtime into the calculation of paid weekly rest, allegedly computed based on ratios that are higher than those established by Law No. 605/49. Current status: The Superior Labor Court ("Tribunal Superior do Trabalho - TST") unified a favorable understanding to the Company's opinion. There are TST decisions favorable to the plaintiffs on individual and collective proceedings judged before the mentioned unification. With respect to the claim filed by Sindipetro Norte Fluminense (NF): (i) the Company has filed an appeal in the TST to overturn a decision and is awaiting judgment; and (ii) The Regional Labor Court ("Tribunal Regional do Trabalho - TRT") from the First Region issued an opinion favorable to the Company in its review appeal. The court stated that the enforceable title changed the factors used on the calculation of extra hour, increasing it and resulting in a considerable decrease in the estimated amount.	311
4) Other labor matters	2,162
<b>Total for labor matters</b>	<b>7,225</b>
Description of civil matters	Estimate
<b>Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP</b>	
1) Proceedings challenging an ANP order requiring Petrobras to unite Lula and Cernambi fields on the BM-S-11 joint venture; to unite Baúna and Piracicaba fields; to unite Tartaruga Verde and Mestiça fields; and to unite Baleia Anã, Baleia Azul, Baleia Franca, Cachalote, Caxaréu, Jubarte and Pirambu, in the Parque das Baleias complex, which would cause changes in the payment of special participation charges. Current status: The claims are being disputed in court and in arbitration proceedings. As a result of judicial decisions, the arbitrations have been suspended. On the Lula and Cernambi proceeding, for the alleged differences on the special participation, the Company made judicial deposits. However, with the cancellation of the favorable injunction, currently the payment of these alleged differences have been made directly to ANP, until a final judicial decision is handed down. On the Baúna and Piracicaba proceeding, Petrobras made court-ordered judicial deposits. On the Baleia Anã, Baleia Azul, Baleia Franca, Cachalote, Caxaréu, Jubarte and Pirambu, in the Parque das Baleias complex proceeding, as a result of a judicial decision and of a Chamber of Arbitration ruling, the collection of the alleged differences has been suspended. On the Tartaruga Verde and Mestiça proceeding, the arbitration is suspended by judicial decision and, so far, there has been no additional collection of special participation due to the unification.	1,992
2) Administrative proceedings challenging an ANP order requiring Petrobras to pay special participation fees and royalties (government take) with respect to several fields and alleged failure to comply with the minimum exploration activities program, as well as alleged irregularities related to compliance with the oil and gas industry regulation. Current status: This claim involves lawsuits in different administrative and judicial stages.	1,668
<b>Plaintiff: Several plaintiffs in Brazil and EIG Management Company in USA</b>	
3) Arbitration in Brazil and lawsuit in the USA regarding Sete Brasil. Current status: The arbitrations in Brazil are at an early stage and a Chamber of Arbitration has not yet been established. The lawsuit filed by EIG and affiliates alleges that the Company committed fraud by inducing plaintiffs to invest in Sete Brasil Participações SA ("Sete") through communications that failed to disclose the alleged corruption scheme. After a hearing held on January 31, 2017 in the federal court in Washington, D.C., the Company awaits a decision relating to the Motion to Dismiss requested by Petrobras.	1,644
<b>Plaintiff: Refinaria de Petróleo de Manguinhos S.A.</b>	
4) Lawsuit seeking to recover damages for alleged anti-competitive practices with respect to gasoline, diesel and LPG sales in the domestic market. Current status: This claim is in the judicial stage and was ruled in favor of the plaintiff in the first stage. The Company is taking legal actions to ensure its rights. The Brazilian Antitrust regulator (CADE) has analyzed this claim and did not consider the Company's practices to be anti-competitive.	575
<b>Plaintiff: Vantage Deepwater Company e Vantage Deepwater Drilling Inc.</b>	
5) Arbitration in the United States for unilateral termination of the drilling service contract tied to ship-probe Titanium Explorer. Current status: The arbitration panel has been established and the parties will discuss the schedule of the proceeding.	400
6) Other civil matters	2,770
<b>Total for civil matters</b>	<b>9,049</b>

Description of environmental matters	Estimate
<p><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></p> <p>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.</p> <p>Current status: The court partially ruled in favor of the plaintiff, however both parties (the plaintiff and the Company) filed an appeal.</p> <p><b>Plaintiff: Instituto Brasileiro de Meio Ambiente - IBAMA and Ministério Público Federal</b></p>	855
<p>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.</p> <p>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.</p>	442
3) Other environmental matters	875
<b>Total for environmental matters</b>	<b>2,172</b>

### 30.4. Class action and related proceedings

Between December 8, 2014 and January 7, 2015, five putative securities class action complaints were filed against the Company in the United States District Court for the Southern District of New York (SDNY). These actions were consolidated on February 17, 2015 (the “Consolidated Securities Class Action”). The Court appointed a lead plaintiff, Universities Superannuation Scheme Limited (“USS”), on March 4, 2015. Together with two other plaintiffs—Union Asset Management Holding AG (“Union”) and Employees’ Retirement System of the State of Hawaii (“Hawaii”)—USS filed a consolidated amended complaint (“CAC”) on March 27, 2015 that purported to be on behalf of investors who:

- a) purchased or otherwise acquired Petrobras securities traded on the NYSE or pursuant to other transactions in the U.S. during the period January 22, 2010 and March 19, 2015, inclusive (the “Class Period”), and were damaged thereby;
- b) purchased or otherwise acquired during the Class Period certain notes issued in 2012 pursuant to a registration statement filed with the SEC filed in 2009, or certain notes issued in 2013 or 2014 pursuant to a registration statement filed with the SEC in 2012, and were damaged thereby; and;
- c) purchased or otherwise acquired Petrobras securities on the Brazilian stock exchange during the Class Period, who also purchased or otherwise acquired Petrobras securities traded on the NYSE or pursuant to other transactions in the U.S. during the same period.

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

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

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

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

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

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

On October 15, 2015, class plaintiffs filed a motion for class certification in the Consolidated Securities Class Action, and on November 6, 2015, Petrobras, PGF, Petrobras America, Inc. and the Underwriter Defendants opposed the motion. On February 2, 2016, the judge granted plaintiffs' motion for class certification, certifying a Securities Act Class represented by Hawaii and North Carolina and an Exchange Act Class represented by USS. On June 15, 2016, the United States Court of Appeals for the Second Circuit ("Second Circuit") granted Petrobras's motion requesting interlocutory appellate review of the class certification decision. The parties completed briefing the appeal on September 8, 2016. Petrobras and the other defendants moved in district court for a stay of all district court proceedings pending the Second Circuit's decision on the merits of the appeal of the class certification, which the district judge denied on June 24, 2016. Defendants then moved in the Second Circuit for a stay of all district court proceedings pending a decision on the appeal of the class certification decision. On August 2, 2016, the Second Circuit granted Defendants' motion and stayed all district court proceedings. Oral argument regarding the appeal was held before the Second Circuit on November 2, 2016.

On June 27, 2016, the parties filed motions for summary judgment. Further summary judgment briefing is stayed pursuant to the Second Circuit's August 2, 2016 decision.

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

In the action in the Eastern District of Pennsylvania, Petrobras and PGF filed a motion to dismiss on May 13, 2016, and the district judge denied the motion on November 1, 2016, allowing the action to continue. On January 26, 2017, the district judge set a schedule for discovery and dispositive motions, with a pre-trial conference scheduled for January 5, 2018.

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

On November 18, 2015, the judge ordered that any Opt-out Claim filed before him in the SDNY after December 31, 2015 will be stayed in all respects until after the completion of the trial.

On October 21, 2016, Petrobras' board of directors approved agreements to settle Opt-out Claims in four cases: Dodge & Cox Int'l Stock Fund, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-10111 (JSR), Janus Overseas Fund, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-10086 (JSR), PIMCO Funds: PIMCO Total Return Fund, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-08192 (JSR) and Al Shams Investments Ltd., et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-6243 (JSR). The terms of the settlements are confidential.

On November 23, 2016, Petrobras' board of directors approved agreements to settle Opt-out Claims in eleven cases: Ohio Public Employees Retirement System v. Petr leo Brasileiro S.A. – Petrobras et al., No. 15-cv-03887 (JSR); Abbey Life Assurance Company Limited, et al. v. Petr leo Brasileiro S.A., et al., No. 15-cv-6661 (JSR); Aberdeen Emerging Markets Fund, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-3860 (JSR); Aberdeen Latin American Income Fund Limited, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-4043 (JSR); Delaware Enhanced Global Dividend and Income Fund, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-4043 (JSR); Dimensional Emerging Markets Fund, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-02165 (JSR); Manning & Napier Advisors, LLC, et al. v. Petr leo Brasileiro S.A. – Petrobras, No. 15-cv-10159 (JSR); Russell Investment Company, et al. v. Petr leo Brasileiro S.A. – Petrobras, No. 15-cv-07605 (JSR); Skagen, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-2214 (JSR); State of Alaska Department of Revenue, Treasury Division, et al. v. Petr leo Brasileiro S.A. – Petrobras, No. 15-cv-8995 (JSR), and State Street Cayman Trust Co., Ltd., v. Petr leo Brasileiro S.A. – Petrobras, No. 15-cv-10158 (JSR).

On February 24, 2017, Petrobras' board of directors approved agreements to settle Opt-out Claims in four cases: New York City Employees Retirement System, et al. v. Petr leo Brasileiro S.A. – Petrobras et al., No. 15-cv-2192 (JSR), Transamerica Income Shares, Inc., et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-3733 (JSR), Internationale Kapitalanlagegesellschaft mbH v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-6618 (JSR) Lord Abbett Investment Trust – Lord Abbett Short Duration Income Fund, et al. v. Petr leo Brasileiro S.A. – Petrobras, et al., No. 15-cv-7615 (JSR).

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

The Consolidated Securities Class Action and certain Opt-out Claims involve highly complex issues that are subject to substantial uncertainties and depend on a number of factors such as the novelty of the legal theories, the information produced in discovery, the timing of court decisions, rulings by the court on key issues, analysis by retained experts, and the possibility that the parties negotiate in good faith toward a resolution.

In addition, the claims asserted are broad, span a multi-year period and involve a wide range of activities, and the contentions of the plaintiffs in the Consolidated Securities Class Action and certain Opt-out Claims concerning the amount of alleged damages are varied and, at this stage, their impact on the course of the litigation is complex and uncertain. The uncertainties inherent in all such matters affect the amount and timing of the ultimate resolution of these actions. As a result, the Company is unable to make a reliable estimate of eventual loss arising from the Consolidated Securities Class Action and certain Opt-out Claims.

Depending on the outcome of the litigation, we may be required to pay substantial amounts, which could have a material adverse effect on the Company's financial condition, its consolidated results of operations or its consolidated cash flows for an individual reporting period.

The Company has engaged a U.S. firm as legal counsel and intends to defend these actions vigorously.

## **30.5. Contingent assets**

### **30.5.1. Recovery of PIS and COFINS**

The Company filed civil lawsuits against the Federal Government claiming to recover PIS and COFINS paid over finance income and foreign exchange variation gains, claiming that paragraph 1 of article 3 of Law No. 9,718/98 is unconstitutional, comprising:

i) PIS: from February 1999 to November 2002; and

ii) COFINS: from February 1999 to January 2004.

Up to the year 2014, the court granted to the Company the definitive right to recover those taxes. Currently, these legal proceedings are in their court-ordered liquidation stage.

As of December 31, 2016, the Company had non-current receivables of US\$ 980 (US\$758 as of December 31, 2015) related to PIS and COFINS, which are indexed to inflation.

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

As of December 31, 2016, the total amount of the GSA agreement (Gas Supply Agreement), entered into by Petrobras and Yacimientos Petroliferos Fiscales Bolivianos – YPF, for the 2017 to 2019 period is approximately 32.94 billion cubic meters (m<sup>3</sup>) of natural gas (equivalent to 30.08 million cubic meters (m<sup>3</sup>) per day) and corresponds to a total estimated value of US\$ 4.68 billion.

## **32. Collateral for crude oil exploration concession agreements**

The Company has granted collateral to the Brazilian Agency of Petroleum, Natural Gas and Biofuels (*Agência Nacional de Petróleo, Gás Natural e Biocombustíveis – ANP*) in connection with the performance of the Minimum Exploration Programs established in the concession agreements for petroleum exploration areas in the total amount of US\$ 2,444 of which US\$ 991 were still in force as of December 31, 2016, net of commitments undertaken. The collateral comprises crude oil from previously identified producing fields, pledged as collateral, amounting to US\$ 797 and bank guarantees of US\$ 194.

### 33. Risk management

The Company is exposed to a variety of risks arising from its operations, including price risk (related to crude oil and oil products prices), foreign exchange rates risk, interest rates risk, credit risk and liquidity risk. Corporate risk management is part of the Company's commitment to act ethically and comply with the legal and regulatory requirements of the countries where it operates. To manage market and financial risks the Company prefers structuring measures through adequate capital and leverage management. The Company takes account of risks in its business decisions and manages any such risk in an integrated manner in order to enjoy the benefits of diversification.

A summary of the positions of the derivative financial instruments held by the Company and recognized in other current assets and liabilities as of December 31, 2016, as well as the amounts recognized in the statement of income and other comprehensive income and the guarantees given is set out as follows:

	Statement of Financial Position				Maturity
	Notional value		Fair value		
	12.31.2016	12.31.2015	Asset Position	(Liability)	
<b>Derivatives not designated for hedge accounting</b>					
Future contracts - total (*)	(1,866)	(5,694)	(8)	38	
Long position/Crude oil and oil products	88,303	53,735	-	-	2017
Short position/Crude oil and oil products	(90,169)	(59,429)	-	-	2017
Options - total (*)	120	123	-	10	
Call/Crude oil and oil products	-	-	-	-	2017
Put/Crude oil and oil products	120	123	-	10	2017
Forward contracts - total			0.3	6.3	
Long position/Foreign currency forwards (BRL/USD)(**)	US\$ 0	US\$ 217	-	6	
Short position/Foreign currency forwards (BRL/USD)(**)	US\$ 15	US\$ 50	0.3	0.3	2017
<b>Derivatives designated for hedge accounting</b>					
Swap - total			(10)	(33)	
Foreign currency / Cross-currency Swap (**)	US\$ 0	US\$ 298	-	(16)	2016
Interest – Libor / Fixed rate (**)	US\$ 371	US\$ 396	(10)	(17)	2019
<b>Total recognized in the Statement of Financial Position</b>			<b>(17.7)</b>	<b>21.3</b>	

(\*) Notional value in thousands of bbl.

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

	Gains/ (losses) recognized in the statement of income (*)			Gains/(losses) recognized in the Shareholders' Equity (**)			Guarantees given as collateral	
	2016	2015	2014	2016	2015	2014	12.31.2016	12.31.2015
Commodity derivatives	(48)	238	368	-	-	-	55	7
Foreign currency derivatives	(55)	27	(20)	7	9	10	-	-
Interest rate derivatives	(8)	(9)	(11)	4	1	(1)	-	-
	(111)	256	337	11	10	9	55	7
Cash flow hedge on exports (***)	(2,841)	(2,057)	(702)	13,620	(19,075)	(5,741)	-	-
<b>Total</b>	<b>(2,952)</b>	<b>(1,801)</b>	<b>(365)</b>	<b>13,631</b>	<b>(19,065)</b>	<b>(5,732)</b>	<b>55</b>	<b>7</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, 2016 is set out following:

Financial Instruments	Risk	Probable Scenario*	Stressed Scenario (Δ of 25%)	Stressed Scenario (Δ of 50%)
<b>Derivatives not designated for hedge accounting</b>				
Future contracts	Crude oil and oil products - price changes	-	(68)	(136)
Forward contracts	Foreign currency - depreciation BRL x USD	-	4	8
Options	Crude oil and oil products - price changes	-	-	-
		-	(64)	(128)
<b>Derivatives designated for hedge accounting</b>				
Swap		3	(1)	(2)
Debt	Interest - LIBOR increase	(3)	1	2
Net effect		-	-	-

(\*) The probable scenario was computed based on the following risks: oil and oil products prices: fair value on December 31, 2016/ R\$ x U.S. Dollar - a 0.6% depreciation of the Real/ Japanese Yen x U.S. Dollar - a 1.5% appreciation of the Japanese Yen/ LIBOR Forward Curve - a 0.27% increase throughout the curve. Source: Focus and Bloomberg.

### 33.1. Risk management of price risk (related to crude oil and oil products prices)

Petrobras does not regularly use derivative instruments to hedge exposures to commodity price cycles related to products purchased and sold to fulfill operational needs. Derivatives are used as hedging instruments to manage the price risk of certain short-term commercial transactions.

### 33.2. Foreign exchange risk management

The Company's Risk Management Policy provides for, as an assumption, an integrated risk management extensive to the whole corporation, pursuing the benefit from the diversification of its businesses.

By managing its foreign exchange risk, the Company takes into account the group of cash flows derived from its operations. This concept is especially applicable to the risk relating to the exposure of the Brazilian Real against the U.S. dollar, in which future cash flows in U.S. dollar, as well as cash flows in Brazilian Real affected by the fluctuation between both currencies, such as cash flows derived from diesel and gasoline sales in the domestic market, are assessed in an integrated manner.

Accordingly, the financial risk management mainly involves structured actions by using natural hedges derived from the business of the Company.

The foreign exchange risk management strategy may involve the use of derivative financial instruments to hedge certain liabilities, minimizing foreign exchange rate risk exposure, especially when the Company is exposed to a foreign currency in which no cash inflows are expected, for example, Pound Sterling.

In the short-term, the foreign exchange risk is managed by applying resources in cash or cash equivalent denominated in Brazilian Real, U.S. Dollar or in another currency.

#### a) Cash Flow Hedge involving the Company's future exports

Considering the natural hedge aforementioned, the Company designates hedging relationships to account for the effects of the existing hedge between a portion of its long-term debt obligations (denominated in U.S. dollars) and its highly probable U.S. dollar denominated future export revenues, so that gains or losses associated with the hedged transaction (the highly probable future exports) and the hedging instrument (debt obligations) are recognized in the statement of income in the same periods.

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## Notes to the financial statements

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



A portion of principal amounts and accrued interest (non-derivative financial instruments), as well as foreign exchange rate forward contracts (derivative financial instruments) have been designated as hedging instruments. Derivative financial instruments expired during the year were replaced by principal and interest amounts in the hedging relationships for which they had been designated.

Individual hedging relationships were designated in a one-to-one proportion, meaning that a portion of the highly probable future exports for each month will be the hedged transaction of an individual hedging relationship, hedged by a portion of the company's long-term debt. Only a portion of the Company's forecast exports are considered highly probable.

Whenever a portion of future exports for a certain period for which a hedging relationship has been designated is no longer highly probable, the Company revokes the designation and the cumulative foreign exchange gains or losses that have been recognized in other comprehensive income remain separately in equity until the forecast exports occur.

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

Mainly due to the decrease in international oil prices, a portion of future exports for which a hedging relationship had been designated was no longer expected to occur or did not occur in 2016. Therefore, a hedging relationship was revoked and a portion was reclassified to the statement of income in the amount of US\$ 299 in 2016.

The carrying amounts, the fair value as of December 31, 2016, and a schedule of expected reclassifications to the statement of income of cumulative losses recognized in other comprehensive income (shareholders' equity) based on a US\$ 1.00 / R\$ 3,2591 exchange rate are set out below:

Hedging Instrument	Hedged Transactions	Nature of the Risk	Maturity Date	Principal Amount (US\$ million)	Carrying amount as of December 31, 2016 (R\$ million)
Non-derivative financial instruments (debt: principal and interest)	Portion of highly probable future monthly exports revenues	Foreign Currency – Real vs U.S. Dollar Spot Rate	January 2017 to March 2027	61,763	201,292

Changes in the reference value (principal and interest)	US\$	R\$ million
Amounts designated as of December 31, 2015	61,520	240,222
Additional hedging relationships designated, designations revoked and hedging instruments re-designated	23,275	79,211
Exports affecting the statement of income	(2,621)	(9,074)
Principal repayments / amortization	(20,411)	(68,740)
Foreign exchange variation	-	(40,327)
Amounts designated as of December 31, 2016	61,763	201,292

The ratio of highly probable future exports to debt instruments for which a hedging relationship has been designated in future periods is set out below:

	2017	2018	2019	2020	2021	2022	2023	2024 to 2027	Average
Hedging instruments designated / Highly probable future exports (%)	73	61	66	73	86	88	74	62	73

A roll-forward schedule of cumulative foreign exchange losses recognized in other comprehensive income as of December 31, 2016 is set out below:

	Exchange rate	Tax effect	Total
Balance at January 1, 2015	(11,664)	3,966	(7,698)
Recognized in shareholders' equity	(21,132)	7,185	(13,947)
Reclassified to the statement of income - occurred exports	2,004	(682)	1,322
Reclassified to the statement of income - exports no longer expected or not occurred	53	(18)	35
Balance at December 31, 2015	(30,739)	10,451	(20,288)
Recognized in shareholders' equity	10,779	(3,665)	7,114
Reclassified to the statement of income - occurred exports	2,542	(864)	1,678
Reclassified to the statement of income - exports no longer expected or not occurred	299	(100)	199
Balance at December 31, 2016	(17,119)	5,822	(11,297)

Additional hedging relationships may be revoked or additional reclassification adjustments from equity to the statement of income may occur as a result of changes in forecast export prices and export volumes following a review of the Company's business plan. Based on a sensitivity analysis considering a US\$ 10/barrel decrease in Brent prices stress scenario, when compared to the Brent price projections in our most recent update of the 2017-2021 Business and Management Plan (Plano de Negócios e Gestão – PNG), a US\$ 31 reclassification adjustment from equity to the statement of income would occur.

A schedule of expected reclassification of cumulative foreign exchange losses recognized in other comprehensive income to the statement of income as of December 31, 2016 is set out below:

	2017	2018	2019	2020	2021	2022	2023	2024 to 2027	Total
Expected realization	(4,718)	(4,672)	(3,158)	(2,301)	(1,947)	(2,226)	(1,021)	2,924	(17,119)

**b) Cash flow hedges involving swap contracts – Yen x Dollar**

The Company had cross currency swap to fix in U.S. dollars for the payments related to bonds denominated in Japanese yen, which matured on September 23, 2016. The relationship between the derivative and the bonds was designated for cash flow hedge accounting.

**c) Sensitivity analysis for foreign exchange risk on financial instruments**

A sensitivity analysis is set out below, showing the probable scenario for foreign exchange risk on financial instruments, computed based on external data along with stressed scenarios (a 25% and a 50% change in the foreign exchange rates), except for assets and liabilities of foreign subsidiaries, when transacted in a currency equivalent to their respective functional currencies.

Financial Instruments	Exposure at 12.31.2016	Risk	Probable Scenario (*)	Stressed Scenario (Δ of 25%)	Stressed Scenario (Δ of 50%)
Assets	4,149	Dollar/Real	27	1,037	2,075
Liabilities	(65,175)		(418)	(16,294)	(32,588)
Cash flow hedge on exports	61,763		396	15,441	30,882
	737		5	184	369
Liabilities	(184)	Yen/Dollar	(3)	(46)	(92)
	(184)		(3)	(46)	(92)
Assets	4	Euro/Real	-	1	2
Liabilities	(50)		-	(13)	(25)
	(46)		-	(12)	(23)
Assets	6,780	Euro/Dollar	(97)	1,695	3,390
Liabilities	(13,363)		191	(3,341)	(6,681)
	(6,583)		94	(1,646)	(3,291)
Assets	2	Pound Sterling/Real	-	1	1
Liabilities	(19)		-	(5)	(10)
	(17)		-	(4)	(9)
Assets	2,658	Pound Sterling /Dollar	(62)	665	1,329
Liabilities	(4,524)		105	(1,131)	(2,262)
	(1,866)		43	(466)	(933)
<b>Total</b>	<b>(7,959)</b>		<b>139</b>	<b>(1,990)</b>	<b>(3,979)</b>

(\*) On December 31, 2016, the probable scenario was computed based on the following risks: R\$ x U.S. Dollar - a 0.6% depreciation of the Real/ Japanese Yen x U.S. Dollar - a 1.5% appreciation of the Japanese Yen/ Euro x U.S. Dollar: a 1.4% depreciation of the Euro / Pound Sterling x U.S. Dollar: a 2.3% depreciation of the Pound Sterling/ Real x Euro - a 0.8% appreciation of the Real / Real x Pound Sterling - a 1.7% appreciation of the Real. Source: Focus and Bloomberg.

### 33.3. Interest rate risk management

The Company considers that interest rate risk does not create a significant exposure and therefore, preferably does not use derivative financial instruments to manage interest rate risk, except for specific situations encountered by certain subsidiaries of Petrobras.

### 33.4. Capital management

The Company's objectives in its capital management is to achieve an adequate level of return on its capital structure in order to safeguard its ability to continue as a going concern, adding value to its shareholders and investors. Its main sources of funding have been cash provided by its operating activities, divestments, loan agreements with commercial banks and debt issuance in the international capital markets.

In line with the assumptions in the 2017-2021 Business and Management Plan, the Company does not foresee net proceeds from financing for the two year period 2017-2018. However, the Company has continually assessed options of funding following its liability management strategy, aiming at improving its debt repayment profile and achieving a lower cost of its debt along with an indebtedness level matching the capital expenditures. Currently, the average repayment term is approximately 7 years.

Net debt is calculated as total debt (short-term debt and long-term debt) less cash, cash equivalents and government bonds from Brazil, U.S.A., Germany and England, as well as time deposits with maturities higher than three months. Adjusted EBITDA is computed by using the EBITDA (net income before net finance income (expense), income taxes, depreciation, depletion and amortization) adjusted by results in equity-accounted investments, impairment of assets and reversals, cumulative foreign exchange adjustments reclassified to the income statement and gains and losses on disposal and write-offs of assets. These measures are not defined by the International Financial Reporting Standards – IFRS (non-GAAP measures) and should neither be considered in isolation or as substitutes for profit, indebtedness and cash flow provided by operating activities as defined by the IFRS, nor be compared to those measures of other companies.

	2016	2015
Total debt (current and noncurrent)	118,370	126,262
Cash and cash equivalents	(21,205)	(25,058)
Government securities and time deposits (maturity of more than three months)	(784)	(779)
<b>Net debt</b>	<b>96,381</b>	<b>100,425</b>
Net debt/(net debt+shareholders' equity)	55%	60%
Adjusted EBITDA	25,630	23,518
Net debt/Adjusted EBITDA ratio	3.76	4.27

The venture and divestment program for the 2017-2018 period, with forecasted divestments of US\$ 21 billion and the Net debt/Adjusted EBITDA ratio reaching 2.5 in 2018, is part of the Company's financial planning, aimed at reducing leverage, preserving cash and prioritizing capital expenditures, primarily in oil and gas production in Brazil in highly productive and profitable areas.

However, this divestment portfolio is dynamic and the occurrence of the transactions depend on business conditions, market conditions and the Company's continuing assessment of its businesses, due to these reasons the rating conditions for assets available for sale were not fulfilled as set out in note 4.12.

### 33.5. Credit risk

Credit risk management in Petrobras aims at minimizing risk of not collecting receivables, financial deposits or collateral from third parties or financial institutions through efficient credit analysis, granting and management based on quantitative and qualitative parameters that are appropriate for each market segment in which the Company operates.

The commercial credit portfolio is broad and diversified and comprises clients from the domestic and foreign markets. Credit granted to financial institutions is related to collaterals received, cash surplus invested and derivative financial instruments. It is spread among "investment grade" international banks rated by international rating agencies and Brazilian banks.

#### 33.5.1. Credit quality of financial assets

##### a) Trade and other receivables

Most of the company's customers have no credit agency ratings. Thus, credit commissions assess creditworthiness and define credit limits, which are regularly monitored, based on the customer's main activity, commercial relationship and credit history with Petrobras, solvency, financial situation and external market assessment of the customer.

##### b) Other financial assets

Credit quality of cash and cash equivalents, as well as marketable securities is based on external credit ratings provided by Standard & Poor's, Moody's and Fitch. The credit quality of those financial assets, that are neither past due nor have been impaired, are set out below:

	Cash and cash equivalents		Marketable securities	
	2016	2015	2016	2015
AAA	5,217	-	-	-
AA	7	567	-	-
A	11,372	18,947	-	-
BBB	42	3,601	-	67
BB	2,794	167	-	-
B	10	7	-	-
AAA.br	373	1,688	874	779
AA.br	1,369	11	-	-
Other ratings	21	70	-	22
	21,205	25,058	874	868

### 33.6. Liquidity risk

Liquidity risk is represented by the possibility of a shortage of cash or other financial assets in order to settle the Company's obligations on the agreed dates and is managed by the Company based on policies such as: centralization of cash management, optimization of the level of cash and cash equivalents held and reduction of working capital; maintenance of an adequate cash balance to ensure that cash needed for investments and short-term obligations is met even in adverse market conditions; increase in the average debt maturity, increase in funding sources from domestic and international markets, and developing a strong presence in the capital markets and also searching for new funding sources (such as new markets and financial products), as well as funds under the venture and divestment program.

In 2016, the Company used traditional funding sources (export credit agencies – ECAs, banking market, capital markets and development banks) to obtain the necessary funding to repay debt and fund its capital expenditures. The Company raised approximately US\$ 18.8 billion through proceeds from long-term financing, mainly from the international capital markets. The Company used part of these funds (US\$ 17.9 billion) to repurchase global notes previously issued, to settle certain debts with the Brazilian Development Bank (BNDES) in advance and also to push forward other debts.

In December 2016, the Company raised funds through financing agreements with China Development Bank CDB in the amount of US\$ 5 billion, maturing in 10 years.

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

Maturity	2017	2018	2019	2020	2021	2022 and thereafter	Balance at December 31, 2016	Balance at December 31, 2015
Principal	8,809	11,331	21,099	16,488	18,903	43,104	119,734	127,354
Interest	7,165	6,673	5,868	4,522	3,208	30,969	58,406	59,038
Total	15,974	18,004	26,967	21,010	22,111	74,073	178,140	186,392

### 33.7. Insurance (unaudited)

The Company's insurance strategy involves acquiring insurance to cover risks that may produce material impacts and also to cover risks that are subject to compulsory insurance coverage (pursuant to legal or contractual requirements). The remaining risks are self-insured and Petrobras intentionally assumes the entire risk by abstaining from contracting insurance.

The Company assumes a significant portion of its risk, by entering into insurance policies that have deductible clauses up to the equivalent to US\$ 180 (US\$ 25 as of December 31, 2015). The higher amount related to deductible clauses was based on a reassessment of the Company's adverse events historical data, which resulted in economic benefits through a decrease in the amount of insurance premiums.

The Company's risk assumptions for insurance are not part of the audit scope of the financial statements audit and therefore were not examined by the Company's Independent Registered Public Accounting Firm.

The main information concerning the insurance coverage outstanding at December 31, 2016 is set out below:

Assets	Types of coverage	Amount insured
	Fire, operational risks and engineering risks	
Facilities, equipment inventory and products inventory		160,399
Tankers and auxiliary vessels	Hulls	4,060
Fixed platforms, floating production systems and offshore drilling units	Oil risks	32,985
<b>Total</b>		<b>197,444</b>

Petrobras does not have loss of earnings insurance or insurance related to well control, automobiles and pipeline networks in Brazil.

### 34. Fair value of financial assets and liabilities

Fair values are determined based on market prices, when available, or, in the absence thereof, on the present value of expected future cash flows.

The hierarchy of the fair values of the financial assets and liabilities, recorded on a recurring basis, is set out below:

- Level 1: inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2: inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: inputs are unobservable inputs for the asset or liability.

	Fair value measured based on			Total fair value recorded
	Level I	Level II	Level III	
<b>Assets</b>				
Marketable securities	784	-	-	784
Foreign currency derivatives	-	0.3	-	0.3
Balance at December 31, 2016	784	0.3	-	784.3
Balance at December 31, 2015	833	6.3	-	839.3
<b>Liabilities</b>				
Commodity derivatives	(8)	-	-	(8)
Interest derivatives	-	(10)	-	(10)
Balance at December 31, 2016	(8)	(10)	-	(18)
Balance at December 31, 2015	-	(33)	-	(33)

There are no material transfers between levels.

The estimated fair value for the Company's long term debt as of December 31, 2016, computed based on the prevailing market rates is set out in note 17.1.

The fair values of cash and cash equivalents, short-term debt and other financial assets and liabilities are equivalent or do not differ significantly from their carrying amounts.

## **35. Subsequent events**

### **Global notes issued in international capital market**

On January 17, 2017, the Company concluded, through its wholly-owned subsidiary Petrobras Global Trading – PGF, a US\$ 4 billion global notes issuance in the international market. This issuance comprises two series of notes each in the amount of US\$ 2 billion, maturing in 5 and 10 years and bearing interest at the rates of 6.125% and 7.375% per annum, respectively.

The net proceeds of this issuance were entirely used to repurchase global notes previously issued by the Company through a tender offer that expired on February 8, 2017. Old notes accepted for purchase amounted to US\$ 4,899 and € 632 million (US\$ 676) in accordance with the tender cap.

### **Legal Proceeding in the Netherlands**

On January 24, 2017, the Stichting Petrobras Compensation Foundation, which is not a Petrobras entity, filed a complaint before the district court in Rotterdam, in Netherlands, against the wholly-owned subsidiaries Petrobras International Braspetro B.V. and Petrobras Global Finance B.V.

This foundation represents a group of investors alleging damages from fraud and bribery schemes perpetrated by Company. These investors purchased shares or bonds issue by Company and traded outside U.S.A. before July 28, 2015.

This action is at an early stage, and the Company did not have access to the allegations and claims in this complaint.

### **Cross currency swap**

In the first quarter of 2017, the Company, through its wholly-owned subsidiary Petrobras Global Trading B.V. (PGT), entered into a £ 700 million notional amount cross currency swap maturing in 2026, in order to hedge its Pounds/U.S. Dollar exposure arose from the Company's debt denominated in Pounds.

### **Formal Notice from CVM – Hedge accounting**

On March 07, 2017, the Company received from the Brazilian Securities and Exchange Commission (Comissão de Valores Mobiliários – CVM) a Formal Notice (Ofício CVM) requesting the Company to restate its Annual Financial Statements and Interim Financial Reporting filed since the second quarter of 2013 . This formal notice requested the restatement of the effects of the hedge accounting policy application relating to the cash flow hedge involving the Company's future exports as described in note 33.2. The CVM does not believe the foreign exchange losses and gains should have been deferred. The Company believes its accounting policy complies with the applicable literature. The Company filed before CVM a request to suspend the effects of this notice, which was granted by the authority's collegiate body.

The Company appealed the CVM decision on March 17, 2017 and has taken all the measures to safeguard its interests.

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

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

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

In accordance with Codification Topic 932 - Extractive Activities – Oil and Gas, this section provides supplemental information on oil and gas exploration and production activities of the Company. The information included in items (i) through (iii) provides historical cost information pertaining to costs incurred in exploration, property acquisition and development, capitalized costs and results of operations. The information included in items (iv) and (v) presents information on Petrobras' estimated net proved reserve quantities, standardized measure of estimated discounted future net cash flows related to proven reserves, and changes in estimated discounted future net cash flows.

Beginning in 1995, the Federal Government of Brazil undertook a comprehensive reform of the country's oil and gas regulatory system. On November 9, 1995, the Brazilian Constitution was amended to authorize the Federal Government to contract with any state or privately owned company to carry out the activities related to the upstream and downstream segments of the Brazilian oil and gas sector. This amendment eliminated Petrobras' effective monopoly. The amendment was implemented by the Oil Law, which liberated the fuel market in Brazil beginning January 1, 2002.

The Oil Law established a regulatory framework ending Petrobras' exclusive agency and enabling competition in all aspects of the oil and gas industry in Brazil. As provided in the Oil Law, Petrobras was granted the exclusive right for a period of 27 years to exploit the petroleum reserves in all fields where the Company had previously commenced production. However, the Oil Law established a procedural framework for Petrobras to claim exclusive exploratory (and, in case of success, development) rights for a period of up to three years with respect to areas where the Company could demonstrate that it had "established prospects". To perfect its claim to explore and develop these areas, the Company had to demonstrate that it had the requisite financial capacity to carry out these activities, alone or through financing or partnering arrangements.

The Company, on December 31, 2016, maintains activities in South America, which includes Argentina, Colombia and Bolivia; North America, which includes Mexico and the United States of America; and Turkey (others). The equity-accounted investments are comprised of the operations of Petrobras Oil and Gas B.V. (PO&G) in Africa, mainly Nigeria, as well as Venezuelan companies involved in exploration and production activities, over which the Company had significant influence until July 2016. However, the Company only estimates reserves in the United States, Nigeria and Argentina.

# 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

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

	Consolidated entities							Equity Method Investees
	Abroad						Total	
	Brazil	South America	North America	Africa	Others	Total		
December 31, 2016								
Unproved oil and gas properties	6,978	115	276	-	-	391	7,369	-
Proved oil and gas properties	87,925	88	4,264	-	-	4,352	92,277	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
December 31, 2014								
Unproved oil and gas properties	9,298	72	673	-	-	745	10,043	9
Proved oil and gas properties	96,520	2,007	4,247	-	-	6,254	102,774	4,542
Support Equipment	79,497	1,181	78	-	3	1,262	80,759	26
Gross Capitalized costs	185,315	3,260	4,998	-	3	8,261	193,576	4,577
Depreciation, depletion and amortization	(46,691)	(1,753)	(1,274)	-	(3)	(3,030)	(49,721)	(1,819)
Net capitalized costs	138,624	1,507	3,724	-	-	5,231	143,855	2,758

**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	Total		
December 31, 2016							
Acquisition costs:							
Proved	-	98	-	-	98	98	-
Unproved	-	-	-	-	-	-	-
Exploration costs	1,459	44	6	-	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>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>990</b>	<b>19,792</b>	<b>441</b>
December 31, 2014							
Acquisition costs:							
Proved	-	89	-	-	89	89	-
Unproved	54	-	-	-	-	54	-
Exploration costs	5,455	122	135	15	272	5,727	-
Development costs	18,158	546	418	-	964	19,122	638
<b>Total</b>	<b>23,667</b>	<b>757</b>	<b>552</b>	<b>15</b>	<b>1,325</b>	<b>24,992</b>	<b>638</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, 2016, 2015 and 2014 are shown in the following table. The Company transfers substantially all of its Brazilian crude oil and gas production to the Refining, Transportation & Marketing segment in Brazil. The internal transfer prices calculated by the Company's model may not be indicative of the price the Company would have realized had this production been sold in an unregulated spot market. Additionally, the prices calculated by the Company's model may not be indicative of the future prices to be realized by the Company. Gas prices used are those set out in contracts with third parties.

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

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, 2016</b>								
Net operation revenues:								
Sales to third parties	693	224	563	-	-	787	1,480	381
Intersegment	31,689	506	-	-	-	506	32,195	31
Production costs	32,382	730	563	-	-	1,293	33,675	412
Exploration expenses	(13,939)	(315)	(132)	-	-	(447)	(14,386)	(56)
Depreciation, depletion and amortization	(1,603)	(35)	(122)	-	(1)	(158)	(1,761)	(4)
Impairment of oil and gas properties	(10,051)	(99)	(327)	-	-	(426)	(10,477)	(170)
Other operating expenses	(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
Production costs	33,818	1,272	590	-	-	1,862	35,680	580
Exploration expenses	(17,023)	(556)	(189)	-	-	(745)	(17,768)	(209)
Depreciation, depletion and amortization	(1,582)	(18)	(311)	-	-	(329)	(1,911)	(30)
Impairment of oil and gas properties	(7,403)	(301)	(246)	-	-	(547)	(7,950)	(187)
Other operating expenses	(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)
<b>December 31, 2014</b>								
Net operation revenues:								
Sales to third parties	500	847	919	-	-	1,766	2,266	676
Intersegment	65,116	1,234	-	-	-	1,234	66,350	1,394
Production costs	65,616	2,081	919	-	-	3,000	68,616	2,071
Exploration expenses	(27,397)	(998)	(227)	-	-	(1,225)	(28,622)	(579)
Depreciation, depletion and amortization	(2,882)	(28)	(142)	(15)	-	(185)	(3,067)	(280)
Impairment of oil and gas properties	(7,675)	(352)	(558)	-	-	(910)	(8,585)	(174)
Other operating expenses	(2,133)	(87)	(1,585)	(6)	-	(1,678)	(3,811)	(74)
Other operating expenses	(2,827)	1,059	(112)	2	113	1,063	(1,764)	(8)
Income before income tax expenses	22,702	1,675	(1,705)	(20)	113	64	22,766	954
Income tax expenses	(7,719)	(490)	(4)	-	17	(477)	(8,196)	(653)
Results of operations (excluding corporate overhead and interest costs)	14,983	1,186	(1,709)	(20)	130	(413)	14,570	301

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

The Company's estimated net proved oil and gas reserves and changes thereto for the years 2016, 2015 and 2014 are shown in the following table. Proved reserves are estimated by the Company's reservoir geoengeers in accordance with the reserve definitions prescribed by the Securities and Exchange Commission.

Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations – prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence within a reasonable time.

Developed oil and gas reserves are reserves of any category that can be expected to be recovered: (i) through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and (ii) through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is done by means not involving a well.

In some cases, substantial new investments in additional wells and related facilities will be required to recover these proved reserves and are named proved undeveloped reserves. Due to the inherent uncertainties and the limited nature of reservoir data, estimates of reserves are subject to change as additional information becomes available.

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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						Total
	Crude oil in Brazil	South America	North America	Africa	Total of crude oil abroad	Synthetic oil in Brazil	
Reserves at December 31, 2013	10,658.4	166.0	123.1	-	289.2	8.8	10,956.4
Revisions of previous estimates	629.3	(3.2)	5.3	-	2.1	0.2	631.6
Extensions and discoveries	267.7	3.0	1.6	-	4.6	-	272.3
Improved Recovery	-	0.5	-	-	0.5	-	0.5
Sales of reserves	-	(104.4)	(0.1)	-	(104.5)	-	(104.5)
Purchases of reserves	-	22.9	-	-	22.9	-	22.9
Production for the year	(704.6)	(18.3)	(10.0)	-	(28.3)	(1.1)	(734.0)
Reserves at December 31, 2014	10,850.9	66.5	119.9	-	186.5	7.9	11,045.1
Revisions of previous estimates	(1,968.9)	(3.5)	(18.1)	-	(21.6)	0.1	(1,990.4)
Extensions and discoveries	407.1	4.8	-	-	4.8	-	411.9
Improved Recovery	0.4	0.7	-	-	0.7	-	1.1
Sales of reserves	(2.3)	(4.5)	-	-	(4.5)	-	(6.8)
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	(743.1)	(11.7)	(11.2)	-	(22.8)	(1.0)	(767.0)
Reserves at December 31, 2015	8,544.1	52.3	90.6	-	142.9	6.9	8,693.9
Revisions of previous estimates	179.5	0.1	17.9	-	18.0	0.8	198.4
Extensions and discoveries	87.8	-	-	-	-	-	87.8
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	(46.6)	-	-	(46.6)	-	(46.6)
Purchases of reserves	-	0.7	-	-	0.7	-	0.7
Production for the year	(748.5)	(5.7)	(12.1)	-	(17.8)	(0.9)	(767.2)
Reserves at December 31, 2016	8,063.0	0.8	96.4	-	97.3	6.8	8,167.1

Apparent differences in the sum of installments are due to rounding.

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

Proved developed and undeveloped reserves - Equity Method Investees	Abroad						Total
	Crude Oil abroad	South America	North America	Africa	Total of crude oil abroad	Brazil's Synthetic Oil	
Reserves at December 31, 2013	-	21.2	-	63.2	84.5	-	84.5
Revisions of previous estimates	-	(1.6)	-	0.5	(1.1)	-	(1.1)
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(1.7)	-	(9.6)	(11.3)	-	(11.3)
Reserves at December 31, 2014	-	18.0	-	54.1	72.1	-	72.1
Revisions of previous estimates	-	(2.2)	-	5.2	3.1	-	3.1
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	16.2	16.2	-	16.2
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(1.2)	-	(9.7)	(10.9)	-	(10.9)
Reserves at December 31, 2015	-	14.6	-	65.8	80.4	-	80.4
Revisions of previous estimates	-	-	-	11.9	11.9	-	11.9
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	(14.1)	-	-	(14.1)	-	(14.1)
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(0.5)	-	(8.7)	(9.2)	-	(9.2)
Reserves at December 31, 2016	-	-	-	69.0	69.0	-	69.0

Apparent differences in the sum of installments are due to rounding.

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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 in Brazil	South America	North America	Africa	Total abroad's Natural Gas	Brazil's Synthetic Gas	
Reserves at December 31, 2013	11,291.7	1,058.5	132.9	-	1,191.4	11.8	12,494.8
Revisions of previous estimates	468.0	25.5	46.1	-	71.6	0.1	539.7
Extensions and discoveries	216.0	42.1	6.0	-	48.1	-	264.1
Improved Recovery	-	10.8	-	-	10.8	-	10.8
Sales of reserves	-	(351.7)	(0.1)	-	(351.8)	-	(351.8)
Purchases of reserves	-	47.1	-	-	47.1	-	47.1
Production for the year	(805.4)	(101.5)	(4.9)	-	(106.4)	(1.4)	(913.2)
Reserves at December 31, 2014	11,170.3	730.8	180.0	-	910.8	10.6	12,091.5
Revisions of previous estimates	(1,178.3)	16.8	(17.0)	-	(0.2)	0.2	(1,178.3)
Extensions and discoveries	417.6	74.6	-	-	74.6	-	492.2
Improved Recovery	0.2	27.7	-	-	27.7	-	27.9
Sales of reserves	(1.3)	(90.2)	-	-	(90.2)	-	(91.5)
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	(820.8)	(79.2)	(24.5)	-	(103.7)	(1.4)	(925.9)
Reserves at December 31, 2015	9,587.7	680.5	138.5	-	819.1	9.3	10,416.1
Revisions of previous estimates	(476.2)	22.9	(19.3)	-	3.6	1.2	(471.4)
Extensions and discoveries	92.1	-	-	-	-	-	92.1
Improved Recovery	0.1	-	-	-	-	-	0.1
Sales of reserves	-	(631.9)	-	-	(631.9)	-	(631.9)
Purchases of reserves	-	93.3	-	-	93.3	-	93.3
Production for the year	(809.7)	(50.9)	(32.1)	-	(82.9)	(1.4)	(894.0)
Reserves at December 31, 2016	8,394.0	113.9	87.2	-	201.1	9.2	8,604.3

Apparent differences in the sum of installments are due to rounding

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

Proved developed and undeveloped reserves - Equity Method Investees	Abroad						Total
	Natural Gas in Brazil	South America	North America	Africa	Total abroad's Natural Gas	Brazil's Synthetic Gas	
Reserves at December 31, 2013	-	41.3	-	20.6	61.9	-	61.9
Revisions of previous estimates	-	(13.1)	-	(1.2)	(14.4)	-	(14.4)
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(0.6)	-	-	(0.6)	-	(0.6)
Reserves at December 31, 2014	-	27.6	-	19.3	46.9	-	46.9
Revisions of previous estimates	-	(10.4)	-	(2.7)	(13.1)	-	(13.1)
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(0.3)	-	-	(0.3)	-	(0.3)
Reserves at December 31, 2015	-	16.9	-	16.6	33.5	-	33.5
Revisions of previous estimates	-	-	-	(4.1)	(4.1)	-	(4.1)
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	(16.8)	-	-	(16.8)	-	(16.8)
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(0.1)	-	-	(0.1)	-	(0.1)
Reserves at December 31, 2016	-	-	-	12.5	12.5	-	12.5

Apparent differences in the sum of installments are due to rounding

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The table below summarizes information about the changes in total proved reserves of crude oil and natural gas, in millions of barrels of oil equivalent, in our consolidated entities and non consolidated affiliate for 2016, 2015 and 2014:

Proved developed and undeveloped reserves	Abroad				Total oil equivalent abroad	Total synthetic oil equivalent in Brazil	Total for all products
	Oil equivalent in Brazil	South America	North America	Africa			
Reserves at December 31, 2013	12,540.4	342.5	145.4	-	487.9	10.7	13,039.0
Revisions of previous estimates	707.3	1.1	13.0	-	14.1	0.2	721.6
Extensions and discoveries	303.7	10.0	2.6	-	12.6	-	316.3
Improved Recovery	-	2.3	-	-	2.3	-	2.3
Sales of reserves	-	(163.0)	(0.1)	-	(163.1)	-	(163.1)
Purchases of reserves	-	30.8	-	-	30.8	-	30.8
Production for the year	(838.8)	(35.2)	(10.8)	-	(46.0)	(1.3)	(886.1)
Reserves at December 31, 2014	12,712.6	188.3	150.1	-	338.3	9.6	13,060.7
Revisions of previous estimates	(2,165.3)	(0.7)	(20.9)	-	(21.6)	0.1	(2,187.1)
Extensions and discoveries	476.7	17.2	-	-	17.2	-	494.0
Improved Recovery	0.4	5.3	-	-	5.3	-	5.8
Sales of reserves	(2.5)	(19.5)	-	-	(19.5)	-	(22.0)
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	(879.9)	(24.9)	(15.3)	-	(40.2)	(1.3)	(921.3)
Reserves at December 31, 2015	10,142.1	165.7	113.7	-	279.4	8.5	10,430.0
Revisions of previous estimates	100.2	3.9	14.7	-	18.6	1.0	119.8
Extensions and discoveries	103.2	-	-	-	-	-	103.2
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	(151.9)	-	-	(151.9)	-	(151.9)
Purchases of reserves	-	16.3	-	-	16.3	-	16.3
Production for the year	(883.4)	(14.2)	(17.4)	-	(31.6)	(1.2)	(916.2)
Reserves at December 31, 2016	9,462.0	19.8	111.0	-	130.8	8.3	9,601.1

Apparent differences in the sum of installments are due to rounding.

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

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, 2013	-	28.1	-	66.7	94.8	-	94.8
Revisions of previous estimates	-	(3.7)	-	0.3	(3.5)	-	(3.5)
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(1.8)	-	(9.6)	(11.4)	-	(11.4)
Reserves at December 31, 2014	-	22.6	-	57.3	79.9	-	79.9
Revisions of previous estimates	-	(3.9)	-	4.8	0.9	-	0.9
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	16.2	16.2	-	16.2
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(1.3)	-	(9.7)	(11.0)	-	(11.0)
Reserves at December 31, 2015	-	17.4	-	68.6	86.0	-	86.0
Revisions of previous estimates	-	-	-	11.2	11.2	-	11.2
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	(16.9)	-	-	(16.9)	-	(16.9)
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	-	(0.5)	-	(8.7)	(9.2)	-	(9.2)
Reserves at December 31, 2016	-	0.0	-	71.1	71.1	-	71.1

Apparent differences in the sum of installments are due to rounding.

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Proved developed and undeveloped reserves - Consolidated and Equity Method Investees	Abroad				Total oil equivalent abroad	Total synthetic oil equivalent in Brazil	Total for all products
	Oil equivalent in Brazil	South America	North America	Africa			
Reserves at December 31, 2013	12,540.4	370.6	145.4	66.7	582.7	10.7	13,133.8
Revisions of previous estimates	707.3	(2.6)	13.0	0.3	10.6	0.2	718.1
Extensions and discoveries	303.7	10.0	2.6	-	12.6	-	316.3
Improved Recovery	-	2.3	-	-	2.3	-	2.3
Sales of reserves	-	(163.0)	(0.1)	-	(163.1)	-	(163.1)
Purchases of reserves	-	30.8	-	-	30.8	-	30.8
Production for the year	(838.8)	(37.0)	(10.8)	(9.6)	(57.4)	(1.3)	(897.6)
Reserves at December 31, 2014	12,712.6	211.0	150.1	57.3	418.4	9.6	13,140.6
Revisions of previous estimates	(2,165.3)	(4.6)	(20.9)	4.8	(20.8)	0.1	(2,186.2)
Extensions and discoveries	476.7	17.2	-	-	17.2	-	493.9
Improved Recovery	0.4	5.3	-	16.2	21.5	-	21.9
Sales of reserves	(2.5)	(19.5)	-	-	(19.5)	-	(22.0)
Purchases of reserves	-	-	-	-	-	-	-
Production for the year	(879.9)	(26.2)	(15.3)	(9.7)	(51.2)	(1.3)	(932.3)
Reserves at December 31, 2015	10,142.1	183.1	113.7	68.6	365.4	8.5	10,516.0
Revisions of previous estimates	100.2	3.9	14.7	11.2	29.8	1.0	131.0
Extensions and discoveries	103.2	-	-	-	-	-	103.2
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	(168.8)	-	-	(168.8)	-	(168.8)
Purchases of reserves	-	16.3	-	-	16.3	-	16.3
Production for the year	(883.4)	(14.7)	(17.4)	(8.7)	(40.8)	(1.2)	(925.4)
Reserves at December 31, 2016	9,462.0	19.8	111.0	71.1	201.8	8.3	9,672.2

Apparent differences in the sum of installments are due to rounding.

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

In 2016, we incorporated 103 million boe of proved reserves from extensions and discoveries in Brazil (Santos Basin), and we added 131 mmboe to our proved reserves due to revisions of previous estimates, as a result of drilling of new production development wells and better reservoir response in onshore and offshore post-salt fields, in Brazil and the USA, and as result of positive answers from the reservoirs, recovery mechanisms (water injection) and operating efficiency of production systems in operation, as well as the growing drilling activities and tie-back activities, in the pre-salt fields, in Santos and Campos Basin, both in Brazil.

We reduced 169 mmboe of our proved reserves due to sales of minerals in situ and increased 16 mmboe in our proved reserves due to purchases of minerals in situ, resulting in a net effect of a decrease of 153 mmboe in our proved reserves. The net result of these additions and disposals, excluding production, was an increase of 81 mmboe to our proved reserves in 2016. Considering a production of 925 mmboe in 2016, our decrease of proved reserves was 844 mmboe. This volume production does not take into account the production of Extended Well Tests (EWTs) in exploratory blocks in Brazil, and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

We had a total of 4,441.1 mmboe of proved undeveloped reserves company-wide at December 31, 2016, approximately 7.4% (329.1 mmboe) of which have remained undeveloped for five years or more as a result of several factors affecting development and production, including the inherent complexity of ultra-deep water development projects, particularly in the Santos Basin and in the Campos Basin, in which we are making investments to develop necessary infrastructure.

In 2015, our proved reserves decreased by 2,186 mmboe due to revisions of previous estimates, mostly as result of the decrease in oil prices during fiscal year of 2015, and decreased by 22 mmboe due to sales of proved reserves. This decrease was partially offset by the incorporation of 494 mmboe of proved reserves from discoveries of new accumulations and extensions in Brazil, specifically in the Santos, Campos and Espírito Santo Basins, and in Argentina, in the Neuquina Basin, and the incorporation of 22 mmboe due to improved recovery. The net result (excluding production) was a decrease of 1,692 mmboe in our proved reserves in 2015. Considering a production of 932 mmboe in 2015, our net decrease of proved reserves was 2,625 mmboe. This volume production does not take into account the production of Extended Well Tests (EWTs) in exploratory blocks in Brazil, and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

In 2014, 1,097 mmboe were added to our proved reserves, excluding synthetic oil and synthetic gas, while we (i) returned to the ANP eleven fields in Brazil (four with proved reserves) and (ii) we divested from fields in which we had interests in Peru, Colombia, Argentina and United States, representing aggregate proved reserves of 193 mmboe. The net result of these additions and dispositions was an increase of 904 mmboe to our proved reserves in 2014. Considering a production of 896 mmboe in 2014, our net increase of proved reserves was 8 mmboe. This volume production does not take into account the production of Extended Well Tests (EWTs) in exploratory blocks in Brazil, production of synthetic oil and synthetic gas and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

# Petróleo Brasileiro S.A. – Petrobras

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

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



	2016				2015				2014			
	Synthetic		Synthetic		Synthetic		Synthetic		Synthetic		Synthetic	
	Crude Oil	Oil	Natural Gas	Gas	Crude Oil	Oil	Natural Gas	Gas	Crude Oil	Oil	Natural Gas	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	4,250.1	6.8	5,034.2	9.2	4,266.5	6.9	5,320.5	9.3	7,002.7	7.9	6,661.0	10.6
South America	0.5	-	33.7	-	39.7	-	366.3	-	52.0	-	358.2	-
North America	79.6	-	83.6	-	53.6	-	122.5	-	63.6	-	146.2	-
Abroad	80.1	-	117.3	-	93.4	-	488.8	-	115.6	-	504.3	-
<b>Total Consolidated Entities</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>	<b>7,118.3</b>	<b>7.9</b>	<b>7,165.4</b>	<b>10.6</b>
Nonconsolidated Entities												
South America	-	-	-	-	6.6	-	8.0	-	9.4	-	15.7	-
Africa	32.5	-	8.6	-	28.0	-	10.4	-	30.8	-	14.4	-
Abroad	32.5	-	8.6	-	34.7	-	18.4	-	40.2	-	30.1	-
<b>Total Nonconsolidated Entities</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>40.2</b>	<b>-</b>	<b>30.1</b>	<b>-</b>
<b>Total Consolidated and Nonconsolidated Entities</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>7,158.5</b>	<b>7.9</b>	<b>7,195.5</b>	<b>10.6</b>
<b>Net proved undeveloped reserves:</b>												
Consolidated Entities												
Brazil	3,812.9	-	3,359.7	-	4,277.7	-	4,267.2	-	3,848.2	-	4,509.2	-
South America	0.3	-	80.2	-	12.5	-	314.2	-	14.6	-	372.5	-
North America	16.8	-	3.6	-	37.0	-	16.0	-	56.4	-	33.8	-
Abroad	17.1	-	83.8	-	49.5	-	330.3	-	71.0	-	406.3	-
<b>Total Consolidated Entities</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>	<b>3,919.2</b>	<b>-</b>	<b>4,915.5</b>	<b>-</b>
Nonconsolidated Entities												
South America	-	-	-	-	7.9	-	8.9	-	8.6	-	11.9	-
Africa	36.5	-	3.9	-	37.8	-	6.2	-	23.3	-	4.9	-
Abroad	36.5	-	3.9	-	45.7	-	15.1	-	31.9	-	16.8	-
<b>Total Nonconsolidated Entities</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>31.9</b>	<b>-</b>	<b>16.8</b>	<b>-</b>
<b>Total Consolidated and Nonconsolidated Entities</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>	<b>3,951.1</b>	<b>-</b>	<b>4,932.3</b>	<b>-</b>

Apparent differences in the sum of installments are due to rounding.

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

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

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

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

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

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



	Consolidated entities							Equity Method Investees
	Abroad						Total	
	Brazil	South America	North America	Africa	Others	Total		
<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
<b>December 31, 2014</b>								
Future cash inflows	1,080,516	7,164	11,334	-	-	18,498	1,099,014	6,282
Future production costs	(469,252)	(3,743)	(3,687)	-	-	(7,430)	(476,682)	(1,904)
Future development costs	(70,098)	(1,195)	(2,351)	-	-	(3,547)	(73,644)	(1,613)
Future income tax expenses	(188,740)	(618)	(408)	-	-	(1,026)	(189,766)	(920)
Undiscounted future net cash flows	352,427	1,608	4,888	-	-	6,495	358,922	1,846
10 percent midyear annual discount for timing of estimated cash flows*	(178,720)	(526)	(1,582)	-	-	(2,108)	(180,828)	(553)
Standardized measure of discounted future net cash flows	173,707	1,082	3,306	-	-	4,388	178,094	1,292

\*Semiannual capitalization

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

# Petróleo Brasileiro S.A. – Petrobras

## Notes to the financial statements

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



	Consolidated entities							Equity Method Investees
	Abroad						Total	
	Brazil	South America	North America	Africa	Others	Total		
Balance at January 1, 2016	42,770	1,205	873	-	-	2,078	44,848	511
Sales and transfers of oil and gas, net of production cost	(18,425)	(351)	(432)	-	-	(783)	(19,208)	(208)
Development cost incurred	12,429	176	148	-	-	324	12,753	389
Net change due to purchases and sales of minerals in place	-	(1,094)	-	-	-	(1,094)	(1,094)	(54)
Net change due to extensions, discoveries and improved recovery related costs	1,234	-	484	-	-	484	1,718	67
Revisions of previous quantity estimates	1,197	-	223	-	-	223	1,420	242
Net change in prices, transfer prices and in production costs	(27,031)	-	(760)	-	-	(760)	(27,791)	(477)
Changes in estimated future development	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>
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	(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>
Balance at January 1, 2014	188,569	2,754	3,335	-	-	6,088	194,657	1,704
Sales and transfers of oil and gas, net of production cost	(38,212)	(652)	(700)	-	-	(1,352)	(39,563)	(952)
Development cost incurred	18,158	546	418	-	-	964	19,122	638
Net change due to purchases and sales of minerals in place	-	(1,092)	106	-	-	(985)	(985)	-
Net change due to extensions, discoveries and improved recovery related costs	7,197	182	-	-	-	182	7,379	-
Revisions of previous quantity estimates	16,764	(28)	213	-	-	185	16,949	(30)
Net change in prices, transfer prices and in production costs	(33,371)	(255)	(378)	-	-	(633)	(34,004)	(576)
Changes in estimated future development	(11,824)	(361)	38	-	-	(323)	(12,147)	(116)
Accretion of discount	18,857	132	343	-	-	475	19,331	176
Net change in income taxes	7,570	(114)	(94)	-	-	(208)	7,363	86
Other - unspecified	-	(30)	25	-	-	(6)	(6)	362
<b>Balance at December 31, 2014</b>	<b>173,707</b>	<b>1,082</b>	<b>3,306</b>	<b>-</b>	<b>-</b>	<b>4,388</b>	<b>178,094</b>	<b>1,292</b>

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