

# REPORT OF THE ADMINISTRATION 2016



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# MESSAGE FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

Dear shareholders, employees and business partners of PETROBRAS,

This message has two major purposes.

The first is to be the first message from the Board of Directors, through its current Chairman, at the end of the first year of full term.

This Chairmanship was initially held throughout 2015 on an interim basis, thereafter replacing its full holder, who took a leave and then resigned during his term.

Once this interim cycle and replacement was completed in April 2016, the Board of Directors was mandated by shareholders for a full period of 02 (two) years, ending in April 2018, and over the course of its first year in office, it faced the replacement of the Chairman of the Executive Board.

Mr. Pedro Parente was appointed as the new President by the controlling shareholder; was submitted to, and approved by, the integrity background check; and was nominated by the Board. Since then, a partnership has been established between the presidency and the Executive Board, which has practiced fruitful, constructive interaction, continuing the high-level work already established under the presidency of Mr. Aldemir Bendine.

As soon as he was sworn in, President Pedro Parente decided to carry out a cycle of constructive conversations focused on an in-depth review of the Strategic Plan of PETROBRAS. The initiative was fully supported by the Board of Directors, which endorsed and supported the promotion of 2 (two) main goals under this new Plan, namely:

- to pursue a considerable reduction in accidents in our facilities and our activities – thus supporting the larger goal of preserving life and pursuing safe working conditions. Our targets in this regard are ambitious, seeking a dramatic reduction of personal incidents per million hours worked, which will be achieved with much training, intensive improvement of process safety and awareness, and
- to significantly reduce the company's debt and the financial leveraging. We are not proud to flaunt the largest corporate debt in the oil and gas sector on the planet.

We recognized that our debt has reached such high levels that repairing measures are required - as envisaged in the Strategic Plan - to refocus our debt to a level that will most benefit Petrobras' businesses. As our President Pedro Parente has already stated, in order to honor the commitment to invest in our core business – oil extraction and fuel industrialization – disinvestment in activities that are not directly related to this business is not a choice between valid alternatives, it is a necessity. Divestment is one of the best ways we can allocate, through active portfolio management, the necessary resources for delivering the production curve we are capable – and obliged – to offer the market.

Another key strategy for ensuring the cash flow that will enable us to invest in our core activities consists of technological, exploration, production, and/or financial partnerships.

The second purpose of this message concerns the formal record of changes in company Governance, of which the current Board of Directors is particularly proud. Let it be said that the current Board is the first, basically since the creation of Petrobras in the 1950s, composed solely of Members with no relation to any government agencies. Additionally, care was taken in 2015, and the principle was preserved in 2016, to appoint a multidisciplinary Board – legal operators are present, financial reporting experts are present, accounting and auditing professionals are present, investors are present, there is a representative elected by the employees, there is an expert in oil, gas, and deepwater, because, ultimately, all facets of the life of the company count on the experts and representatives on the Board.

After being sworn in in 2015,, the Board immediately reinforced the mission and the internal rules of 5 (five) Advisory Committees to the Board itself:

- the Auditing Committee, which became Statutory in 2016 in compliance with the corresponding requirements from the Comissão de Valores Mobiliários – CVM (the Brazilian Securities and Exchange Commission) and the Securities and Exchange Commission – SEC, USA;
- the Strategic Affairs Committee;
- the Finance Committee;
- the Committee on Nomination, Compensation, and Succession; and
- the Health, Safety, and Environment Committee.

More recently, the Board of Directors incorporated a Minority Shareholders Committee, which has the duty and prerogative to speak for the care of company interests in transaction proposals with parties related to the Federal Government and its Autarchies and Foundations, within the authority of the Board of Directors.

Each of these six Committees is chaired by a member of the Board of Directors. The Statutory Audit Committee is composed only of members of the Board of Directors. On the other Committees, non-Board members who have knowledge and expertise in matters within the scope of each Committee participate. It should be said, to give insight into the intensity of Committee operations, that in 2016, the Statutory Audit Committee met 29 (twenty-nine) times; the Committee on Nomination, Compensation and Succession met 32 (thirty-two) times; the Health, Safety, and Environment Committee met 13 (thirteen) times; the Finance Committee met 26 (twenty-six) times; and the Strategic Committee met 21 (twenty-one) times. All of this alongside the 47 (forty-seven) Ordinary and Extraordinary meetings of the Board of Directors meetings.

Our Whistleblowing Channel was enormously improved and background checks of suppliers are in the thousands. Additionally, vetoes to the nomination of persons with inappropriate curricula for positions with decision-making authority and vetoes to suppliers from which we demand change in stance for a better governance have been frequent.

It is our duty in rendering accounts of this nature to also confront specific challenges. Two of them are worthy of record:

- divestmentthe vital decision to abide by orders to improve transparency, issued by competent authorities, will directly result in extended periods to operationalize divestments; and
- discussions with the DoJ – the United States Department of Justice – and the SECin our defense in Class Action suits, in addition to several proceedings before Brazilian authorities (CVM, TCU, Prosecutor’s Office, the Judiciary Branch) will ensure final results once such cases are closed, although Petrobras is a victim in this process and at no time benefited directly or indirectly from the illicit acts.

As I said in the beginning, this is the start of an “accountability” report in this first year of the current mandate.

And if we can summarize the understanding of our Mission beyond the safety of human life and the return to investment grade ratings, perhaps the best expression of our task is to contribute to recovering the self-esteem of employees, investors and Brazilians in their largest state-owned company, which we all want to be, once again, the best one.

**Nelson Carvalho**

Chairman of the Board of Directors

# MESSAGE FROM THE PRESIDENT OF PETROBRAS

Dear shareholders and investors,

I present my first message as President of Petrobras to our shareholders and investors with the sense of immense responsibility for leading the Executive Board of the largest company in Brazil, which is among the four largest companies in Brazil in terms of market value, in full recovery.

The global oil and gas industry faced the second year of adversity, which began with the abrupt drop in oil prices in the last quarter of 2014 when barrel price dropped from US\$ 100 level to less than US\$ 35 in early 2016. More recently, those prices have fluctuated in a range between US\$ 45 and US\$ 55 per barrel. The industry had to adapt to this new reality of prices by selling assets and reducing investments and costs. An important aspect of this new competitive framework is the consolidation of so-called unconventional oil and gas production (shale and tight oil/gas), which represents a disruptive change in exploration and production of hydrocarbons and imposes great challenges to players in so-called conventional production, including Petrobras.

This industry context, challenging in and of itself, also found Petrobras in the midst of the biggest crisis in its history. The height of these problems is the size of our gross debt, which reached the US\$ 126 billion (R\$ 493 billion) at the end of 2015. This is the largest debt among non-financial entities in the country, except for the Federal Government's debt. It is also the largest debt among global public companies operating in our industry. Those are not honorable positions and it is our strategic goal to reverse this situation.

Throughout 2016, we announced and implemented the necessary measures to deal with the numerous problems left as an inheritance of this crisis. The Partnership and Divestment Program, which began a new cycle in 2015, had its pace accelerated in August. In September, we announced a new Strategic Plan and the corresponding Business and Management Plan for the 2017 to 2021 period, with two priority metrics. The first metric is related to safety, in which we pledged that by 2018 we'll limit our Recordable Injury Index (TAR) to 1.4 accidents per million hours worked. The second metric is related to our debt, as measured by the ratio between net debt and EBITDA (a proxy of operating cash generation). By the end of 2015 this ratio had reached an index of 5.1, which is very high considering both the circumstances of the Brazilian market and the comparison against other large international companies in the oil and gas sector. The strategic plan provides for the reduction of the net debt/EBITDA ratio to 2.5 by the end of 2018.

In our strategic plan, we clearly define the vision of the company we want to be: an integrated energy company, focusing on oil and gas, which evolves together with society, generates high value and has unique technical expertise. We objectively point out, with this vision and the 21 corresponding strategies, the areas in which we will operate and, with unprecedented clarity and transparency, those where we will not operate.

The plan defines five levers to ensure we achieve our top metrics. The first is the "Commitment to Life" plan, which seeks to strengthen the behavioral and safety aspects of processes to enable achieving our safety metric.

The four other pillars are integrated to allow the reduction of our debt: (1) a new pricing policy for gasoline and diesel, based on international parity and the declaration that at no time will we charge prices below international parity; (2) greater efficiency in our investments (CAPEX), translating into a reduction in our investments with an increase in our production; (3) reduction of our costs without compromising our safety and production goals; and (4) partnerships and divestments in transactions totaling US\$21 billion in the 2017/18 biennium.

The 2016 results show advances on all fronts. The number of recordable accidents per million man-hours was reduced by 24%, reaching the 1.63 index, which was only expected by the end of 2017. We generated positive free cash flow in every quarter of the year, totaling 7 consecutive quarters. Operating profit was R\$ 17 billion in 2016, with a 16% increase in adjusted EBITDA, which represents the highest EBITDA margin among the main players in the sector. The ratio between our net debt and our adjusted EBITDA was reduced by 31%, from 5.11 times to 3.54 times.

We implemented a new pricing policy starting in October 2016. The company's revenue began to follow international market dynamics, with revisions carried out at intervals no greater than 30 days. Today there is growing naturalness in the way that markets and other external audiences receive these monthly revisions, consolidating the implementation of this new policy.

Throughout 2016, we became more efficient in the production and exploration of oil and gas. For the second consecutive year, we were able to achieve our oil production target, registering several records. Average production in Brazil reached the level of 2.144 million barrels per day. We highlight the 1.02 million barrels of oil per day mark in pre-salt layer-operated production, where we prioritized our investments and gathered knowledge and experience to provide a relevant increase in productivity. When we include gas, our total production in Brazil and abroad reaches the expressive mark of 2.79 million barrels of oil equivalent per day.

Partnerships and divestments have gained new impetus, and the announced transactions reached an amount of US\$ 13.6 billion in December 2016. In addition to being essential for the financial recovery of the company, the strategic partnerships offer the opportunity of broad relationship with global companies, sharing risks, unburdening investments, promoting technological exchanges and strengthening corporate governance. With partnerships, we are more competitive to cope with industry challenges.

The relationship between the Executive Board and our Board of Directors merits special highlight. As an oversight body, the Board has diligently fulfilled its statutory duties, as presented in the message from its chair. Together with the Board of Directors, we have enhanced the company's governance, improving internal controls, decision-making processes and the policy on management succession. With this cooperation, we are better qualified to deal with the challenge of getting Petrobras out of the financial and reputational crisis in which it was placed in the recent past.

It is essential to register the contribution of our workforce for these advances. The dedication and technical competence of Petrobras employees have turned the company into a world reference, especially in deepwater exploration and production. These same attributes are needed now to overcome the challenges we face.



I send a special message to our shareholders. The company's results in 2016 unfortunately did not allow us to pay dividends as we'd like. However, in terms of overall return to shareholders, which includes variation in market value of our shares, we were the company that offered highest returns in 2016 in the oil and gas sector. We know that this result is due, to a large extent, to the confidence of our shareholders and investors in our ability to deliver what we promised in our Strategic Plan. We'll work in 2017 with redoubled effort to match that trust.

**Pedro Parente**  
President

## PROFILE

We are a publicly traded company that operates in an integrated, specialized manner in the oil, natural gas, and energy industry.

## SECURITIES MARKET

We are a mixed-capital company incorporated by Law no. 2004/53 to explore activities in oil, gas, and their derivatives, initially under Federal Union monopoly. Upon the enactment of Law no. 9478/97, we started to operate in the market under free competition. The activities that we currently develop are outlined in our bylaws.

Brazilian law requires the Brazilian Federal Government, as our controlling shareholder, to hold the majority of our shares with voting rights, thus holding power to elect the majority of members of our Board of Directors ("BD"). The Executive Officers are elected by the BD.

We have two classes of shares listed on stock exchanges: (i) common shares, which grant voting rights to holders, and (ii) preferred shares, which do not grant voting rights but guarantee priority in the distribution of dividends.

In Brazil, our shares are listed on the São Paulo Stock Exchange ("BM&FBovespa"), under the trading codes PETR3 (common) and PETR4 (preferred). In the United States, the ADRs (*American Depositary Receipts*), which are certificates issued by American banks that represent shares of a foreign company in the U.S., are listed on the New York Stock Exchange (NYSE) under the codes PBR (receipts representing common stock) and PBRA (receipts representing preferred the stock). In Spain, the receipts that represent company shares are listed on Latibex under the codes XPBR (representing common stock) and XPBRA (representing preferred stock). Receipts that represent our shares are also listed in Argentina, on the Buenos Aires Stock Exchange, under the codes APBR (representing common stock) and APBRA (representing preferred stock).

# SHAREHOLDING POSITION – DECEMBER 31, 2016

Chart 1: Voting Capital - Common Shares

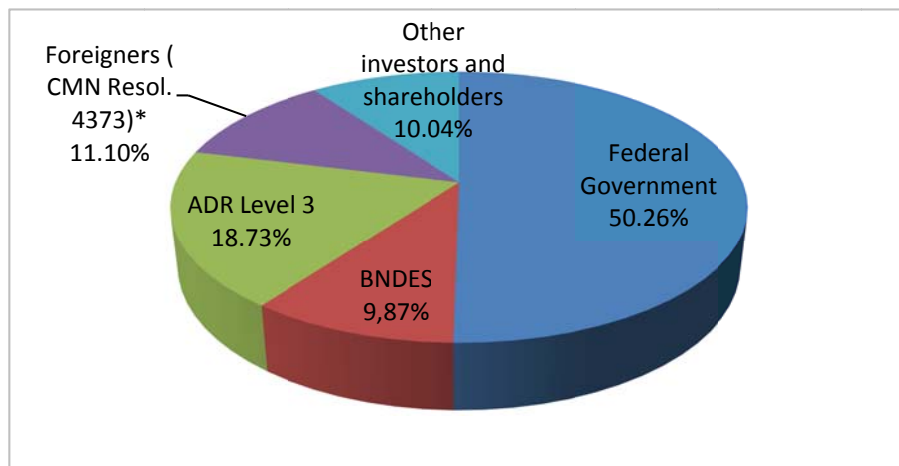


Chart 2: Non-Voting Capital - Preferred Shares

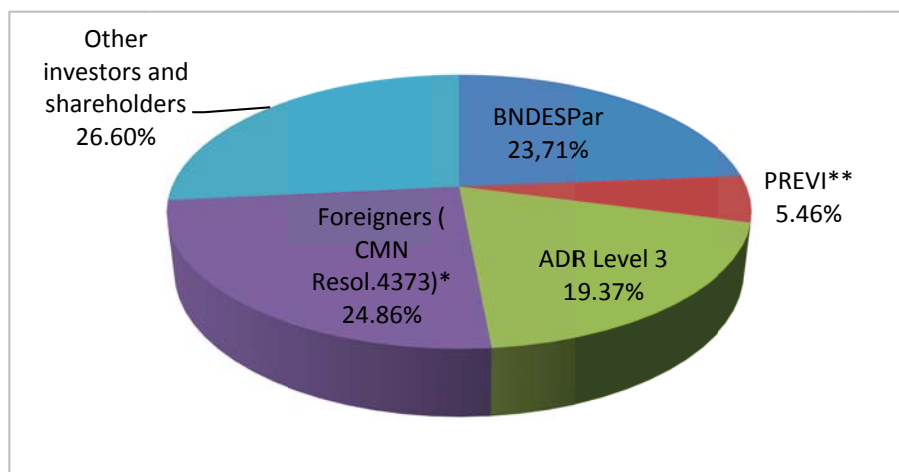
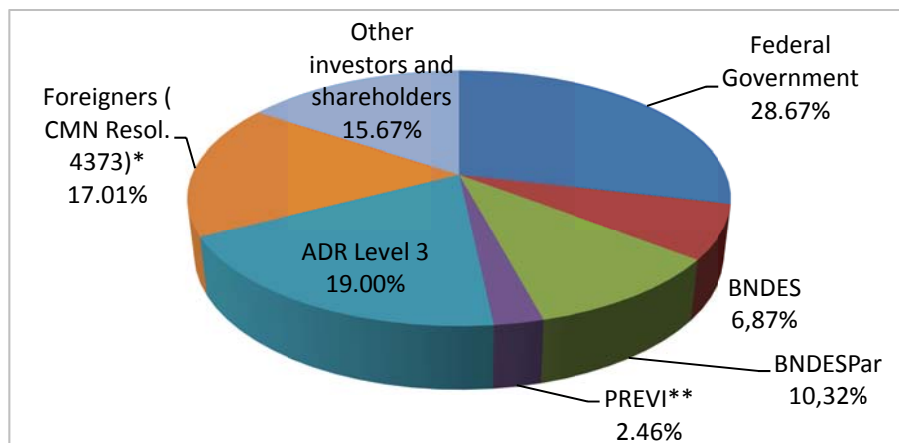


Chart 3: Capital Stock



\* CMN Resolution No. 4373: governs investments by non-resident foreign investors in the Brazilian financial and capital markets, and includes other provisions. \*\* PREVI: Pension Fund of Banco do Brasil Employees.

## STOCK PERFORMANCE

In 2016, several factors positively affected the performance of our shares listed on BM&FBovespa. In this context, Ibovespa, the exchange's main index, grew 34% over the previous year.

Reflecting this scenario as well as the increase in the international oil price, our share prices in the end of 2016 were higher than in 2015. As compared to 2015, common shares ("PETR3") rose by 98%, while preferred shares ("PETR4") rose by 122%, priced respectively at R\$ 16.94 and R\$ 14.87 as of 29 December 2016. With the sharp rise in share prices, our market value as of that date was R\$ 209 billion (US\$ 64 billion).

In the New York Stock Exchange - NYSE, where the receipts representing common ("PBR") and preferred ("PBRA") shares are traded, the increase reached 135% and 159%, respectively. The price of the receipts were further impacted by the Brazilian real's 18% appreciation against the U.S. dollar. On December 30, 2016, PBR price closed at US\$ 10.11, and PBRA price closed at US\$ 8.81.

Chart 4: Petrobras Market Value and Equity Value

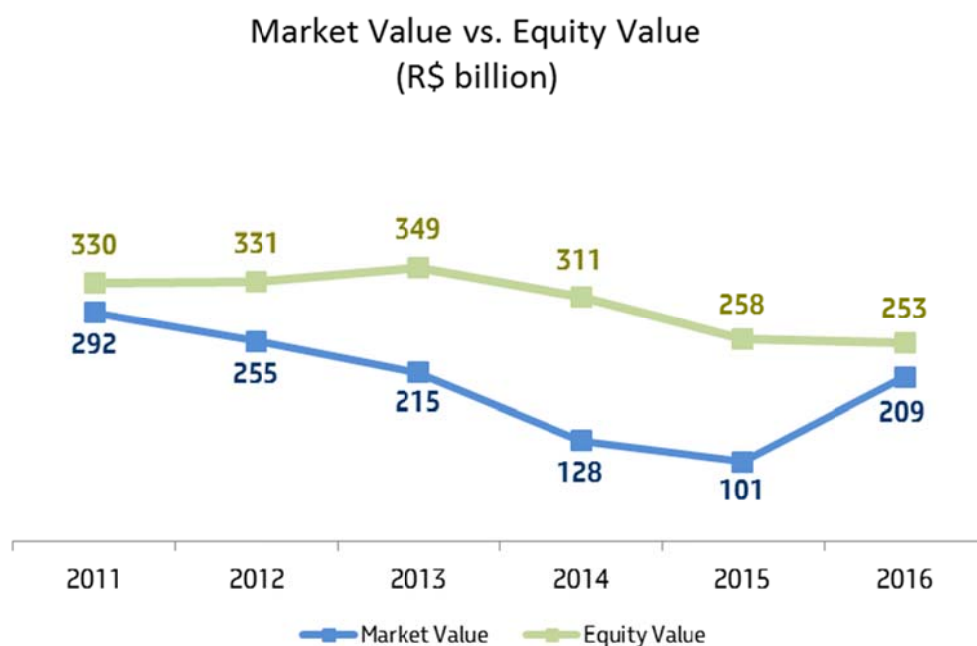
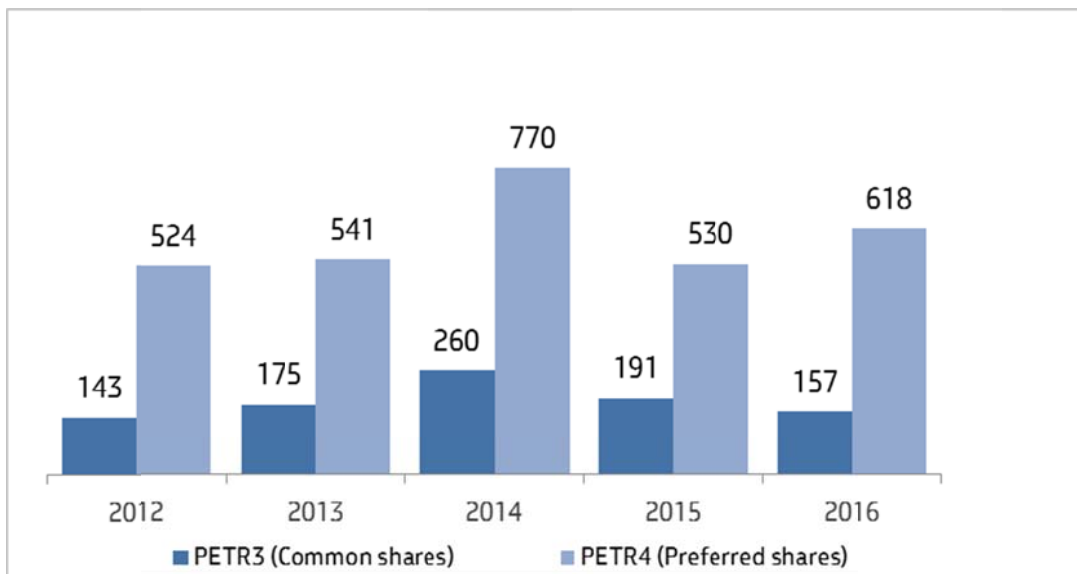
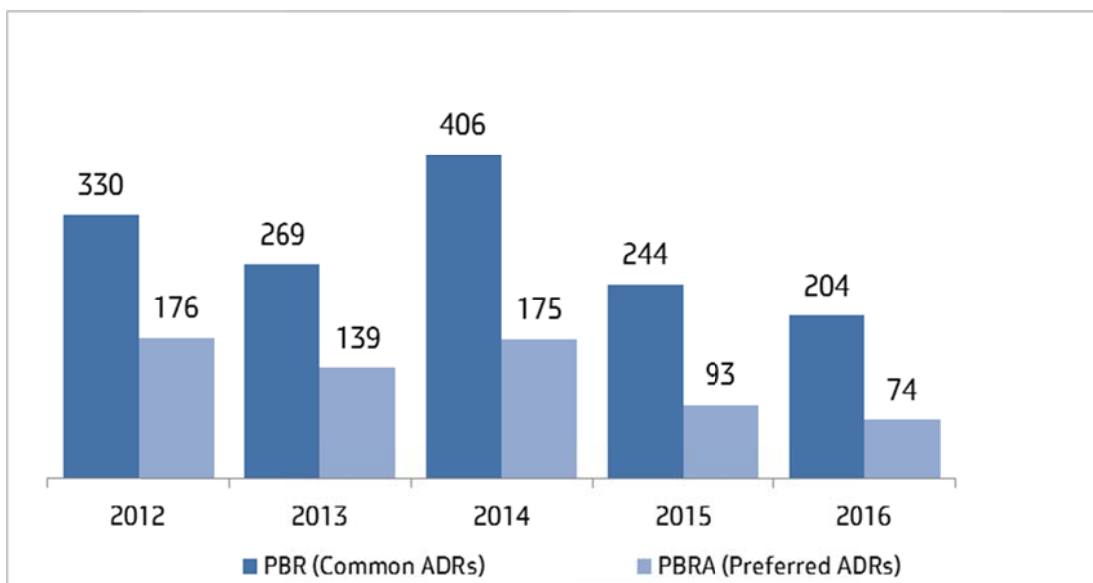


Chart 5: Financial Volume Traded on BM&FBovespa (daily average in R\$ million)



Source: Bloomberg

Chart 6: Financial Volume Traded on NYSE (daily average in US\$ million)



Source: Bloomberg

## RISK RATING

According to credit rating agencies, our rating reflects not only the perspectives on our operating and financial performance, but also the level of Brazil's sovereign risk.

In the first months of 2016, the three main rating agencies announced a reduction in our credit rating. On 18 February 2016, Standard & Poor's reviewed the risk level of our debt from BB to B+, with a negative perspective, following the change in sovereign rating. On May 11, 2016, Fitch also downgraded our credit rating from BB+ to BB, after changes in sovereign rating. In addition, Moody's reduced our risk rating by two levels on February 24, 2016, from Ba3 to B3.

In the end of 2016 and early 2017, however, two agencies improved our risk rating level. On 21 October, Moody's announced a one-level increase the company's rating plus a change in perspective, from "negative" to "stable," reflecting lower liquidity risk, considering changes in the regulatory framework of Brazil and the expectation of better operating performance in the medium term, in addition to the fact that Petrobras was able to achieve its cash generation and sale of assets goals.

On February 10, 2017, Standard & Poor's raised the rating of the company's corporate debt from B+ to BB-, and also altered the perspective from "negative" to "stable." In addition to the reasons highlighted by Moody's, Standard & Poor's stressed the recovery in the relationship with domestic and international banks, and our capacity to access capital markets, as well as the consistency of the new pricing policy, which allows greater visibility to our cash generation.

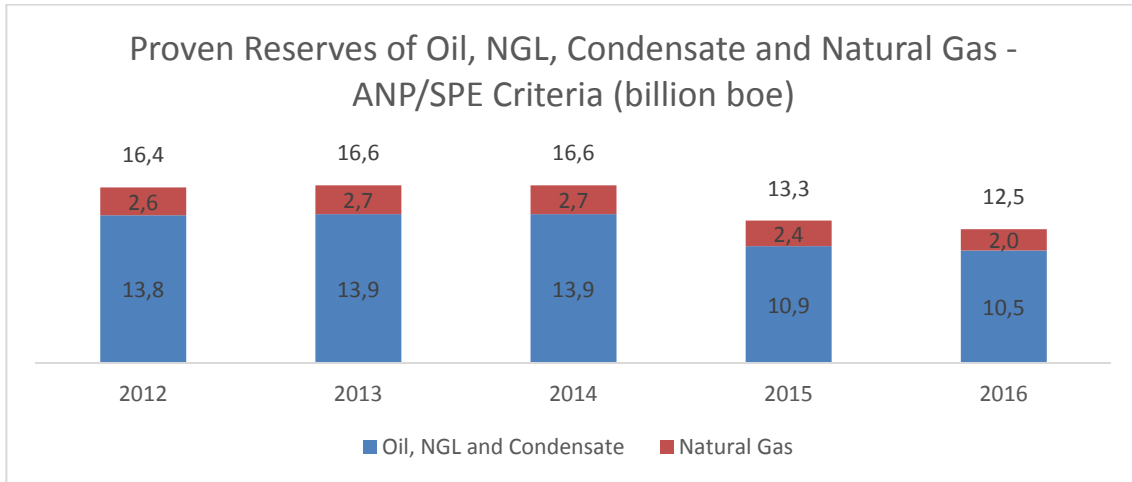
Table 1: Petrobras' assessment per rating agency

Rating Agency	Last Review	Overall Rating	Perspective
Moody's	10/21/2016	B2	Stable
Standard & Poor's	2/10/2017	BB-	Stable
Fitch Ratings	1/26/2017	BB	Negative

# LARGE NUMBERS

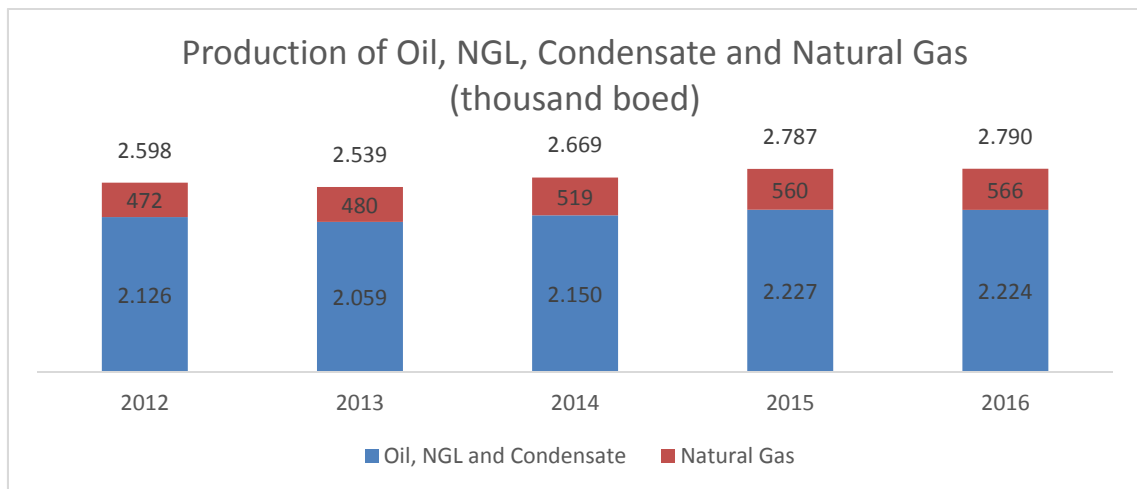
## RESERVES

Chart 7: Proven Reserves of Oil, NGL, Condensate, and Natural Gas - ANP/SPE Criteria (billion boe)



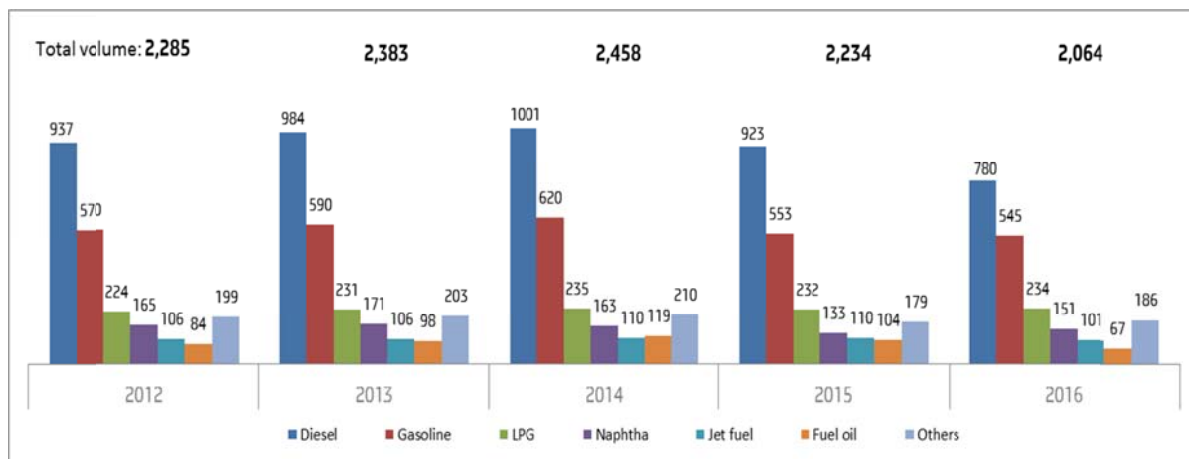
## PRODUCTION

Chart 8: Production of Oil, NGL, Condensate, and Natural Gas (thousand boed)



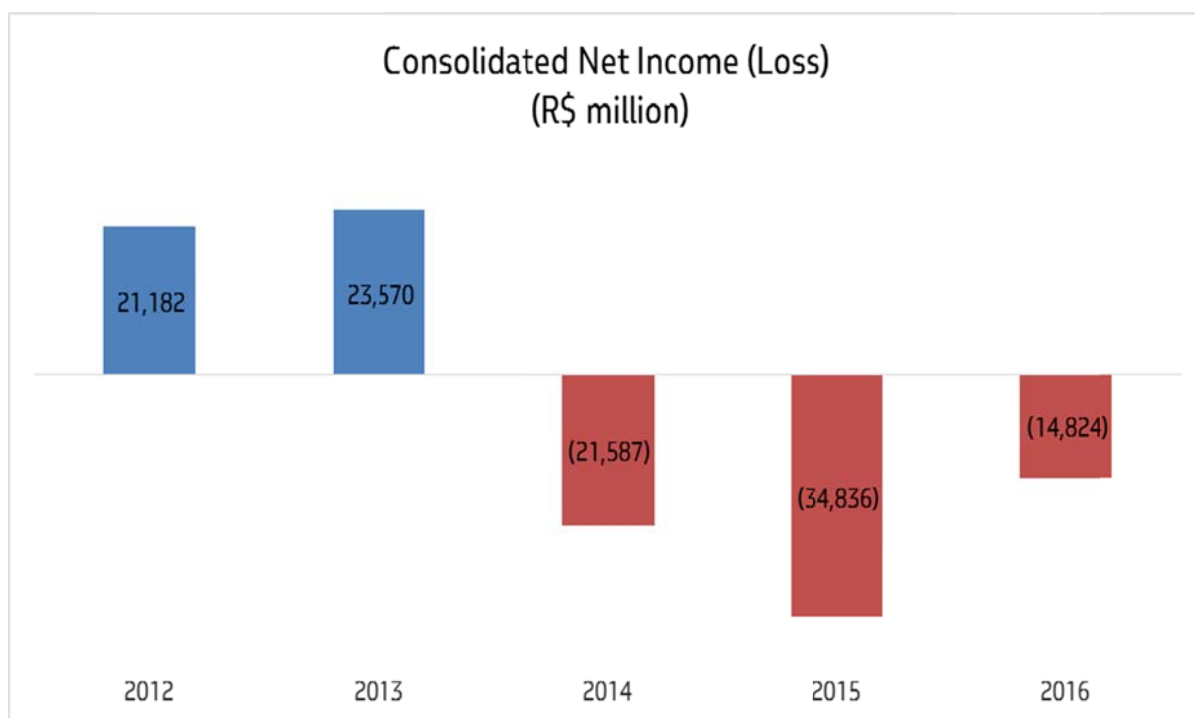
## SALE OF DERIVATIVES

Chart 9: Sales Volume of Derivatives on the Domestic Market, per Product and Total in Year (thousand barrels/day)



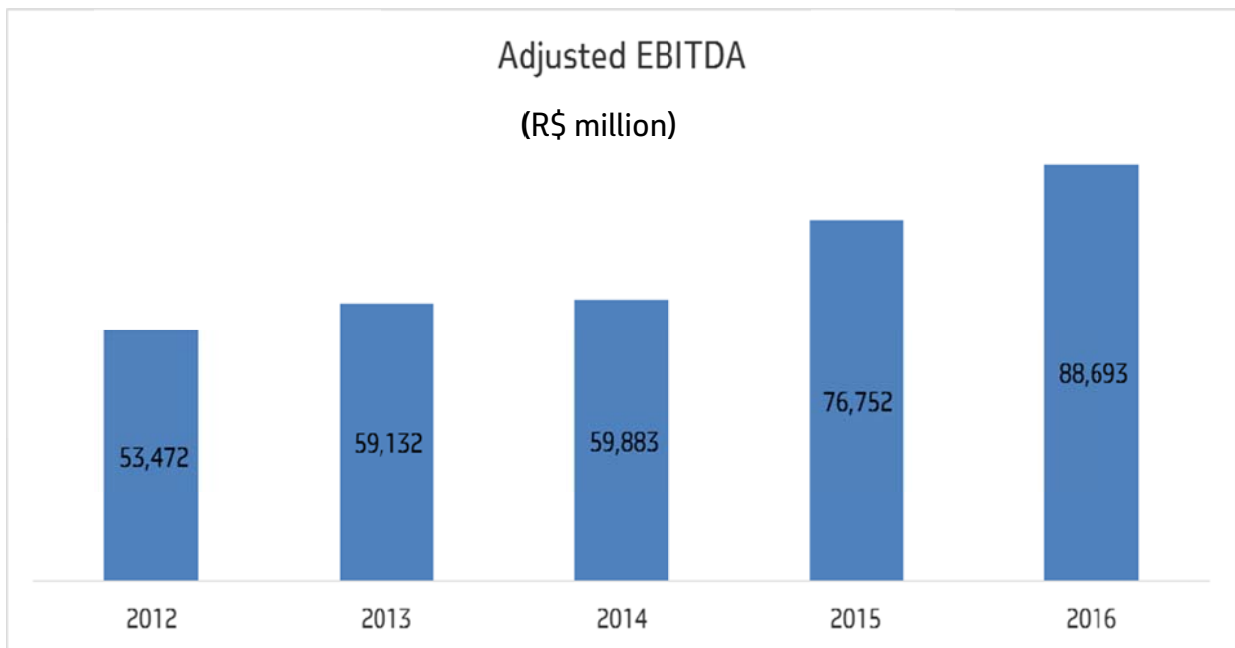
## CONSOLIDATED NET INCOME (LOSS)

Chart 10: Consolidated Net Income (Loss) (R\$ million)



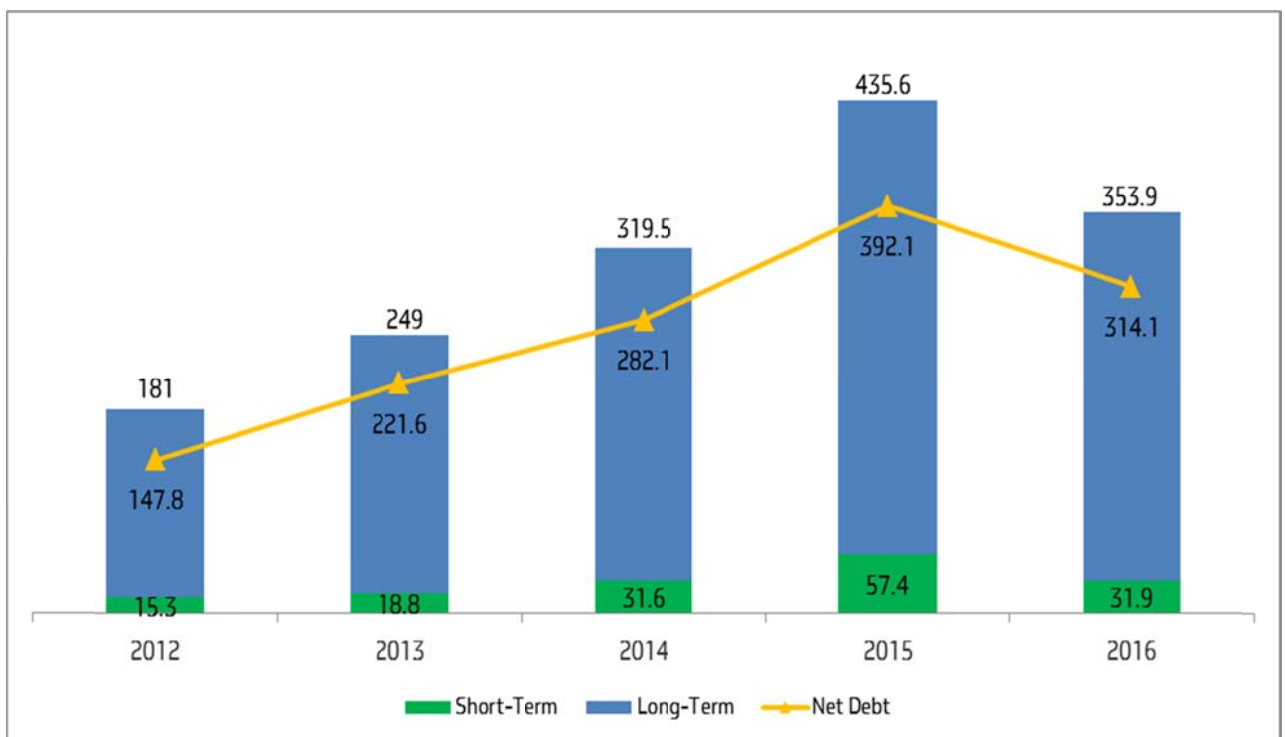
## ADJUSTED EBITDA

Chart 11: Adjusted EBITDA (R\$ million)



## CONSOLIDATED DEBT

Chart 12: Consolidated Debt (R\$ billion)





# CORPORATE STRATEGY

The Strategic Plan (“EP”) and the 2017-2021 Business and Management Plan (“PNG 2017-2021”), approved by the Board of Directors (“BD”) in September, were drafted in an integrated manner and relied on direct involvement of senior management and other executives in all of their drafting stages.

## STRATEGIC PLAN

The Strategic Plan updates our vision, highlighting five elements that define what we will be, based on our values:

### Our Vision

*An integrated energy company with a focus on oil and gas that evolves along with society, generates high value and has unique technical capability .*

### Our Values

Respect  
for life,  
people and  
the  
environme

Ethics and  
transparency

Market  
oriented

Resilience and  
confidence

Results

The five elements of our vision unfold in 21 strategies. These strategies were detailed in initiatives and targets, with systematic follow-up in order to ensure discipline in the execution. They are described below:

5 Elements of the Vision	21 Strategies
<b><i>Integrated energy company</i></b>	<ul style="list-style-type: none"> <li>• Reduce Petrobras’ risk in Exploration and Production, Refining, Transportation, Logistics, Distribution, and Marketing operations through partnerships and divestments;</li> <li>• Restructure the energy business by consolidating thermal power assets and other businesses in this segment, seeking an alternative that maximizes our value;</li> <li>• Review lubricant business positioning, aiming to maximize our value generation;</li> </ul>

<p><b><i>Focus on oil and gas</i></b></p>	<ul style="list-style-type: none"> <li>• Managing the exploration portfolio, in order to maximize economy and ensure sustainability in oil and gas production;</li> <li>• Manage the Exploration and Production project portfolio in an integrated manner;</li> <li>• Optimize business portfolio, by fully abandoning biofuel production activities, liquefied petroleum gas (“LPG”) distribution, fertilizer production, and petrochemical interests, preserving technological skills in areas with development potential;</li> <li>• Maximize value generation in the gas supply chain, in line with regulatory developments, ensuring monetization of own production and adapting the participation in the natural gas supply chain as a long term transition fuel;</li> </ul>
<p><b><i>Evolution with society</i></b></p>	<ul style="list-style-type: none"> <li>• Strengthen internal controls and governance, ensuring transparency and effectiveness of the prevention and combat system against misappropriation, without negatively affecting the swift decision-making process;</li> <li>• Recover credibility and strengthen our relationship and reputation with all stakeholders, including our control and oversight bodies;</li> <li>• Maintain transparent, respectful, proactive dialogue with all stakeholders, by using the best, most modern internal and external communication practices;</li> <li>• Align social responsibility actions with our projects;</li> </ul>
<p><b><i>Value generation</i></b></p>	<ul style="list-style-type: none"> <li>• Strengthen the management of reservoirs to maximize the value of E&amp;P contracts in all regulatory regimes, seeking opportunities for continuous incorporation of reserves;</li> <li>• Ensure discipline in the use of capital and return to shareholders in all of our projects, with high reliability and predictability in delivery;</li> <li>• Continuously maximize productivity and cost reduction, in accordance with the best international practices;</li> <li>• Promote market pricing and margin maximization policy in the supply value chain;</li> <li>• Act with an emphasis on partnerships and divestments as key elements for generating value;</li> <li>• Promote management of our workforce in participatory culture and mutual trust environment, oriented towards results that add value, with safety, ethics, responsibility, stimulating debate, meritocracy, simplicity and compliance;</li> <li>• Manage the procurement process of goods and services with a focus on value, aligned to international standards and metrics, meeting compliance requirements, while maintaining flexibility towards adverse</li> </ul>

	scenarios and demand volatility, and contributing to the development of the supply chain as a whole;
<b>Technical capability</b>	<ul style="list-style-type: none"> <li>• Ensure constant development of technological capabilities in areas with development potential, strengthening current business performance and opening options for competitive performance in low carbon, renewable energies, and refining-petrochemical integration technologies;</li> <li>• Prioritize the development of deepwater production, working primarily in strategic partnerships, bringing together technical and technological skills;</li> <li>• Facilitate the design and implementation of projects with low price of oil balance, with safety and compliance to environmental requirements.</li> </ul>

## 2017-2021 BUSINESS AND MANAGEMENT PLAN

Integrated into the Strategic Plan, the 2017-2021 Business and Management Plan was developed based on the following pillars:

Figure 1: 2017-2021 Business and Management Plan Pillars

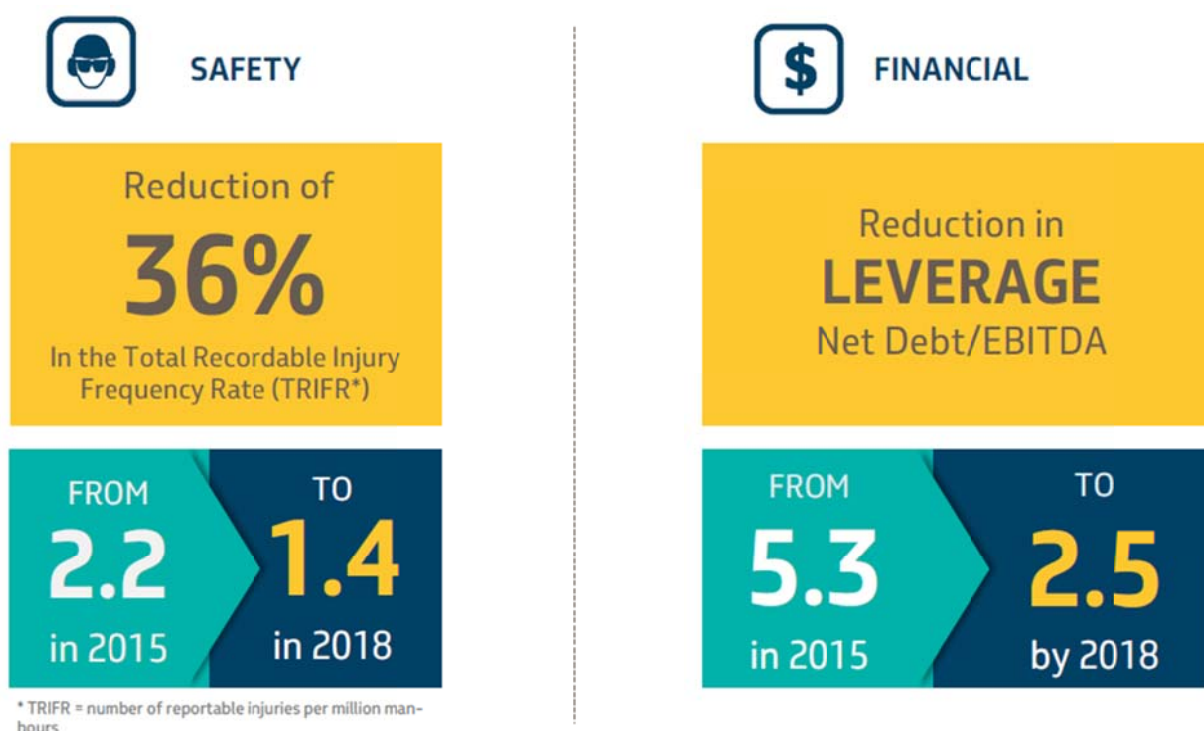


The key word is **evolution**, which we will encourage by accelerating the recovery of the financial health of the company and the improvement of safety indicators. To this end, we rely on the following pillars of value generation: competitive prices, Capex efficiency, Opex efficiency, and partnerships and divestments.

Surrounding these four pillars and this acceleration process of company recovery are: **safety**, the **management system** and **cultural transformation**.

The plan details operational planning, with a focus on safety and financial planning for the next five years, and it has set two major metrics: one in safety (reduce Recordable Injury Rate - "TAR") and another in finance (reduce the leverage – net debt/Ebitda), which guide the company's strategy.

Figure 2: Main Metrics in the 2017-2021 Business and Management Plan



## SAFETY

To meet one of the key metrics in the PE and PNG 2017-2021, we created the Commitment to Life program, whose main goal is to reduce the TAR to 1.4 in 2018, based on operational discipline and process safety. The program aims to enhance safety awareness in the company, leadership commitment, continuous training focused on knowledge of risks and processes, management evaluation and the system of consequences.

## FINANCIAL PLANNING

Among the main assumptions considered in planning, we highlight:

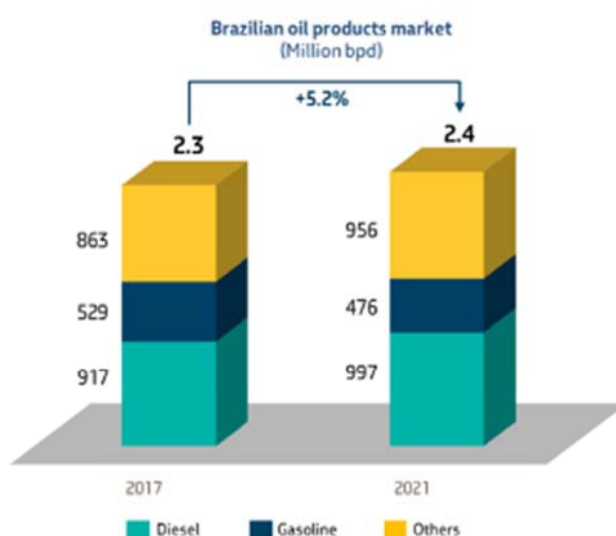
- average Brent price and average exchange rate, as per the following table;

Table 2: Brent and Forex Projection

		2017	2018	2019	2020	2021
<b>Brent Base Year 2016</b>	US\$ / bbl	48	56	68	71	71
	<b>Nominal Exchange Rate</b>	R\$ / US\$	3.55	3.71	3.72	3.74

- Growth of the Brazilian derivatives market;

Chart 13: Brazilian Derivatives Market (million bpd)



To meet the 2.5 Net Debt/EBITDA financial metrics, by 2018, we will work with four pillars, as described below:

## COMPETITIVE PRICES

In October, we adopt a new pricing policy of gasoline and diesel in our refineries. The main changes are the frequent assessments for price review purposes, to be carried out at least once a month, in line with international market trends.

The following principles are part of our pricing policy:

- international parity price (“IPP”) as a reference;
- margin for compensation of the inherent risks in the operation, such as volatility in exchange rate and international quotes, demurrage, among others;
- market share level;
- prices never below international parity.

The assessment of needs for adjustments in fuel values in refineries is performed by a committee, the Executive Group of Market and Prices, composed of the President of the

company, the Executive Officer for Refining and Natural Gas and the Executive Officer for Finance and Investor Relations.

Since the new policy was adopted in October 2016, six revisions have been carried out as of February 2017.

## CAPEX AND OPEX EFFICIENCY

Originally approved with investments of US\$74.1 billion for the 2017–2021 period, the PNG 2017–2021 investment program was upgraded to US\$ 74.5 billion in February 2017, due to the reallocation of resources scheduled and not carried out in 2016.

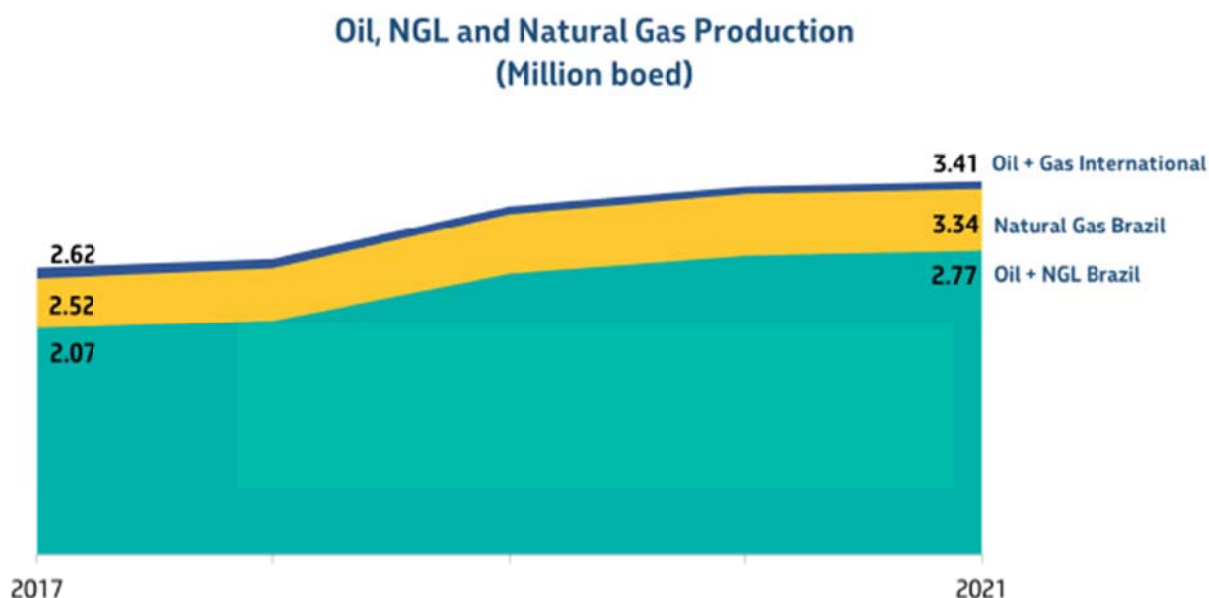
The 2017–2021 Business and Management Plan investment portfolio prioritizes oil exploration and production projects in Brazil, with emphasis on deep water. In the other business areas, investments are intended primarily to maintain operations and projects related to the discharge of oil and natural gas production.

Most of the investments are concentrated in the Exploration and Production area, allocated mainly to production development.

In the Refining and Natural Gas area, investments will be allocated to the operational continuity of the assets and projects related to the discharge of oil and gas production.

The increased efficiency in the application of resources will enable the reduction of investment volumes, without great impact on production targets.

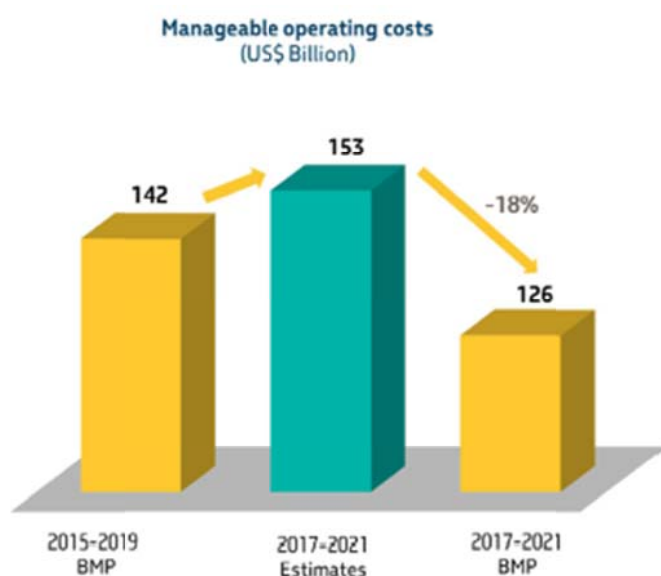
Chart 14: Production of Oil, NGL, and Gas (million boed)



The plan provides for the adoption of new cost-reduction (manageable operating expenses) measures. Among these actions, we highlight the implementation of new management tools, such as the Zero-based Budgeting (“ZBB”).

As noted in the chart below, the goal is to reduce manageable operating expenses by 18%, compared against the estimated value if no initiative had been implemented.

Chart 15: Manageable Operating Expenses (US\$ billions)



These initiatives, combined with our partnership and divestment program and an operating cash generation estimated at US\$158 billion after dividends, will enable investments and reduce our indebtedness, without need for new net borrowings throughout the period provided by the plan.

## PARTNERSHIPS AND DIVESTITURES

Another important strategy is the expansion of our partnership and divestment program, spreading the experience of working in partnerships in the Exploration and Production area to other areas of the company. The partnership and divestment program totaled US\$13.6 billion in the 2015-2016 biennium. US\$21 billion are expected for the 2017-2018 biennium.

In 2015, 2016 and early 2017, we completed the following partnerships and divestments:

Table 3: Completed Partnerships and Divestments (in 2015, 2016 and early 2017)

Date of Contract Signature	Date of Closing of the Transaction	Transaction	Transaction Value* (US\$ billion)
3/31/2015	3/31/2015	Sale of assets in Austral Basin, in Santa Cruz province, Argentina	0.1
10/23/2015	12/28/2015	Sale of 49% of Petrobras Gás S.A. ("Gaspetro")	0.5
5/13/2016	7/27/2016	Sale of the entire 67.19% stake in Petrobras Argentina	0.9
7/29/2016	11/21/2016	Sale of the entire 66% stake in exploratory block BM-S-8, in Santos Basin	2.5

10/17/2016	12/28/2016	Sale of 100% of shares of Nansei Seikyu (NSS), located on Okinawa island, Japan	0.2
7/22/2016	1/4/2017	Sale of 100% of Petrobras Chile Distribución Ltda.	0.5
12/28/2016	2/3/2017	Sale of the entire 45.97% stake in Guarani S.A.	0.2
12/15/2016	2/23/2017	Collection of 24 million new common shares issued by São Martinho S.A., as payment for the incorporation, by the São Martinho, of 49% stake held by Petrobras Biocombustíveis in Nova Fronteira Biocombustíveis S.A.	0.1**
<b>Total</b>			<b>5.0</b>

\* Consider amounts received and future payments related to the transaction

\*\* Based on the weighted average price for the trading volume of São Martinho shares in the 30 days prior to the signature of the contractual instruments of incorporation

Additionally, we signed the contractual instruments relating to the partnerships and divestments listed below. The completion of these transactions is subject to the fulfillment of previous legal and contractual conditions.

Table 4: Partnerships and Divestments – Contractual Instruments Signed

Date of Contract Signature	Transaction	Transaction Value*
9/23/2016	Sale of 90% of shares of Nova Transportadora do Sudeste (“NTS”), natural gas carrier of southeastern Brazil	5.2
11/17/2016	Sale of 100% of shares held by Petrobras for Liquigás Distribuidora S.A.	0.8**
12/28/2016	Sale of all the shares held by Petrobras in its wholly-owned subsidiaries Companhia Petroquímica de Pernambuco (“PetroquímicaSuape”) and Companhia Integrada Têxtil de Pernambuco (“Citepe”)	0.4
12/28/2016	Strategic Alliance with French company Total in the upstream and downstream segments. The following were signed: (i) joint exploratory studies in exploratory areas of the Equatorial Margin and in Santos Basin; and (ii) technology partnership agreement in the areas of digital petrophysics, geological processing and subsea production systems. In addition, the contracts provided for the transfer of 22.5% rights from Petrobras to Total in the lara concession area; transfer of 35% rights of 35%, plus operation, in the Lapa field concession area, in Block BM-S-9, whereas Petrobras maintains 10%; sale of 50% stake in Termobahia, including the Rômulo de Almeida and Celso Furtado thermal plants and the option of acquisition by Petrobras of 20% stake in Block 2 of the Perdido Foldbelt area, in the Mexican sector of Gulf of Mexico.	2.2
<b>Total</b>		<b>8.6</b>

\* Consider receivables at transaction closing and subsequent payments

\*\* Considering the exchange rate as of 12/31/2016

The transactions above are part of our Partnership and Divestment Program, which totaled US\$13.6 billion in the 2015–2016 biennium.

On 12/7/2016, through an interim decision, the Federal Accounting Court (“TCU”) ordered that we refrained from “signing contracts for the sale of assets and companies that were



underway as of that date, as well as starting new sales projects,” until TCU decided on the merit of the proceeding – the System for Company Divestments (“System”). This decision provided an exception for the following projects: (i) sale of stake in U.S. Gulf of Mexico assets; (ii) transfer of rights in the Baúna and Tartaruga Verde fields; (iii) sale of the entire 45.97% stake in Guarani S.A.; (iv) sale of all shares held by Petrobras in its wholly-owned subsidiaries Companhia Petroquímica de Pernambuco (PetroquímicaSuape) and Companhia Integrada Têxtil de Pernambuco (“Citepe”); and (v) incorporation by São Martinho of 49% stake owned by Petrobras Biocombustível on Nova Fronteira Biocombustível S.A.

We reviewed the System to implement improvements, which were submitted to TCU for evaluation. Thus, on 3/15/2017, TCU ordered that, before such improvements were incorporated into the System, all divestment projects in progress were restarted. Specifically in connection to the sale of stake in U.S. Gulf of Mexico assets and the transfer of rights in the Baúna and Tartaruga Verde fields (for which an exception had already been granted in the decision of 12/7/2016), the relevant competitive processes can proceed from their current phase, based on the revised System.

Due to injunction decisions by the Judiciary issued in a class action, proceedings pertaining to the following divestment projects are currently suspended:

- sale of equity stake in Petrobras Distribuidora;
- transfer of concessions rights in onshore fields located in the states of Sergipe, Ceara, Rio Grande do Norte, Bahia, and Espírito Santo; and
- transfer of rights in Baúna and Tartaruga Verde field concessions (which are suspended for this reason, though their conclusion has been allowed by TCU).

All decisions issued by the Judiciary to date in ongoing proceedings, whether favorable or unfavorable to us, are based on preliminary analysis (i.e., there was no statement on the merits of the case), so that, at least in theory, the current status of project continuation or suspension could be reversed by subsequent decisions that might be issued, including by the very instances that have issued preliminary statements.

Lastly, in terms of strategic partnership, in addition to the aforementioned alliance with Total, we have signed Memoranda of Understanding with the companies Statoil and Galp, to consolidate the strategic alliance in the Exploration & Production and Natural Gas segments.

We’ll move forward with our partnership and divestment program, which is considered one of the main pillars to achieve the leverage reduction target, focusing on the partnership and divestment target defined in our Strategic Plan.

## **INTERNATIONAL ENVIRONMENT, OIL MARKET AND REGULATION**

### **INTERNATIONAL ENVIRONMENT**

The global economy recorded difficulties in resuming more consistent growth in 2016. During the year, several events contributed to maintain a high level of uncertainty in the international market, whereas capital flows, which are significantly volatile, and the price of commodities remained depressed. A particularly striking aspect of 2016, indicated by the

presidential election in the United States and the referendum in the United Kingdom that voted in favor of its exit from the European Union, is the possibility of reversal of globalization processes, with medium-term effects in economic, geopolitical, and social dynamics. In this sense, the low growth of economies, unemployment, social fragility, and the migratory flow from Middle Eastern countries, mainly for Europe, have encouraged defensive movements opposed to further global integration. Should such movements advance, the prospects are for decline in international trade and aggravation of geopolitical tensions.

Regarding developed economies, the year was marked by the slowdown of the U.S. economy, from 2.6% to 1.6%, due to speculation on the trajectory of American interest rate ("FFR") and the U.S. presidential election. Donald Trump's victory brought uncertainties to the international market and strengthened the possibility of reversals in important international agreements. In this regard, it should be noted that the President-elect's campaign speech was directly opposed to important agreements, such as the Transpacific Agreement, the North American Free Trade Agreement ("Nafta") and the climate agreement established in Paris, on the 21st Climate Convention ("COP 21"). Europe continued to have difficulties promoting income and employment growth amid restrictive policies for public sector deleveraging. Moreover, no progress was made in solving inter-regional imbalances, particularly those associated with the heterogeneity of competitiveness and productivity among member countries of the Euro area. Another important point was the victory of the proposal in favor of the United Kingdom's departure from the European Union, in the referendum held in June. Even though the exit is not immediate, the decision has great importance, not only in economic terms but also in the more general context of questioning the block's current policies. It was the first time a country has decided to leave the European Union, a fact that may encourage exit or reform movements in other countries.

In emerging economies, growth rates remained steady at 4.1% p.a.<sup>1</sup> However, this aggregate result masks a great dispersion in the growth trajectory of these countries. In general, the emerging countries of Asia maintained an expansion quite higher than the other countries. India grew 6.6%<sup>2</sup> in 2016, benefiting from improvements in the terms of exchange in its international trade. In China, the 6.7% economic growth<sup>3</sup> was slightly higher than the target for the 2016-2020 period.

On the other hand, the slowdown in South America countered the good performance of Asian countries. The South American economies, still under the impact of the negative effects from the significant drop in commodity prices in 2014, recorded a reduction in activity level in 2016. Despite the adverse foreign context, some countries have gone through this period with small slowdown, as in the case of Chile, Bolivia and Colombia. In other countries, however, there is a deeper economic crisis. This group consists mainly of Venezuela and, to a lesser extent, Brazil, Ecuador and Argentina. Regarding Argentina, it is worth highlighting the significant change in economic policy as a result of the 2015 presidential election, with the implementation of measures aimed at improving the business environment, such as the liberalization of the exchange rate and the reduction of subsidies.

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<sup>1</sup>IMF, World Economic Outlook update, 1/16/2017.

<sup>2</sup>IMF, World Economic Outlook update, 1/16/2017.

<sup>3</sup>IMF, World Economic Outlook update, 1/16/2017.

The weak momentum of the international economy and the maintenance of the low level of commodity prices directly impacted the dynamics of Brazilian economy. However, domestic difficulties best explain the 3.6% drop of the level of activity in the country. Economic performance was once again heavily influenced by the downturn in domestic demand, particularly in private consumption and investment. The former's drop is explained primarily by the high level of household debt and the increased level of unemployment, which reached 13.02% by the end of the year. Meanwhile, investments followed a downward trajectory, due mostly to the indebtedness of firms and to maintenance of wide idle production capacity in industrial segments. In addition, the performance of economic activity turned out to be influenced negatively by strong political instability, such as the impeachment process of the President of the Republic of Brazil and other events.

From the point of view of monetary policy, the economic downturn was sufficient to cause variation in price levels to stay below the target threshold set by the Central Bank (6.5%). As such, accrued inflation in 2016 as measured by the Extended National Consumer Price Index (IPCA) recorded 6.29% variation. Price expansion in 2016 occurred mainly due to increased food prices. With the maintenance of a more significant rate of increase in domestic prices, the Central Bank kept the basic interest rate at 14.25% p.a. over almost the entire year, with reductions in October and November, closing the year at 13.75% p.a.

In addition, 2016 saw the Brazilian fiscal crisis worsen. Fiscal indicators continued deteriorating with the continuation of the recession. The primary result, which recorded a deficit at 1.9% of GDP in 2015, reached the 2.5% deficit mark in 2016, the main reason for which was the drop in tax revenue related to economic activity. Annual revenue in actual terms was about 3% lower in 2016. The government's general gross debt grew from 66% of GDP to around 70%.

In relation to the exchange rate, the national currency began the year strong devaluation, listed next to 4.00 BRL/USD during the months of January and February. From there, however, the trajectory was reversed due to both foreign and domestic factors. At the international level, the relative recovery in commodity prices strengthened the currencies of the major exporters of raw materials, such as Brazil. In parallel, within the domestic arena, the beginning of the process of change in the Federal Government was reflected in the drop in country risk perception, increasing the movement of currency appreciation. In the second half, although the exchange rate fluctuated at a level below 3.30 BRL/USD, speculations about changes in the monetary policy of the United States retained the uncertainty about the real's trajectory. As such, the national currency was one of the most volatile currencies in the world for over a year, especially sensitive to variation in commodities and signals from the U.S. Federal Reserve.

As for hydro power generation, over the course of the year, a partial recovery was observed in the volumes of the country's main reservoirs, which returned to reasonable levels. The relief in the water crisis in the Southeast area was due in most part to the improvement in the rainfall regime itself (increase of rains).

Hydro power generation improved in general in comparison to 2015, except in the Northeast, where reservoirs remained in the worst historical level. This led the National System Operator ("ONS") to request a decrease in the minimum flow of the São Francisco River plants to the National Electric Energy Agency ("Aneel"). Despite the increased wind power

generation in the region, the spot market price remained above R\$ 100/MWh throughout 2016, differently than what occurred in other subsystems, where this level only was reached mid-year. Accrued power consumption presented a 1.1% drop in comparison to the previous year. This downturn in demand was responsible for the cancellation of the new Energia Nova A-3 auction in 2016.

## CLIMATE CHANGES

Regarding climate change, the Global Agreement signed at COP 21, in Paris, aims primarily to keep the planet's temperature rise below a limit of 2° C, and there are efforts to keep it at 1.5° C, considered a time slice from the pre-industrial period until the end of this century. The agreement's entry into force, initially planned for 2020, has been anticipated for 2016.

At the UN General Assembly, Brazil delivered its ratification of the agreement. Brazil's goal is to cut greenhouse gas emissions by 37% by 2025, with the reduction target of 43% by 2030, compared with 2005 levels. The main targets in the agreement are the reduction of deforestation and the expansion of renewable energies within the energy matrix, from 39.4% to 45% by 2030.

The 22nd Climate Convention ("COP 22") took place in November in Marrakech, and its main objectives covered both the discussion on the development of the Global Agreement to achieve the goals proposed by the countries and the review processes that should boost policies to intensify reductions in emissions, in order to reach the 2 C° temperature rise threshold as stated in the agreement.

## OIL MARKET

In 2016, Brent oil prices continued their downward trajectory started in the second half of 2014. The US\$ 44,11/bbl annual average was 15.6% lower than<sup>4</sup> the US\$5 2,31/bbl average recorded in 2015. The first few months of the year were particularly critical to this result, since Brent value reached its lowest level since January 2003, impacting the first quarter's average, which stood at US\$ 34,80/bbl. Despite the rising prices in subsequent quarters, the price drop in annual comparison was justified by the slowness in the process of market rebalancing, still ongoing.

Insofar as oil demand is concerned, in comparison with the previous year, there was a 1.6% increase, with reduction in growth rate in both member and non-member countries of the Organization for Economic Cooperation and Development ("OECD"). In the first group, the growth rate in demand dropped from 1.3% in 2015 to 0.4% in 2016. Among non-OECD member countries, in turn, the growth rate dropped from 2.8% to 2.4%. Despite the reduced rate in comparison to the previous year, the 1.6% growth rate in 2016 is still above historical levels<sup>5</sup>.

On the oil supply side, the volume recorded in 2016 was 0.3 million bpd<sup>6</sup> (+0.34%) higher than in 2015, with a decline in production from countries outside the Organization of Petroleum

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<sup>4</sup> Source: Bloomberg

<sup>5</sup> Source: Oil Market Report – AIE/Jan/2017 Issue

<sup>6</sup> Source: Oil Market Report – AIE/Jan/2017 Issue

Exporting Countries (“OPEC”) that was partially counterbalanced by the increase in OPEC production.

Outside of Opec, American oil production started responding to low oil prices. The 8.9 million bpd volume in 2016 corresponds to an annual drop of 530 thousand bpd (-5.6%) in relation to 2015<sup>7</sup>, the first since 2008. Another relevant factor for non-OPEC production was the occurrence of forest fires in Canada in the middle of the year, which temporarily reduced the volume produced in the country in the months of May and June<sup>8</sup>.

Growth in OPEC production in turn was mainly the result of expansion in countries such as Saudi Arabia, Iran and Iraq, which more than offset the decline resulting from geopolitical strife in Nigeria and the economic/political difficulties in Venezuela. Due to the negative impact of low prices on the revenues of member countries, the possibility of production control in partnership with major producers outside OPEC was discussed on more than one occasion throughout the year. At a meeting held at the end of September, in Algeria, OPEC member countries agreed to reduce production volume, in order to accelerate market rebalancing.

The details of the agreement, which were defined in the OPEC ordinary meeting held in November, indicated an 1.2 million bpd cut in oil production compared to the production level in October. The production cut took effect in January 2017, with the participation of all Organization members except for Iran, Libya and Nigeria. A group of 11 producer countries outside OPEC, including Russia, executed an agreement to contribute with a 558 thousand bpd production cut in support of OPEC, for the same period. The positive impact on oil prices in December, whose US\$ 54.07/bbl average was 16% higher than in November, wasn't enough to reverse the drop in prices over the previous year.

In this context of low oil prices, oil companies reduced long-term investments in exploration and production technologies, and prioritized efficiency gains and incremental advances in existing technologies, relying, to that end, on increasing use of digital technologies<sup>9</sup>.

## REGULATION

In 2016, the business environment in the oil and natural gas sector of Brazil was updated due to relevant changes in regulatory aspects, particularly by the National Congress' approval of new rules for the pre-salt areas. Furthermore, throughout the year, actions designed to ease the rules defined for local content policy were promoted, as well as regulatory adaptations to suit the natural gas market to a more competitive model.

The changes in the regulatory framework for the pre-salt layer were the most outstanding point of regulatory revisions occurred in 2016 in the country. Before, Petrobras was forced by Law No. 12,351/2010, to be the single operator and to hold a minimum 30% stake on any block contracted under the production sharing regime, which was exclusive to new hydrocarbon exploration and production activities in the pre-salt polygon in Brazil. With the change, we went from mandatory operator to preferred operator, being able to choose in

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<sup>7</sup> Source: EIA/DOE/data through November/2016

<sup>8</sup> Source: PIRA Crude Oil Disruption Tracker-Aug/2016

<sup>9</sup> Source: IHS Energy – Upstream Technology and Innovation – Jul/2016

which biddings for blocks in the pre-salt areas we wished to participate. In addition to the change in the regulatory framework, in December, the National Energy Policy Council (“CNPE”) authorized ANP to conduct three bidding rounds in 2017: the 2nd Round under the Production Sharing regime for unitized areas, the 4th Round of Marginal Fields, and the 14th Round under the Concession regime. The government’s expectation is that there are new investments in exploration in Brazil, with the acceleration of production in some fields.

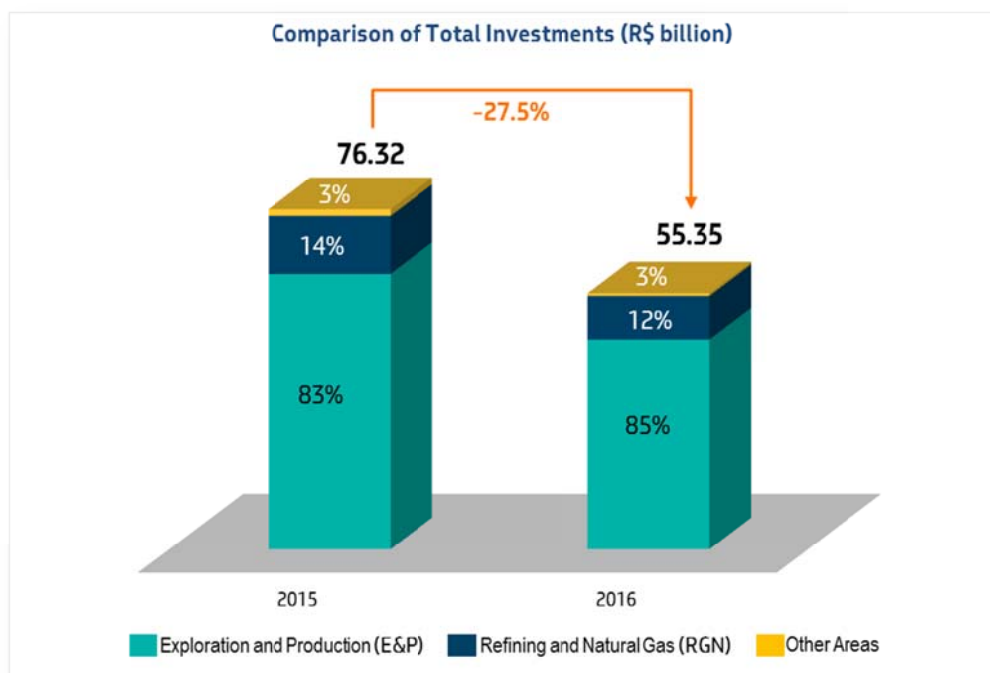
In the context of the local content policy, the Oil and Gas Sector Production Chain Competitiveness, Development, and Supplier Enhancement Stimulus Program (“Pedefor”) was established. In order to identify the main weaknesses of the rules in force, a few technical meetings took place involving said institutions over 2016. One of the main objectives was to draft a proposal for new guidelines for the operation of the local content policy to be adopted in the new bidding rounds expected for 2017, forwarded to CNPE. The final decision on the issue should take place in 2017.

In relation to the natural gas market, in mid-2016, the Ministry of Mines and Energy launched the initiative “Gas to Grow,” which aims at improving the regulatory framework of the sector, laying the groundwork for a competitive market by adopting best international practices in order to build a favorable environment for new investments. The implementation of activities within the framework of this initiative takes into account a strategic discussion with the different industry players in Brazil. At a meeting held in December 2016, CNPE adopted a Resolution defining the guidelines for the design of this new market and created the Technical Committee for the Development of the Natural Gas Industry (CT-GN), which is to present draft measures to be submitted to the National Congress within 120 days. The Committee is composed of representatives from several Federal Government agencies, associations, and natural gas industry players and civil society stakeholders (for additional information on regulation, see item “Regulatory Models: Concession, Production Sharing and Transfer of Rights” in this report).

## **INVESTMENTS**

Our investments totaled R\$ 55.35 billion in 2016, 27.5% less than the previous year, distributed as follows:

Chart 16: Comparison of Total Investments (R\$ billion)



In the E&P area, we invested R\$ 47.3 billion. These resources were allocated for the development of new oil fields, primarily in the Santos Basin Pre-Salt Area, for the maintenance of production at old fields, for exploratory activities and for improving operational efficiency. In 2016, we initiated the operations of the Cidade de Maricá e Cidade de Saquarema platforms, each with 150 thousand bpd in capacity, both in Lula field, and the Cidade de Caraguatatuba platform, with 100 thousand bpd capacity in Lapa field, all in Santos Basin.

In the area of Refining and Natural Gas, we injected R\$ 6.4 billion, mainly for the construction and expansion of the capacity of pipelines and natural gas processing units, to meet production in the Santos Basin Pre-Salt Area and for maintenance of the refining park. We started in 2016 the operation of the Cernambi-TECAB (route 2) pipeline, responsible for discharging up to 16 MM m<sup>3</sup>/day of natural gas produced in the Santos Basin pre-salt to the processing terminal in Cabiúnas (RJ). In the year, we also expanded the daily oil processing capacity of the Abreu e Lima Refinery (PE), from 74 thousand to 100 thousand bpd.

Transpetro invested R\$ 1.236 million in 2016. Investments were directed, in particular, to the construction of ships for the Fleet Upgrade and Expansion Program ("Promef"). In 2016, four new ships were delivered: suezmax Machado de Assis and gas tankers Barbosa Lima Sobrinho, Darcy Ribeiro, and Lúcio Costa.

Petrobras Distribuidora invested R\$ 410 million in 2016, aimed at the maintenance and expansion of the logistics infrastructure, the development and modernization of the network of stations, the aviation segment, and gas distribution and power trading.

Our investment budget, as well as the investment and budget of our subsidiaries, is approved on an annual basis by the National Congress, pursuant to budgeting legislation in force in Brazil for companies controlled either directly or indirectly by the Federal Government. The budget in effect in 2016 was approved by Law 13,255/2016 (2016 Annual Budget Law - LOA) and amends.

In compliance with the constitutional rule prohibiting investments that exceed the budget and additional credits approved, we executed our investments within the limits approved by the competent authorities.

## **IMPAIRMENT**

The recoverability assessment of our assets takes place annually as of December 31, or when there is evidence of devaluation over the course of the year. In 2016, the indicators were checked for specific assets in the third quarter, mainly due to an expectation of more moderate recovery in the international price of oil, as well as because of changes in the Brazilian political and economic scenario, which raised country risk and the discount rate on the cash flow of projects. These factors, together with the decrease in expenditure provided for in the investment portfolio, reflecting portfolio optimization and the effort to reduce the company leverage, changed the medium- and long-term economic projections used in the context of Petrobras' new 2017-2021 Business and Management Plan, with direct consequences to key impairment testing assumptions. Said plan was completed and approved in the third quarter of 2016.

We recognized a total value of R\$ 20.3 billion in asset impairment, of which R\$ 16.8 billion we had already recorded by the third quarter.

For information on impairment in the business areas, refer to explanatory note 14 to the financial statements in this Management Report.



# BUSINESS PERFORMANCE

## EXPLORATION AND PRODUCTION

We operate in the Exploration and Production area with focus on research, location, identification, development, production, and incorporation of oil and natural gas reserves, onshore and offshore, producing hydrocarbons safely and profitably.

We are world leaders in deep and ultra-deep water exploration and production, recognized for pioneering the introduction of new technologies. Thanks to his leadership, we have received nationally and internationally recognized awards in the oil and gas industry (for more information, see item "Awards and Recognition" in chapter Business Performance).

After an abrupt drop in 2015, average Brent price suffered further 17% reduction in 2016, reaching the average price of US\$43,69/bbl in the year. In this scenario, upon revisiting our investment plan, we reduced by 24% the amount to be invested in Exploration and Production between 2017 and 2021. This cut will be based on the maturation and the optimization of development projects, without significant impacts on the production curve expected for the period.

As a result of our project portfolio review program, we decided to prioritize investments in production development, with a focus on projects of greater profitability and cash generation, and to perform divestments in some assets in Brazil and abroad (for more information, see item "Partnerships and Divestments" in chapter Corporate Strategy).

In addition, we continued with our efforts to reduce costs, mainly through the reduction of intervention activities in Campos Basin wells. Add to that the increased participation of the pre-salt layer in our total production, which has lower operating costs. In 2016, our average extraction cost, excluding government charges, was US\$ 10,33/boe, which is a 11% decrease compared to the US\$ 11,67/boe average cost obtained in 2015.

## Areas of Operation

### Brazil

The focus of our activities is Brazil, with the portfolio focused on the Southeast, and most of our oil reserves are located in offshore deepwater and ultra-deepwater, in the Campos, Santos, and Espirito Santo basins. We also have relevant onshore and shallow water production, concentrated primarily in the North and Northeast regions and, to a lesser extent, in the Southeast, in the Espirito Santo area.

Our domestic exploration portfolio consists of 131 exploration blocks, totaling an area of 67,315 km<sup>2</sup>, of which 20,818 km<sup>2</sup> onshore and 46,497 km<sup>2</sup> offshore. We are working on 37 Discovery Assessment Plans (PADs), 35 of which in areas solely exploratory and two in ring fence areas (an exploratory area contiguous to a field where there were past discoveries).

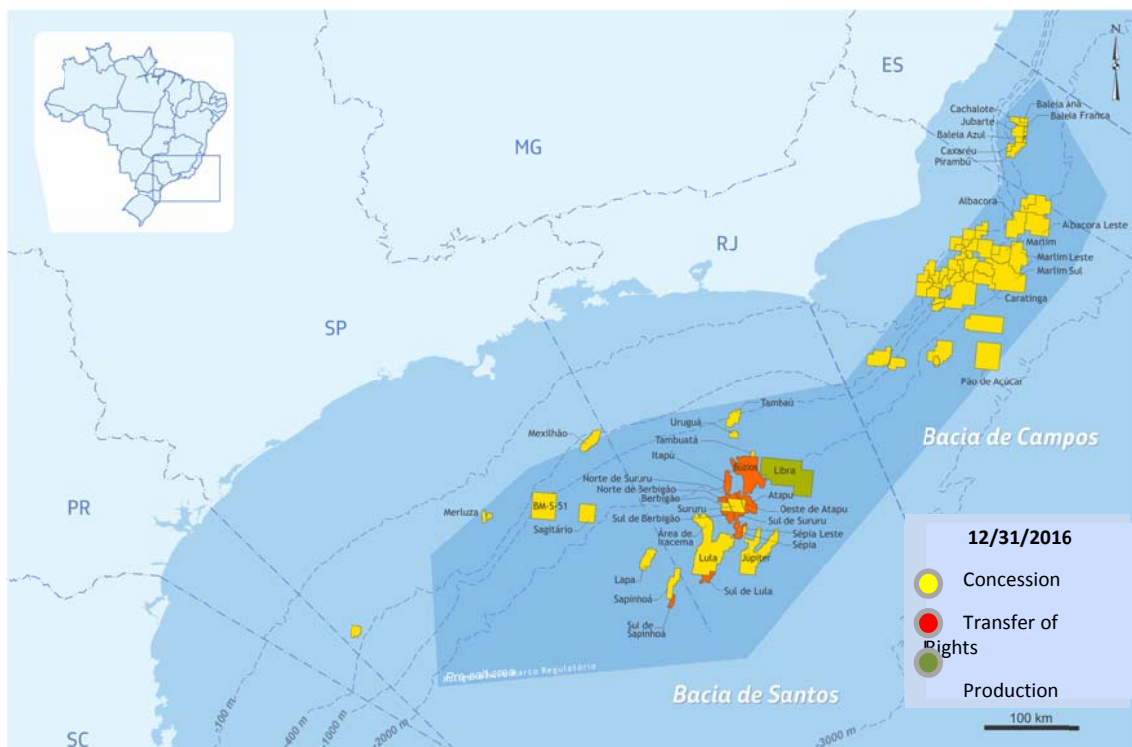
In the development and operation of production, our domestic portfolio consists of 316 active oil and natural gas fields, 306 of which are governed by concession contracts and 10 by transfer of rights contracts.

## Regulatory models: concession, production sharing and transfer of rights

In Brazil, the Union owns the oil, but the extraction can be performed by companies or consortia through different payment methods, such as royalties, which vary depending on the regulatory model applied. The main process of acquisition of rights in exploration blocks takes place through tenders conducted by the National Agency of Petroleum, Natural Gas and Biofuels (ANP). The concession model fully governed oil and natural gas exploration and production activities until 2010, when the laws creating the transfer of rights and production sharing models were enacted .

As mentioned, our main fields in production currently follow the concession model. Meanwhile, fields under the transfer of rights and production sharing regimes will represent a large part of our production in the medium and long terms. The map below shows the distribution of our participation in the fields of the two major oil basins in Brazil – Campos and Santos – and the respective regulatory models:

Figure 3: Map of Major Oil Basins in Brazil and their Regulatory Models



Within the scope of the Production Sharing Contract model, the rights and obligations of operating and exploring a strategic pre-salt block known as Libra, located in the Santos Basin, were granted at public auction held in October 2013 to a consortium of which we are part. In December 2013, we signed the first contract under such regime. We have 40% share in the Libra block and are its exclusive operator. This contract has a term of 35 years.

In 2010, we signed a Transfer of Rights Contract, pursuant to which we acquired the right to produce up to five billion barrels of oil equivalent (boe) in selected areas of pre-salt. Contract negotiation involved important aspects, such as: (i) the area covered by the transfer of rights, which consisted of exploration blocks; (ii) the volume in barrels of oil equivalent that could be extracted from this area; (iii) the price to be paid for the Contract; (iv) the terms of the subsequent review of Contract value and (v) the terms of reallocation of volumes between the blocks whose rights were transferred to Petrobras.

At this time, the terms of the Transfer of Rights Contract are under review, as planned, including, most notably: value, maximum volume to be extracted, term, and local content percentages. Once the Contract review process is completed, should it be determined that the transferred rights reach a value greater than the one initially paid, Petrobras shall (i) pay the difference to the Federal Government or (ii) reduce, proportionately, the total volume of extracted barrels under the terms of the Transfer of Rights Contract. On the other hand, if it is found that the revised value is lesser than the initial value of the contract, the Federal Government will reimburse the difference to Petrobras in cash, government bonds, securities issued by the concessionaire, or another method agreed by the parties. In December 2013, after the first declaration of commerciality, as defined in the terms of Contract review, negotiations began with the Federal Government on the Contract review process. These negotiations continue to this day and it is not possible to specify a date for their conclusion.

Currently, the method for calculating special participations due in areas subject to unification are under discussion. Because of the ANP's order to unify unconnected fields (read: Lula and Cernambi; Baúna and Piracaba; Tartaruga Verde and Tartaruga Mestiça; and Parque das Baleias), as the administrative channels are exhausted, we have initiated four arbitration proceedings against ANP, questioning such unifications both technically and legally before the International Chamber of Commerce, as provided for in the transfer of rights contracts signed.

## Abroad

We operate internationally in Latin America, the United States and Africa.

In South America, we operate in Argentina, Bolivia and Colombia, with a portfolio composed of nine assets (three in exploration and six in production, of which two still with exploratory potential). Of this total, we operate seven assets (three in exploration and four in production, one of which with exploratory potential), under two types of exploration and production contracts: concession (Argentina and Colombia) and operation (Bolivia). Upon completion of the sale of 67.19% stake in Petrobras Argentina (Pesa), on 7/27/2016, to Pampa Energía, we left the integrated operation in Argentina, but we maintained participation in the Neuquina Basin, in the Active Río Neuquén asset (for more information, see item "Partnerships and Divestments" in chapter Corporate Strategy).

In the United States, we have 100% stake in Petrobras America, Inc. (PAI), which focuses on deepwater and ultra-deepwater fields in the American section of the Gulf of Mexico. As of 31 December 2016, PAI held stakes in 52 offshore blocks. PAI production in the United States in 2016 originated mainly from the Cascade, Chinook, Saint Malo, Lucius, Hadrian South and Cottonwood fields.

In Mexico, we execute service contracts without risk clause since 2003, through our joint venture PTD Servicios Múltiples SRL in the Cuervito and Fronterizo onshore blocks, in the Burgos Basin. Based on these service contracts, we receive payments for our services, but all the production belongs to the Mexican national oil company Pemex.

In Africa, we operate through our 50% stake in the company Petrobras Oil and Gas (PO&G). Our activities are concentrated mainly in Nigeria, in the Agbami and Akpo fields. We also have a production development project in the Egina field, and exploratory activity in the Egina South and Preowei fields, all of which under the production sharing contract regime.

## Exploration

Exploratory activity generates discoveries of hydrocarbon reservoirs, whose volumes are incorporated into our reserves, according to the results of the Discovery Assessment Plans (PADs). In Brazil, in 2016, we drilled 16 exploration wells – 10 onshore and 6 offshore – and achieved 63% exploratory success rate. In the pre-salt layer, we drilled four wells, with 100% success rate. Abroad, we drilled five onshore wells, four of which in Argentina and one in Bolivia, with 80% success rate.

Our investments in exploration totaled R\$ 2.85 billion in the year, R\$ 2.64 billion of which in Brazil. These investments cover mainly the cost of drilling, seismic surveys and the acquisition of blocks, which resulted in the following discoveries and declarations of commerciality:

Table 5: Main Discoveries in 2016

Country	Basin	Granting	Area/Well	Well Name (ANP)	Ambient	Water Depth (m)	% Petrobras
Brazil	Santos	Libra	3-RJS-741	PAD Libra 5 NW 5	Pre-Salt	1913	40
Brazil	Campos	Albacora	3-AB-128-RJS	PAD Forno Extensão NW2	Pre-Salt	337	100
Brazil	Campos	BM-C-33	3-REPF-17-RJS	PAD Gávea A1	Pre-Salt	2740	30

Table 6: Declaration of Commerciality in 2016

Country	Field	Basin	Recoverable Volume (million boe)	Quality (API)	% Petrobras
Brazil	Guriatã	Recôncavo	0.547	37	100

## Production

In 2016, we produced in Brazil an average of 2.144,3 thousand barrels per day (bpd) of oil, representing a 0.75% increase over the previous year, in line with the 2.145 thousand bpd target scheduled for the period. For the second consecutive year, we achieved the scheduled planning, reinforcing the commitment to predictability in our projections. If the own production of natural gas is considered, which reached unprecedented 77 million m<sup>3</sup> a day in 2016, total production in Brazil reaches 2.63 million barrels of oil equivalent per day (boed) – 1% more than achieved in 2015, in addition to being a new record for Petrobras.

In the pre-salt, in the month of May we surpassed together with our partners the milestone of one million barrels produced per day. Meanwhile, in November, we achieved accumulated production of one billion barrels of oil in the pre-salt layer, just six years after the entry into operation of the first production system.

The average annual production operated in the pre-salt layer in 2016, which includes the production of Petrobras and its partners, was record, reaching 1.02 million bpd of oil and surpassing the 2015 production by 33%. The main highlights were the significant production growth in the Lula field (Iracema Norte and Iracema Sul areas, thanks to FPSOs Cidade de Itaguaí and Cidade de Mangaratiba) and in the Sapinhoá field (FPSO Cidade de Ilhabela), located in the Santos Basin pre-salt layer, in addition to the Parque das Baleias area (P-58), in the Espírito Santo State's portion of Campos Basin. In addition, operations for three production systems were started, two of which in Lula field (FPSO Cidade de Maricá and FPSO Cidade de Saquarema) and one in Lapa field (FPSO Cidade de Caraguatatuba), located in the Santos Basin pre-salt layer.

Abroad, the average oil production in 2016 was 80 thousand bpd, 19% below the volumes produced in the previous year. The average production of natural gas was 13.7 million m<sup>3</sup>/day, 11% below the 2015 production. The reduction occurred mainly due to divestments, such as the sale of our stake in Petrobras Argentina.

Consolidating the productions in Brazil and abroad, the average oil production in 2016 was 2.22 million bpd, and the annual average oil and gas production was 2.79 million boed - same production level as 2015, as detailed in the table below.

Table 7: Consolidated Productions (Brazil and Abroad)

Petrobras Production	Brazil		Abroad		Total	
	2015	2016	2015	2016	2015	2016
Oil (million bpd)	2.13	2.14	0.1	0.08	2.23	2.22
Gas (million m <sup>3</sup> /d)	74.5	77.0	15.4	13.7	89.8	90.8
Total (million boed)	2.60	2.63	0.19	0.16	2.79	2.79

## Reserves

According to ANP/SPE criteria, as of 31 December 2016, our proven reserves of oil, condensate and natural gas reached 12.514 billion barrels of oil equivalent (boe), as shown in the table below. In 2015, these volumes were 13.279 billion boe.

Table 8: Proven Reserves of Oil, Condensate, and Natural Gas (ANP/SPE criteria, as of 31 December 2016)

Description	Proven Reserves
Oil and Condensate (billion bbl)	10.553
Natural Gas (billion m <sup>3</sup> )	312.293
Oil Equivalent (billion boe)	12.514

Our volumes of oil, condensate and natural gas in Bolivia are not recorded because the Bolivian Constitution does not allow reserves to be disclosed by the concessionaire.

The following table details the evolution of proven reserves in 2016, according to ANP/SPE criteria.

Table 9: Evolution of Proven Reserves in 2016 (ANP/SPE criteria)

Composition of Proven Reserves	Petrobras (billion boe)
a) Proven Reserves December/2015	13.279
b) New Discoveries and New Accruals in 2016 <sup>10</sup>	0.110
c) Monetization of Reserves in 2016 <sup>11</sup>	-0.153
d) Revisions in 2016 <sup>12</sup>	0.203
e) 2016 Balance (b+c+d)	0.160
f) 2016 Production in the Year	-0.925
G) Annual Variation (e+f)	-0.765
h) Proven Reserves December/2016 (a+g)	12.514

The main factors that impacted reserves were:

- incorporation of 0.110 billion boe in proven reserves due mainly to new well drilling in the Búzios field (Santos Basin);
- increase of 0.203 billion boe in proven reserves resulting from drilling new production development wells and better behavior of post-salt layer onshore and offshore areas in Brazil and in USA. In the pre-salt layer, the increase resulted from positive responses in the behavior of reservoirs, recovery mechanisms (water injection) and operating efficiency of production systems in operation, as well as of increased drilling activity and interconnection of wells in the Santos Basin and in the Campos Basin;
- divestments that enabled early monetization of 0.153 billion boe of reserves in Argentina and Venezuela; and
- production of 0.925 billion boe in 2016. This volume includes shale oil production; it does not, however, include the volume extracted in Tests of Long Duration (“TLD”) and the production in Bolivia. TLDs occur in exploratory areas where field commerciality has not yet been declared; therefore, there is no associated reserve. In addition, as previously mentioned, in the case of Bolivia, the Bolivian Constitution does not allow reserves to be recorded by the concessionaire.

We had a 34% Reserve Replacement Ratio (“RRR”), excluding the impact of divestments made in 2016. The ratio between the volume of reserves and the volume produced is 13.5 years, and 13.9 years in Brazil. The Development Ratio (“DR”), which is the ratio between developed proven reserves and proven reserves, was 50% in 2016.

<sup>10</sup> Includes extensions that encompass expansions in the area of proven reserves through well drilling after the discovery.

<sup>11</sup> Divestitures, which representing early monetization of reserves.

<sup>12</sup> Revisions based on technical (ex: reservoir characteristics) and economic criteria.

## REFINING, TRANSPORTATION, TRADING AND PETROCHEMICALS

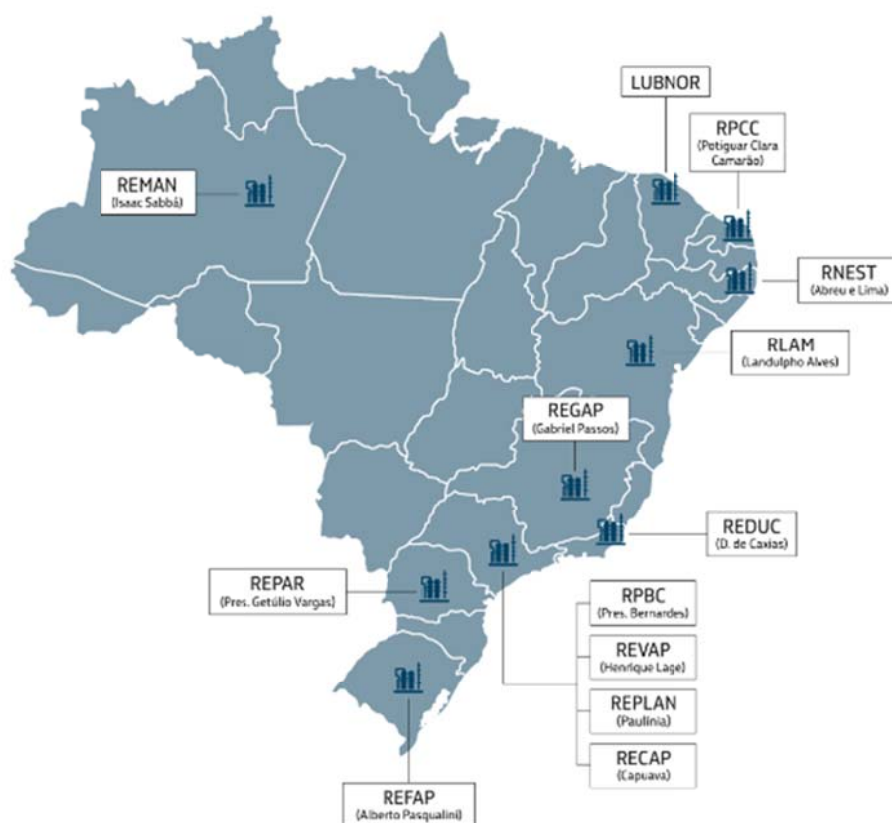
Our downstream area is responsible for refining, transportation and marketing of oil and derivatives, guided by the strategy of increasing the efficiency of our assets to serve the domestic market. We also operate in participations in the petrochemical segment.

### REFINING

We substantially operate all refining capacity in Brazil. Six of our thirteen refineries are located in the southeast of the country, close to the most populous and industrialized markets, and to the source of most of our crude oil, in the Campos and Santos Basins. We meet the demand for derivatives in Brazil through a planned combination of imports and oil processing, which seeks to optimize our margins, taking advantage of price differentials between the cost of oil processing in Brazil and the cost of importing oil derivatives.

The map below indicates the geographical location of each of our refineries in Brazil:

Figure 4: Map of our Refineries in Brazil



In 2016, our refineries in Brazil, with a total capacity of 2.176 thousand bpd, processed 1.819 thousand bpd of oil and natural gas liquid (NGL), producing 1.887 thousand bpd of derivatives. Out of the total volume of processed oil, 92% were from Brazilian fields.

Out of derivatives produced in our refineries, we registered record production of S-10 diesel oil in Brazil, totaling 228 thousand bpd, 13% higher than the volume produced in 2015. The

S-10 diesel oil has maximum sulfur content of 10 parts per million (ppm). Its main benefit is the reduction in emission of polluting gases by vehicles.

We also registered records in oil processing in the Abreu e Lima Refinery (“Rnest”), achieving the average of 99,77 thousand bpd of oil processed in August. The milestones achieved reaffirm our continuous search for increased operating efficiency in our refineries, with integrated management of the downstream system, contributing to the reduction of derivate imports and increased profitability of the company.

Abroad, our refineries processed 126 thousand bpd of oil and natural gas liquid (NGL), producing 128 thousand bpd of derivatives.

In the United States, through the Pasadena Refining System (“PRSI”), we operate a refinery with capacity to process 100 thousand bpd of oil.

In Japan, we operated Nansei Sekiyu Kabushiki Kaisha (“NSS”) until April 2015. In March 2016, its operation was discontinued definitively (final shutdown). Its sale was completed in December, to Taiyo Oil Company (for more information, see item “Partnerships and Divestments” in chapter Corporate Strategy).

In Argentina, until July 2016, we operated the Bahía Blanca Refinery, capable of processing 30,5 thousand bpd of oil, through stake in Petrobras Argentina S.A. (Pesa). Our stake was wholly sold to Pampa Energía (for more information, see item “Partnerships and Divestments” in chapter Corporate Strategy).

## **REFINING VENTURES**

### **Abreu e Lima Refinery**

The Abreu e Lima Refinery, located in Ipojuca, Pernambuco, is expected to operate two processing units, known as refining lines. The first refining line enter in operation in December 2014, with a 74 thousand bpd of oil load and, in January 2016, it was authorization to process up to 100 thousand bpd of oil. We will resume work on the sulfur emissions reduction unit (SNOX) in 2017, with expected startup in 2018, whereupon we will operate at full load. For the completion of the second line, with the same capacity of the first, we are in search of a partnership, as provided for in PNG 2017-2021.

### **Petrochemical Complex of Rio de Janeiro**

We have approved the re-evaluation of the Petrochemical Complex of Rio de Janeiro (“Comperj”) project, located in the city of Itaboraí, Rio de Janeiro, to continue the implementation of the units associated with the Natural Gas Processing Unit (“UPGN”). The UPGN is part of the Integrated Route 3 Project, which also includes a pipeline (Route 3), the Additional Gas Treatment Unit in Cabiúnas Terminal (Tecab), in Macaé, Rio de Janeiro, and the pipeline track (Route 3 North). Together, these projects complement the discharge and processing infrastructure of natural gas from the Santos Basin Pre-Salt Area. For the completion of the first refining line, we are in search of a partnership, as provided for in PNG 2017-2021. The projects for the second refining line and lubricants unit were canceled.



# TRANSPORT

## TRANSPORT AND STORAGE

Petrobras Transporte (Transpetro), our wholly-owned subsidiary, is responsible for servicing our oil and gas production, logistics, and refining and distribution areas by carrying and storing oil, natural gas, derivatives, and biofuels, acting as an operator in terminals (47 terminals, 20 of which onshore and 27 waterway), own and chartered vessels (56), oil pipelines (7,719 km), gas pipelines (7,155 km) and road transport.

Transpetro carries imported and exported cargo of oil and other products, and its main clients, in addition to the Petrobras System, are distribution and petrochemical companies. In Brazil, the subsidiary operates facilities in 19 out of the 27 federation units.

## PIPELINES AND TERMINALS

Transpetro's pipelines and terminals area carried 603.3 million m<sup>3</sup> in oil, derivatives, and biofuels in the terminals and pipelines operated by the company in 2016, a 5.4% drop compared with the previous year's transport, a result influenced by the country's economic scenario and the behavior of the oil derivate market.

The main highlights in 2016 were:

- consolidation of remote operation in road loading bases in terminal located along the pipelines connecting Paraná-Santa Catarina (Opasc) and São Paulo-Brasilia (Osbra). The remote operation of these pipelines is performed by the National Center of Control and Logistics (CNCL), located in Rio de Janeiro, ensuring greater flexibility and safety to operations, optimizing the capacity of installations, reducing costs and the need for investments.
- start of the remote operations of pipelines connecting Manaus to Coari (Orsol I and II), located in Amazonas, and remote operations of the oil pipeline interconnecting Caraguatatuba to the Henrique Lage Refinery (Revap), in São José dos Campos (Ocvap II), located in São Paulo, by CNCL. This action ensures greater efficiency and safety to operations, requiring fewer resources locally (labor, transport, etc.), which provides productivity gains.
- expansion of vessel discharge operations and storage of derivatives, from Transpetro to third parties, in the ports of Vitória, Belém, Maceió, Suape, Cabedelo and São Luís, due to new purchase and sale contracts of derivatives signed between Petrobras and distributors in the Southeast and Northeast. Under these new contracts, our responsibility scales back to product delivery to the output flange for the moored ship in the port of destination, where product ownership is transferred to the customer, whereas the distributors, customers of Petrobras, are responsible for hiring Transpetro to execute the necessary services for the delivery of the product at the terminal of destination. In addition to representing a cost reduction for Petrobras, this initiative contributes to broadening Transpetro's client portfolio, strengthening its position in the logistics market, with potential revenue increase.

- first-time execution of aviation kerosene (QAV) transport operation from São Paulo to Rio de Janeiro using the Transpetro-operated pipeline system. Such a transport allows full service to the market, with consequent reduction of logistics costs for the Petrobras System.
- execution of operating improvements in the logistics infrastructure of piers in the port of Suape, in Pernambuco, enabling greater operating flexibility and reliability, with estimated financial gains of up to R\$25 million per year. The port of Suape features the largest movement of Transpetro vessels, with monthly average of 55 ships. Other projects planned to be completed in 2017 aim to reduce logistical bottlenecks and promote expected savings of R\$ 52 million/year.
- centralized maintenance of major equipment in Southeast terminals at the Campos Elíseos Terminal workshop, in Rio de Janeiro, generating savings of approximately R\$14 million/year.

## MARITIME

Transpetro has 56 vessels in its fleet and transport capacity of about 4.5 million metric tons of deadweight (DWT), the equivalent to 32 million bbl. Participation by Transpetro corresponds to 40% of the total cargo of the Petrobras System. The subsidiary is adapting its fleet profile, in order to meet the increased oil production in Brazil.

In 2016, the fleet of Transpetro ships transported 78.7 million tons of oil and derivatives, the equivalent of 551.8 million bbl, 18.8% more than in 2015.

The segment highlights in 2016 were:

- receipt of four ships scheduled under the Fleet Expansion and Upgrade Program (Promef). Since 2010, Transpetro has received a total of 17 vessels within the scope of Promef. In the year, two fleet ships were sold. Twelve other ships are under construction.
- completion of preparatory work of Transpetro vessels for vetting, inspections which provided a service standard close to the best international references. This action enabled the increase in oil exports and imports by Transpetro for the Petrobras System. Part of the fleet was destined to such operations, having carried out several operations in China, Chile and Europe.
- in relation to safety and operating availability of Transpetro's fleet, there was no record of oil or derivate spills in 2016, and Operational Availability Index (IDO), which measures the hours in which the vessel was operating or ready to operate in relation to total hours within a given period, reached 99.81%, without docking (mandatory ship stops), a figure superior to the 2015 result (99.26%).

## TRADING

### DOMESTIC MARKET

We traded 2.064 thousand of oil derivatives in the domestic market, a volume 8% lower than in the 2015.

Sales of diesel fuel dropped 15%, due mainly to the decline in our market share as a result of the significant increase in imports by third parties. Another factor that explains the downturn is the smaller economic activity, the consequences of which have been strongly felt in the demand for transport, in particular by road.

Gasoline trading featured 1% drop. The major factor was the increase in the volume sold by importers, petrochemical plants and private refineries, which displaced part of our market share. In addition, the sharp drop in the consumption of households impacted the demand as a whole. The sales downturn was softened by the loss of competitiveness of hydrated ethanol relative to gasoline compared to 2015.

It is worth noting that the effects of increased imports of diesel oil and gasoline by third parties on company results were fully offset by competitive prices.

Sales of liquefied petroleum gas (LPG) grew 1%, influenced by lower average temperatures in the winter time in the main consuming regions, which boosted the consumption of the derivate for residential use.

A 36% downturn was observed in fuel oil sales, caused by the reduction in deliveries to the thermal power generation segment due to lower economic activity, the expansion of wind power generation, and increased production of hydro power by power plants in the northern region of the country.

Trading of aviation kerosene recorded 8% drop due to the intensification of grid optimization measures adopted by airlines, as a way to offset the strong reduction in demand for travel caused by the crisis.

In 2015, there was a reduction of the amount of petrochemical naphtha hired to Petrobras, with consequent increase in imports carried out directly by Braskem. Upon the signing in December 2015 of a long term contract in the same quantities as in the previous contract, sales increased to 14% in 2016, compared with the previous year.

### EXPORTS X IMPORTS

Our oil exports reached 387 thousand bpd, an increase of 8% over the volume of 2015, due mainly to two factors: domestic oil production growth and shrinkage of domestic demand, which also influenced sales of oil derivatives to the foreign market, which reached 155 thousand bpd, a 4% increase over the previous year.

Our oil imports totaled 136 thousand bpd, a 51% decline from 2015, also due to downturn in the domestic market. Imports of oil derivatives totaled 238,000 bpd, a 7% drop. The smaller volume of imported derivatives was a result of the aforementioned the domestic market downturn, associated to larger sale of products in the Brazilian market by third parties.

In 2016, we assumed the position of net exporters of oil and oil derivatives.

The financial balance of our trade balance, calculated on the basis of oil and oil derivatives exports and imports, disregarding natural gas, liquefied natural gas (LNG) and nitrogenous, featured US\$ 2.8 billion in surplus.

## PETROCHEMICAL

Our current participation in the petrochemical sector occurs through the following controlled, associated or jointly controlled companies (participation as of 31 December 2016):

- Braskem S.A. (36.20%) – mainly produces ethylene, polyethylene, polypropylene and PVC;
- Deten Química S.A. (27.88%) - produces raw material for detergents: linear alkylbenzene (LAB), linear alkylbenzene sulfonic acid (LAS), heavy alkylates (ALP);
- Metanor S.A./Copenor S.A. (34.54%) - produces methanol, formaldehyde and hexamine;
- Fábrica Carioca de Catalisadores (50%) - produces catalysts and additives;
- Petrocoque S.A. (50%) - produces calcined petroleum coke;
- Companhia Petroquímica de Pernambuco – PetroquímicaSuape (100%) and Companhia Integrada Têxtil de Pernambuco Citepe (100%) - produces purified terephthalic acid (PTA), PET resin (polyethylene terephthalate) and polyester filaments. In December, we signed a contract for the sale of PetroquímicaSuape and Citepe to Grupo Petrotemex S.A. de C.V. and Dak Americas Exterior, s.l, subsidiaries of Alpek, S.A.B. de C.V. (for more information, see item “Partnerships and Divestments” in chapter Corporate Strategy).

## DISTRIBUTION

Petrobras Distribuidora, our subsidiary, operates in the trading and distribution of oil derivatives and biofuels in all of Brazil, through a network of 8,176 service stations and 14,100 large consumers. It is the leader in this market, with 31.1% market share as of 31 December 2016. It also operates in the segments of large consumers, chemicals, aviation, asphalt, energy business and, locally, in Espírito Santo state, in the distribution of piped natural gas.

Petrobras Distribuidora traded 45.5 million m<sup>3</sup> of fuel in 2016, 14.7% lower than the volume recorded in 2015, due mostly to the downturn in economic activity in the country. Net operating revenue was R\$ 86.6 billion, with net loss of R\$ 0.3 billion.

Regarding the performance of Petrobras Distribuidora, we are analyzing the formation of a partnership to share control of the company (for more information, see item “Partnerships and Divestments” in chapter Corporate Strategy).

In the international market, we operate in the distribution segment in South American countries. In Colombia, Paraguay and Uruguay, we have 114, 186, and 88 service stations and

hold 4%, 18%, and 22% market share, respectively. In Chile, we used to have 281 service stations and 13% market share until early January 2017, while the sale of full distribution participation by Petrobras in Chile to the Southern Cross Group was completed, pursuant to the terms of the contract signed in July 2016. In Argentina, we used to have 266 service stations until July, when we signed with Pampa Energía, the contract for sale of our entire distribution share in Argentina (for more information, see item “Partnerships and Divestments” in chapter Corporate Strategy).

Liquigás Distribuidora S.A. operates in the bottling, distribution and trading of liquefied petroleum gas (LPG). In 2016, 1.6 million tons of LPG were sold. In November, we signed a purchase and sale of shares contract for the sale of 100% of Liquigás shares, acquired by Companhia Ultragas S.A., a subsidiary of Ultrapar Participações S.A. Although the contract has already been signed, only after consent by the Administrative Council for Economic Defense (CADE) is obtained can the transfer of shares be effected (for more information, see item “Partnerships and Divestments” in chapter Corporate Strategy).

## **NATURAL GAS, ELECTRICITY AND FERTILIZERS**

### **NATURAL GAS**

Our Natural Gas area is responsible for processing, logistics and trading of natural gas.

Monetization of the natural gas in Brazil’s sedimentary basins is one of our main strategic goals. The growth in domestic oil production and consequent increase in associated gas production also promote the increase in the supply of gas. Such an increase has contributed to the increased reliability in the supply of the product, both for domestic consumption and for contracts with distribution companies and for thermal power generation, progressively reducing the need for imports.

#### **Natural Gas Processing**

The Natural Gas Processing Asset Operation Unit (UO-APGN) is composed of the natural gas processing assets of Cabiúnas (APCAB), in Rio de Janeiro, Espírito Santo (APES) and São Paulo (APSP). Together, these assets have nominal processing capacity of 63.6 million m<sup>3</sup>/day in natural gas.

The average total volume of natural gas processed in 2016 by UO-APGN was 36 million m<sup>3</sup>/day, which has made it possible to provide 33 million m<sup>3</sup>/day of natural gas, 1.7 thousand t/day of LPG, 2 thousand m<sup>3</sup>/day of C<sub>5</sub>+ gasoline (natural gasoline) and 7 thousand m<sup>3</sup>/day of natural gas liquid (NGL) to the market.

Upon the entry into operation of the Route 2 Natural Gas Processing Unit (UPGN2) in Cabiúnas, and the larger supply of natural gas by the Santos Basin Pre-Salt Area, the average volume processed at UO-APGN reached 41 million m<sup>3</sup>/day in the second half of the year, representing a 28% increase over the first half. We also registered the record processing of 50.4 million m<sup>3</sup>/day which occurred on 11/30/2016. In turn, the supply of liquefied petroleum gas (LPG) and C<sub>5</sub>+ gasoline reached 1.7 thousand t/day and 2 thousand m<sup>3</sup>/day levels, respectively.

In the Cabiúnas Processing Asset (APCAB), the largest Brazilian center for natural gas processing, the average volumes of processed natural gas totaled 16 million m<sup>3</sup>/day. The active has processing capacity of 25.1 million m<sup>3</sup>/day of natural gas, and 6 thousand m<sup>3</sup>/day processing capacity of natural gas condensate.

The Espírito Santos Processing Asset (APES), composed of the Cacimbas (URGC) and Sul Capixaba (UTGSUL) gas processing plants, has total capacity to process 18.500 millions m<sup>3</sup>/day of natural gas and 6.8 thousand m<sup>3</sup>/day of condensate. APES processed, on average, 8 million m<sup>3</sup>/day.

In Sao Paulo, the Caraguatatuba Processing Asset (APSP) has processing capacity of 20 million m<sup>3</sup>/day of natural gas, and 8 thousand m<sup>3</sup>/day of condensate, having processed, on average, 11 million m<sup>3</sup>/day.

### **Natural Gas Logistics**

The natural gas transport system in Brazil, with equity stake by Petrobras, consists of gas pipelines totaling 9,190 km in extension. Of this total, Transportadora Brasileira Gasoduto Bolívia Brasil S.A. (TBG) is responsible for 2,593 km, and Petrobras indirectly holds via Logigás, 51% stake in the company. Additionally, Petrobras holds 100% share ownership in Transportadora Associada de Gás S.A. (TAG), responsible for 4,504 km, and in Nova Transportadora do Sudeste S.A. (NTS), responsible for 2,043 km. In this company, Petrobras is in the process of selling 90% of share to Brookfield Infrastructure Partners (BIP) and its affiliates (for more information, see item "Partnerships and Divestments" in chapter Corporate Strategy). Lastly, Petrobras holds indirectly, via Logigás, 11% stake in Gás Transboliviano S.A. (GTB), responsible for the Bolivian side of the Bolivia-Brazil gas pipeline, totaling 557 km, and 25% stake in Transportadora Sulbrasileira de Gás S.A. (TSB), responsible for 50 km.

### **Natural Gas Trading**

We sell natural gas through 44 contracts with 18 distribution companies, both for the thermal power segment and the non-thermal power segment, including cogeneration units. Additionally, we serve two free consumers and a consumer under court injunction.

We supplied in 2016, an average of 74.64 million m<sup>3</sup>/day of natural gas to the market and the internal consumption of Petrobras units. Of this volume, 24.20 million m<sup>3</sup>/day went to the thermal power market, 15.66 million m<sup>3</sup>/day to refining unites and fertilizer plants, and 34.78 million m<sup>3</sup>/day to gas distributors to serve the non-thermal power market.

Out of total natural gas supply, 44.03 million m<sup>3</sup>/day were from domestic production, 3.84 million m<sup>3</sup>/day of liquefied natural gas (LNG) were regasified in LNG terminals in Pecem (CE), in Baía de Guanabara (Rio de Janeiro) and Bahia (BA) and 28.38 million m<sup>3</sup>/day were imported from Bolivia. Of this total, 1.63 million m<sup>3</sup>/day was used in the natural gas transportation system.

## Natural Gas Distribution

In the natural gas distribution business, we operate in Brazil and Uruguay. The distributors in which we have stake trade 21.36 million m<sup>3</sup>/day in Brazil and 182.06 thousand m<sup>3</sup>/day abroad to 351,318 and 59,189 customers (residential, commercial, industrial, vehicular, thermal power), respectively.

In Brazil, we are the controlling shareholder, with 51% shares, of Petrobras Gás (Gaspetro), *holding* that consolidates our equity interests in state natural gas distribution companies, with the exception of the natural gas distributor of Espírito Santo, fully controlled by Petrobras Distribuidora.

In Uruguay, through Petrobras Uruguay S.A. de Inversión, we hold stakes in two companies in the natural gas distribution business, responsible for distribution throughout the Uruguayan territory.

## Completed Natural Gas Projects

- Route 2 Gas Pipeline: pipeline that interconnects the Santos Basin Pre-Salt Area to the Cabiúnas Processing Asset (APCAB), in Rio de Janeiro. With 401 km and initial capacity to discharge 13 million m<sup>3</sup>/day, it entered into operation in February 2016. In August, ANP granted authorization to operate a 16 million m<sup>3</sup>/day gas pipeline, after a study attesting to the possibility of increased discharge capacity. With that, we avoided cutting production in Santos Basin pre-salt fields, whose production curve exceeds 13 million m<sup>3</sup>/day, after FPSO Cidade de Mangaratiba entered into operation; and
- Route 2 Natural Gas Processing Unit: located in Cabiúnas, it enabled increased daily processing capacity of gas from the Santos Basin Pre-Salt Area by 5.4 million m<sup>3</sup>/day, leading to the increase in APCAB capacity from 20 million to 25 million m<sup>3</sup>/day. The work also allowed APCAB condensate processing to increase from 4.5 thousand to 6 thousand m<sup>3</sup>/day. This unit started operations in February 2016.

## Natural Gas Projects in Progress

### Gas Pipelines

- Gasfor II (CE): segment from Horizonte to Caucaia with 83.2 km. Its scheduled operation startup was adjusted to April 2018;
- Route 3 Gas Pipeline: gas pipeline that will interconnect the Santos Basin Pre-Salt Area to the Natural Gas Processing Unit located in Comperj, in Itaboraí, for discharge of up to 18 million m<sup>3</sup>/day. This gas pipeline will be 355 km long, of which 307 km will be offshore and 48 km onshore. Completion is scheduled for 2019.

### Natural Gas Processing Units (UPGNs)

- Complementary Treatment in APCAB: it will enable receiving and treating up to 2.9 million m<sup>3</sup>/day additional gas from the Santos Basin Pre-Salt Area, and will enable discharge via Gasduc II, of this additional gas for processing at the Route 3 units in

Comperj. Mechanical completion occurred in July 2016. The pre-operation and startup stages are associated with the conclusion of the natural gas processing units at Comperj; and

- Route 3 Natural Gas Processing Unit: located in Comperj, it will have two units with total capacity to process 21 million m<sup>3</sup>/day of natural gas from the Santos Basin Pre-Salt Area, which will increase the supply of natural gas, LPG and natural gasoline (C<sub>5</sub>+) to the market. The start of operations is scheduled for 2020.

## **ELECTRICITY**

Our Energy area is responsible for the generation and sale of electricity.

Our generating park, with 6.1 thousand MW installed capacity, consists of 20 thermal power plants, among wholly owned and leased plants, powered by natural gas, diesel or fuel oil. Including the plants with generation from renewable sources and the projects in which we have minority stakes, our power generation capacity totaled 6.5 thousand MW.

In 2016, we generated 2.3 thousand average megawatts (MWmed) of electricity to the National Interconnected System (SIN). This result is approximately 50% lower than in 2015, due to the increase in affluent energy (rains), the recovery of water levels in reservoirs at hydro power plants, and load downturn (demand). We sold approximately 835 MWmed in electricity in the free contracting environment, and 3.2 thousand MWmed in the regulated contracting environment.

In July and August, we exported electricity to Argentina from our gas plants in the thermal power park, which resulted in gains from the direct sale of energy in export and trading of natural gas to third-party power plants.

## **FERTILIZERS**

We operate in the production and trading of fertilizers. We currently have three plants, located in the states of Bahia, Sergipe, and Paraná. In 2016, we registered record productions of 435 thousand tons of ammonia and 418 thousand tons of urea at the Bahia plant. In total, we produced 1.1 million tons of ammonia (of which 743 thousand tons were used in urea production and 21 thousand were used in the production of ammonium sulfate) and 1.3 million tons of urea.

The works at the Nitrogenous Fertilizer Unit III, in Três Lagoas (MS), were discontinued and we are re-evaluating the project (for more information about the company's strategy in the fertilizer segment, see item *"Focus on oil and gas"* in chapter Corporate Strategy - Strategic Plan).

## **BIOFUELS**

We operate in the production of biodiesel and ethanol through our wholly owned subsidiary Petrobras Biocombustível. One of our goals is to manage our participation in the biofuels market by integrating the activities in the production, logistics, and trading areas and exploring synergies with the Petrobras System.



## **Biodiesel and Agricultural Supply**

Petrobras Biocombustível operates two biodiesel units, one located in Candeias (BA) and the other in Montes Claros (MG), with total production capacity of 369 thousand m<sup>3</sup>/year, whereas production in the Quixadá (CE) unit was discontinued in November 2016 due to poor economic results, with no reversal expected in the short term.

It also has 50% stake in BSBios Sul Brasil, with shared management. BSBios operates two units, one located in Marialva (PR) and the other in Passo Fundo (RS), with total capacity of 425 thousand m<sup>3</sup>/year.

In addition to the assets in biodiesel production, we developed Project Belém in equal partnership with Galp Energia, which encompasses palm tree cultivation, oil extraction and export in Brazil, and the production of 270 thousand tons of green diesel in Portugal. In 2016, the palm tree-cultivated area in Pará totaled 42 thousand acres. Due to prioritization of investments, the installation of palm oil extractors in Brazil and the construction of the green diesel industrial plant in Portugal were postponed. In 2017, a partnership was approved in part of the palm tree plantations, which will enable the entry of third-party resources for implementation of the extraction unit, diluting the costs of current shareholders.

Petrobras Biocombustível also operates in the extraction and trading of Castor oil tree, cotton and sunflower oils its stake in Bioóleo, a company located in Feira de Santana (BA). The affiliate has the capacity to process 130 thousand tons/year of grain and refine 54 thousand t/year of soybean or cotton oil. Its operations contribute to maintaining the Selo Combustível Social ("Social Fuel Seal") issued by the Ministry of Agrarian Development, a requirement for the sale of biodiesel in the auctions promoted by ANP.

## **Ethanol**

We operate in ethanol production through our subsidiary Petrobras Biocombustível, a company that as of 2016 held shared management in three companies: Bambuí Bioenergia S.A. (MG), Guarani S.A. (SP) and Nova Fronteira Bioenergia S.A. (GO). Total crushing capacity of these affiliates is 31.2 million t/year of sugarcane.

At Bambuí Bioenergia, sugarcane crushing totaled 1.20 million tons, and production of 104.61 m<sup>3</sup> of hydrous ethanol. In 2016, the equity ownership of Petrobras Biocombustível on company was reduced from 44% to 26%, approximately, due to the non-exercise of subscription rights in May 2016.

At Guarani, sugarcane crushing totaled 20.12 million tons, ethanol production totaled 636.35 thousand m<sup>3</sup>, and sugar production totaled 1.570,48 thousand tons. The participation of Petrobras Biocombustível increased from 43% to 46%, approximately, after contribution made in January 2016, as provided for in the Investment Agreement. In December, Petrobras Biocombustível executed with Tereos Participations SAS a contract for the sale of its full stake in Guarani (for more information, see item "Partnerships and Divestments" in chapter Corporate Strategy).

In Nova Fronteira Bioenergia, sugarcane crushing reached 4.86 million tons, and ethanol production was 412.05 thousand m<sup>3</sup>. In December, the incorporation of Nova Fronteira Bioenergia by São Martinho was approved, through share exchange. With this transaction, Petrobras Biocombustível will hold 6.593% of São Martinho shares, replacing its 49% stake in

Nova Fronteira Bioenergia (for more information, see item “Partnerships and Divestments” in chapter Corporate Strategy). There is prospect of future sale of these shares, through a structured process.

These divestments related to Guarani e Nova Fronteira Bioenergia comply with our strategic guideline to exit biofuel production activities, preserving technological skills in areas with potential for development.

## AWARDS AND RECOGNITION

We are one of the world leaders in deep and ultra-deep water exploration and production, recognized for pioneering the introduction of new technologies. Thanks to this leadership, we have received nationally and internationally recognized awards in the oil and gas industry, such as the *OTC Distinguished Achievement Award*, the most important award in the industry, in 1992, 2001, and 2015.

In 2016, the constant search for overcoming challenges led to recognition in other areas of performance.

### *Technological Innovation*

We won three categories of the National Agency of Petroleum, Natural Gas and Biofuels’ (ANP) Technological Innovation award in 2016. In the first category, “Technological Innovation Developed in Brazil by National Science and Technology Institution (ICT) in Collaboration with Oil Company,” the winner was the project Feeler PIG for Multisize Offshore Pipelines Inspection, developed in partnership with the Pontifical Catholic University of Rio de Janeiro (PUC-RJ).

In the second category, “Technological Innovation Developed in Brazil by Micro, Small or Medium-Sized Company in the Oil, Natural Gas and Biofuels Segment in Collaboration with Oil Company,” the winning design was the Real-Time Diagnostics Program of Problems with Drilling (PWDa), developed in partnership with Engineering Simulation and Scientific Software Ltda. (ESSS), Ensino Superior Unificado Centro Leste (UCL), the Rural Federal University of Rio de Janeiro (UFRRJ) and the Federal Technological University of Paraná (UTFPR).

In the third category, “Technological Innovation Developed in Brazil by Large-Sized Supplying Company in the Oil, Natural Gas and Biofuels Segment in Collaboration with Oil Company,” the CO<sub>2</sub> Self-Repairing project, developed in partnership with Schlumberger, was awarded.

We also received the 2016 Brazil Innovation Valor Award, offered by the newspaper *Valor Econômico*, as the most innovative company in the country in the category Base Industry and Metallurgy, which includes oil and gas, ore, and cement companies. This award, organized by the newspaper Valor Econômico since 2015, was created to recognize companies that excel in developing research and technology in the country in 17 economic sectors. The ranking is prepared based on a survey carried out by the newspaper in partnership with consulting firm Strategy&, and on analysis of data such as investments in innovation, best practices, creation of new products and solutions, and strategies, among other indicators. As

debutants in the competition, we number 14 in the ranking of the 100 most innovative companies in Brazil.

### *Finances*

We received the “Corporate Liability Management of the Year” award from magazine *LatinFinance*, as we were considered to have been the company that performed the best debt management operation in international capital markets in 2016.

We were awarded for the two securities issue and repurchase transactions in the international market, held in May and July. In both transactions, we used the funds to buy back bonds maturing between 2017 and 2019, in order to extend the average maturity of our debt.

### *Communication and Brands*

We received awards and honors in 2016, such as the title “Highly Reputed Brand,” awarded by the National Institute of Intellectual Property (INPI). The title is a statement that the Petrobras brand enjoys undisputed prestige, notoriety and tradition. Currently, only ten brands in the country hold this title.

Still with regard to brands, we won the “Top of Mind 2016” award, granted by Instituto Datafolha in two categories. In the debuting category “Brand that Represents Brazil,” we were the big winner. In the category/segment “Fuel,” we led as the most remembered brand, with 20% of mentions.

Petrobras Distribuidora received in April, for the third consecutive time, the “Seal of Excellence in Franchising” - Master Category (companies with more than 10 years and over 60 franchisees) for its role as a franchisor of the BR Mania network of convenience stores. The award is granted by the main entity in the franchise sector in Brazil - the Brazilian Franchising Association (ABF) - and aims to recognize the company’s quality and excellence in relation to its role as a franchisor, in addition to stimulating the improvement of its performance by promoting the best practices and professionalism of the companies operating in the franchising system.

Our distributor also won 1st place in the category Lubricants Brand - LUBRAX - in the “Transport and Logistics Choice Award 2016,” and was featured in the category Best Distributor, one of the most important categories in national economy.

## **GOVERNANCE, MANAGEMENT AND COMPLIANCE**

### **ETHICS**

We have an Ethics Committee that integrates the Ethics Management System of the Federal Executive Branch, which in turn is coordinated, evaluated and supervised by the Public Ethics Commission (CEP), under the Office of the President of the Republic. Our commission, which is composed of seven members appointed by the Executive Board, guides, disseminates and promotes compliance with ethical principles and conduct commitments, and orders the

investigation of conduct contrary to ethical standards by the units in charge, among others. It also acts as advisory body to our managers and employees, and in the face of a complaint, it assesses the need to act in accordance with its role of investigation and other appropriate procedures, as well as owning documents such as the Petrobras System Code of Ethics and our Code of Conduct.

In our Code of Ethics, we present the ethical principles and conduct commitments to be followed by Board of Directors, Audit Committee, and Executive Board members, as well as Petrobras System employees, interns and service providers. The Code of Conduct is addressed to the same audience, and includes developments of the principles in the Code of Ethics, with practical guidelines for day-to-day work. In December, the Executive Board and the Board of Directors approved reassigning the Petrobras System Code of Conduct, with the recommendation that it is followed also by wholly-owned subsidiaries and the controlled companies in the Petrobras System.

In 2016, we spread the principles and commitments made in the Code of Ethics and the Code of Conduct through lectures for new employees, strengthened the electronic signature campaign of the Statement of Acknowledgment for those documents, supported managers and the areas in clarifying questions and in developing local actions based on consultations on ethics-related issues, and intensified a communication campaign with guidance to the workforce on how to proceed in situations of nepotism, conflict of interest, and offers of gifts, tokens, hospitality or sponsorship counterparts.

## **HEALTH, SAFETY, AND ENVIRONMENT (HSE)**

In 2016, we invested R\$ 5.88 billion in initiatives to improve our performance in health, safety, and environment (“HSE”) to comply with specific legislation and contribute to ensure operating practices at our units are safe, cost-effective, and environmentally responsible.

Among such initiatives, we highlight the compliance certification in ISO 14001 (environmental management) and OHSAS 18001 (health and safety management) standards of the HSE management systems for our operating units in Brazil and abroad. In 2016, all refined oil in the country was processed in certified units.

We systematically evaluate the main risks to the elements of health, safety, and environment in investment projects. The results of these assessments are periodically followed by the BD HSE Committee, which consists of three members.

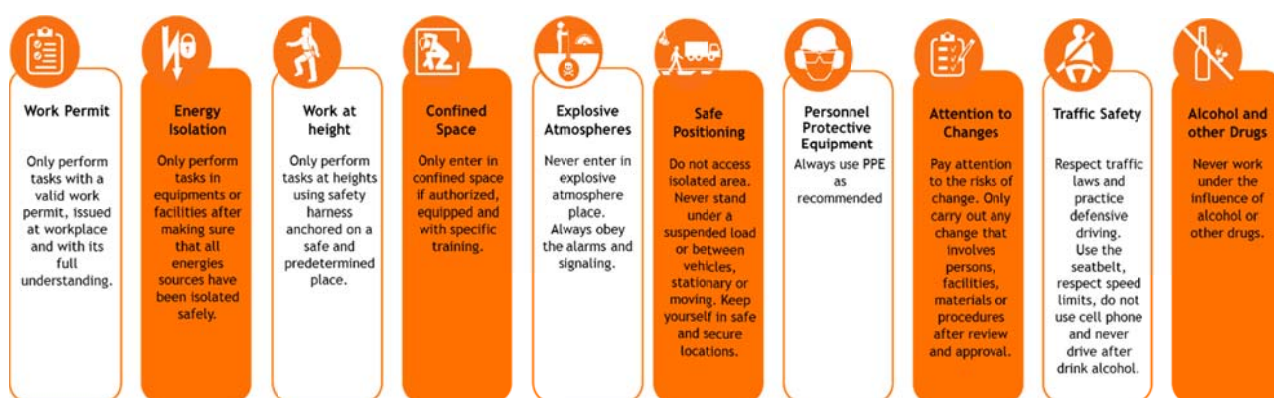
## **SAFETY**

In order to improve the safety of our operations and prevent injuries and illnesses, we work by disseminating the fundamentals, concepts and process safety practices of Process Safety and Workplace Safety, and by implementing programs and actions in these disciplines.

We reinforce the commitment to safety, emphasizing the value “respect for life” in our Strategic Plan (“PE”), wherein the main challenge to safety management is to reduce accidents and any other types of harm to people.

PE HSE initiatives are developed in the PNG 2017-2021, which highlights the Commitment to Life Program, aiming to reinforce safety guidelines at all process stages to eliminate critical deviation and thus prevent the occurrence of fatal accidents. The program brings together a series of impacting actions aimed at rapid and consistent reduction in accidents and standardization of best practices in the company, considering the specifics of the different areas. Assuming the existence of continuity and evolution of plans and effective actions, operational discipline and active participation of leadership, the Commitment to Life Program will reinforce for the entire workforce the training and internalization of so-called Golden Rules. Released in 2015, the Golden Rules are a set of ten practical rules intended to draw the attention of the workforce to the importance of adopting attitudes that prevent harm to people and strengthen our safety culture. The Golden Rules are detailed below:

Figure 5: Golden Rules of Safety



Efforts to reach the goal of the Program is grounded on four pillars: (i) reinforcing process safety, which incorporates principles and guidelines that also benefit the Workplace Safety, Environment, and Health dimensions; (ii) “obligation to do,” which provides for the compliance with HSE legislation, rules and standards for all employees; (iii) HSE conduct treatment system, which recognizes employees who stand out in terms of HSE and holds accountable those employees who do not present the appropriate conduct and (iv) integrated actions throughout the company.

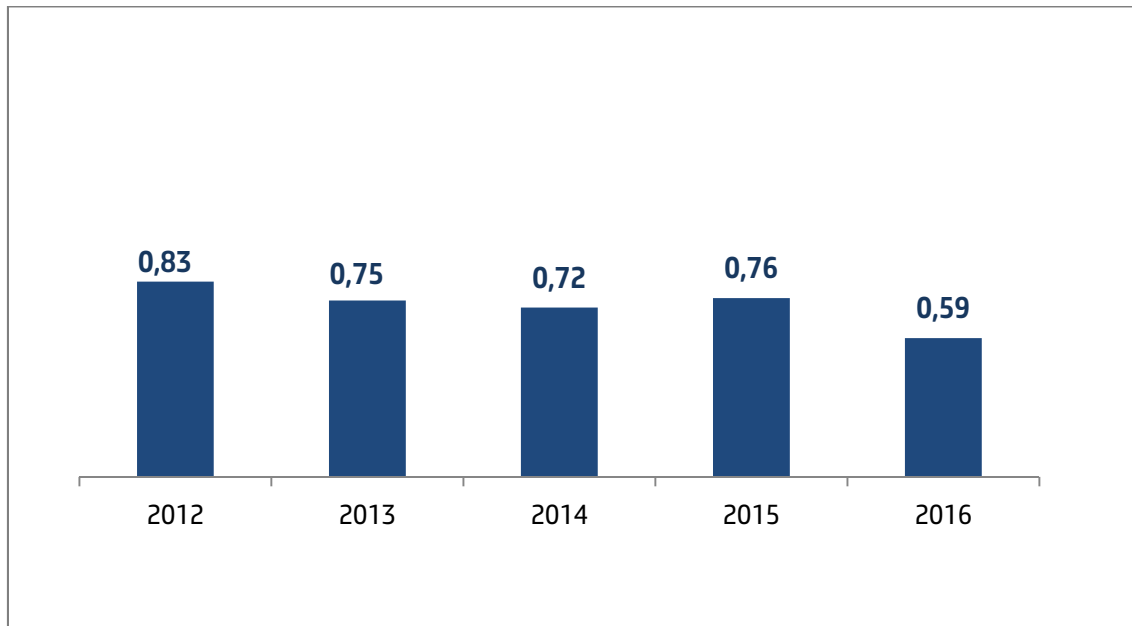
The program aims at reducing the number of accidents in our operations, one of the top metrics in our PE and PNG 2017-2021, which consists of 36% reduction in the Recordable Injury Rate (“TAR”), a figure expected to be reduced from 2.2 per million man-hours in operations in 2015 to a maximum of 1.4 in 2018, reaching 1 by no later than 2021.

In addition to TAR, we track other indicators. The Recordable Occurrence Rate (“TOR”)<sup>13</sup> presented a reduction of 25% in comparison to the rate achieved in 2015, resulting from the implementation of initiatives to prevent injuries and illnesses. Such initiatives have enabled the reduction in the frequency of Lost-Time Injury Rate (TFCA<sup>14</sup>) by 22% over the previous year.

<sup>13</sup>TOR - Recordable Occurrence Rate, that is, number of recordable injuries with or without leave, with casualties, and first-aid cases for every million man hours of exposure to risk in the period considered.

<sup>14</sup> TFCA is obtained by calculating the number of lost-time accidents x 1 million on HHER 1 (man hour with risk exposure). A TFCA equal to 1 means 1 lost-time injury for every 1 million man-hours worked.

Chart 17: Lost-Time Injury Rate (TFCA)



Despite the search for continuous improvement in HSE management, we recorded and regret the occurrence of three casualties in the year involving our employees and subcontractors.

In the area of Process Safety, we track the indicator Number of Process Safety Accidents Tier 1 (NASP1), which records cases of greater severity (Tier 1). The NASP1 indicator has been set in accordance with industry best practices, enabling the comparison of Petrobras' performance with that of its peers. Process safety accidents are characterized by loss of primary containment of hazardous fluids or energy at processing facilities (for example, spill of a volume of oil derivate at an operating unit caused by the breaking of a pipe). Although rare, large process safety accidents may cause extensive environmental impacts, and damage to industrial facilities and to the health of a large number of people.

We recorded, in 2016, 24 cases of process accidents (NASP1), 27 less than in 2015. We investigated all accidents recorded to identify their root causes. We recommend preventive and corrective actions, which we monitor while being implemented. In cases of major accidents, we issued alerts for the entire company, in order to allow the units to assess the likelihood of similar events in their own operations and decide on the advisability of adopting the measures recommended.

### *Oil and Derivate Leakage*

Spills of oil and derivatives totaled 48.32 m<sup>3</sup> in 2016, 34% less than the volume recorded in 2015 and 78% below the Alert Threshold set by the company at 216.3 m<sup>3</sup>. The volume spilled in 2016 corresponded to less than 7% compared to the average leaks recorded by international companies in the same period.<sup>15</sup>

We are constantly improving our standards, procedures and response plans to spills, which are structured in local, regional, and corporate levels. To act effectively in these types of

<sup>15</sup> Leaked volumes data extracted from sustainability reports or similar published by the companies selected for comparison.

emergency, we have distributed resources in our 12 Environmental Defense Centers (CDAs), in 12 advanced bases, and in Transpetro's Emergency Response Centers, located in different parts of the national territory.

We are members of the *Oil Spill Response Limited*, an organization that operates at a global level specializing in providing and supplementing resources for effective response to oil spills. In 2016, we carried out 13 simulation exercises of regional scope, including training in response to leaks.

## ENVIRONMENT

To increase the eco-efficiency of our operations, we increasingly seek the rational use of water, energy and other inputs, and manage atmospheric emissions and waste and effluent generation. Our goal is to reduce the impacts of activities on the environment to a minimum. For this, we operate on several fronts.

### *Biodiversity, Water Resources and Effluents*

We reused 24.8 m<sup>3</sup> million in 2016, a volume 7% higher than the volume in 2015 and enough to supply a city of 600 thousand residents for one year. The resulting economy of rationalization and reusing actions contributed to ensuring the security of supplies necessary to our operations. We applied the Water Shortage Risk Index to a set of operating units that account for about 90% of the total fresh water that we caught. The index is a tool developed in partnership with Coppe/UFRJ to identify the risks of water scarcity in our units. The results provide use with the basis to prioritize and structure actions aimed at the mitigation of these risks.

We published for the second year the Annual Report on Biodiversity, consolidating information on risk management and biodiversity impacts. Based on this information, we planned and developed projects for the prevention, mitigation, environmental restoration or compensation of these impacts.

The report is also important for the critical assessment of the company's performance of this issue, in order to enable the improvement of current management strategies.

### *Waste*

We recycled through energy reuse, 28% of the 136 thousand tons of hazardous solid waste from industrial processes, a volume 2% higher than in 2015. Reuse and recycling actions with hydrocarbon recovery include: 1) deployment of processing unit at Alberto Pasqualini Refinery (Refap), which enabled reprocessing 10.5 thousand m<sup>3</sup> of residual oily streams with incorporation of solids in green petroleum coke and 2) disposal of 64 thousand tons of residual oily streams for reprocessing in the Shale Industrialization Unit (SIX).

We also sought to reduce the disposal of waste generated in our activities to landfills, by recycling 90% of paper, 88% of wood, 96% of scraps, 51% of glass and 81% of plastics.

### *Atmospheric Emissions and Climate Change*

In recent years, we have reduced the intensity of greenhouse gas (GHG) emissions in our processes through different initiatives, with emphasis on the upgrade of facilities, the use of

more efficient equipment, the increased use of natural gas, the standardization of designs and operating practices, and investments in research and technology.

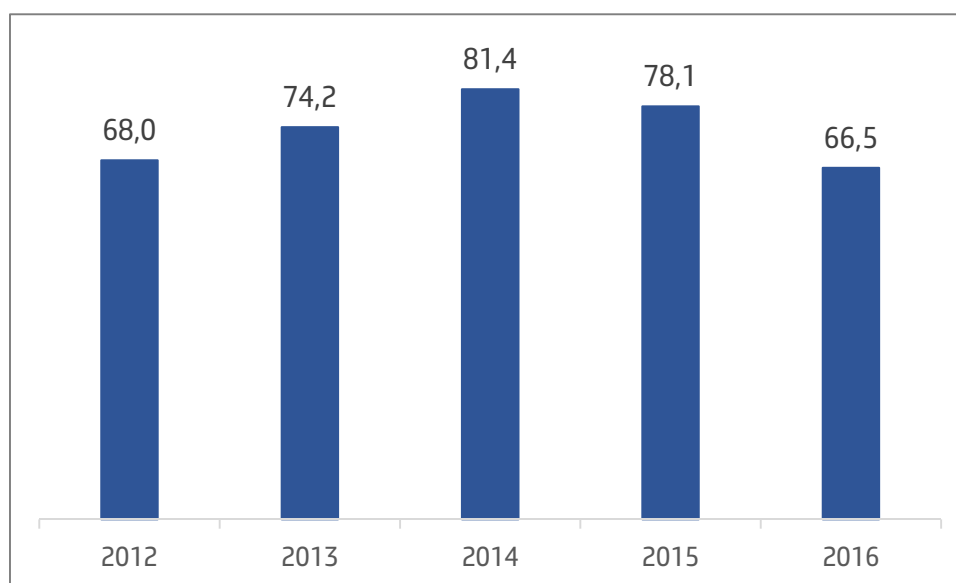
Our efforts on programs and actions for process optimization and mitigation of emissions resulted in a total of approximately 72 million t CO<sub>2</sub>eq avoided in the period from 2010 to 2015.

From an annual perspective, in 2016 we reduced absolute GHG emissions by about 15% in comparison to 2015. Such a decrease is due to factors such as the reduction of electricity generation in thermal power plants and divestments in assets. On a smaller scale, operating fluctuations have also contributed to the reduction of emissions, such as lower activity of drilling rigs and operations of support vessels to E&P activities and the reduction of the load processed at refineries.

The aforementioned factors are also reflected in the reduction of regulated pollutants emissions (NO<sub>x</sub>, CO, particulate matter, SO<sub>x</sub>, and non methane hydrocarbons).

The graph below demonstrates the evolution of GHG emissions in the period from 2012 to 2016.<sup>16</sup>

Chart 18: GHG emissions (million tons of CO<sub>2</sub>eq)



In 2016, we obtained the highest score in the CDP (formerly known as *Carbon Disclosure Project*) since we first joined the Organization in 2006, earning the grade A-, which represents leadership in management and transparency.

## HEALTH

In addition to the Occupational Health Medical Control Program, we carry out prevention and health promotion initiatives at the corporate level and in organizational units, for monitoring

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<sup>16</sup> Emissions Chart: CO<sub>2</sub>eq emissions were calculated based on Global Warming Potential values (GWP) in the IPCC Fourth Assessment Report (AR4). In the previous Management Reports, these emissions were calculated considering the GWP values from the Second IPCC Assessment Report (SAR), therefore changes in the data from 2012 to 2015 can be observed.



of health indicators and the analysis of the epidemiological profile of our employees. Such initiatives include information such as measurement of blood pressure, cholesterol levels, physical activity, among others.

These results are obtained based on data collected annually during the occupational examinations associated with the characteristics and risks of employee activities, which guide the planning of health promotion initiatives.

We track by using the Lost Time Percentage (PTP) indicator, the evolution of absenteeism by accidents and diseases, as well as its main causes, whether or not related to work. This monitoring also influences our health actions. In 2016, PTP was 2.47%, in line with the 2.40% Alert Threshold set for the year.

## ORGANIZATIONAL RESTRUCTURING

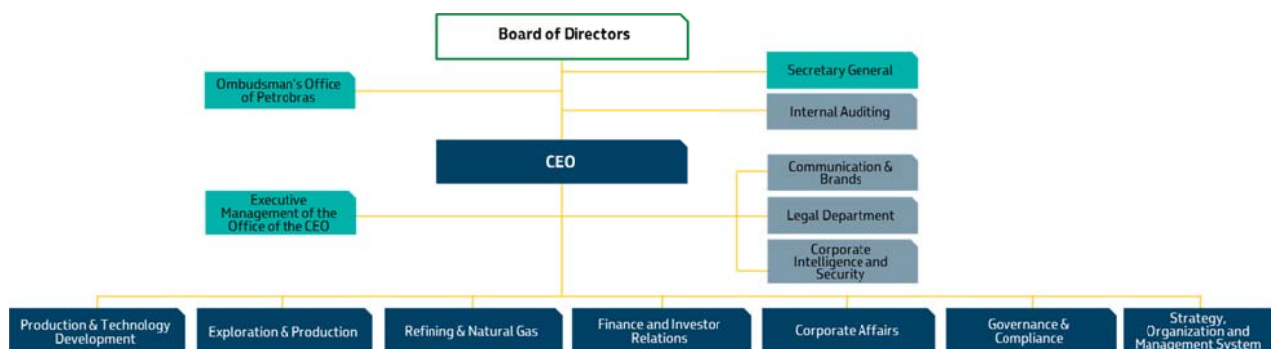
In 2016, the BD approved our organizational restructuring, reviewing governance and organizational management models for economies of scale, optimization of synergies, prioritization of business profitability, and capital discipline.

Among the changes that took place, highlights are the merge of the Downstream area with Gas and Energy, and the centralization of corporate activities. The centralized functions, either in whole or in part, were: human resources; supply of goods and services; health, safety, and environment; social responsibility; comptroller; governance; business risks; compliance; strategy and organization.

Another highlight of the restructuring was the creation of the Strategy, Organization and Management System area, to strengthen activities related to Strategic, Business, and Management Plans for Petrobras and their development in the company, ensuring greater control on expenditures and investment projects.

Our organizational structure is as follows:

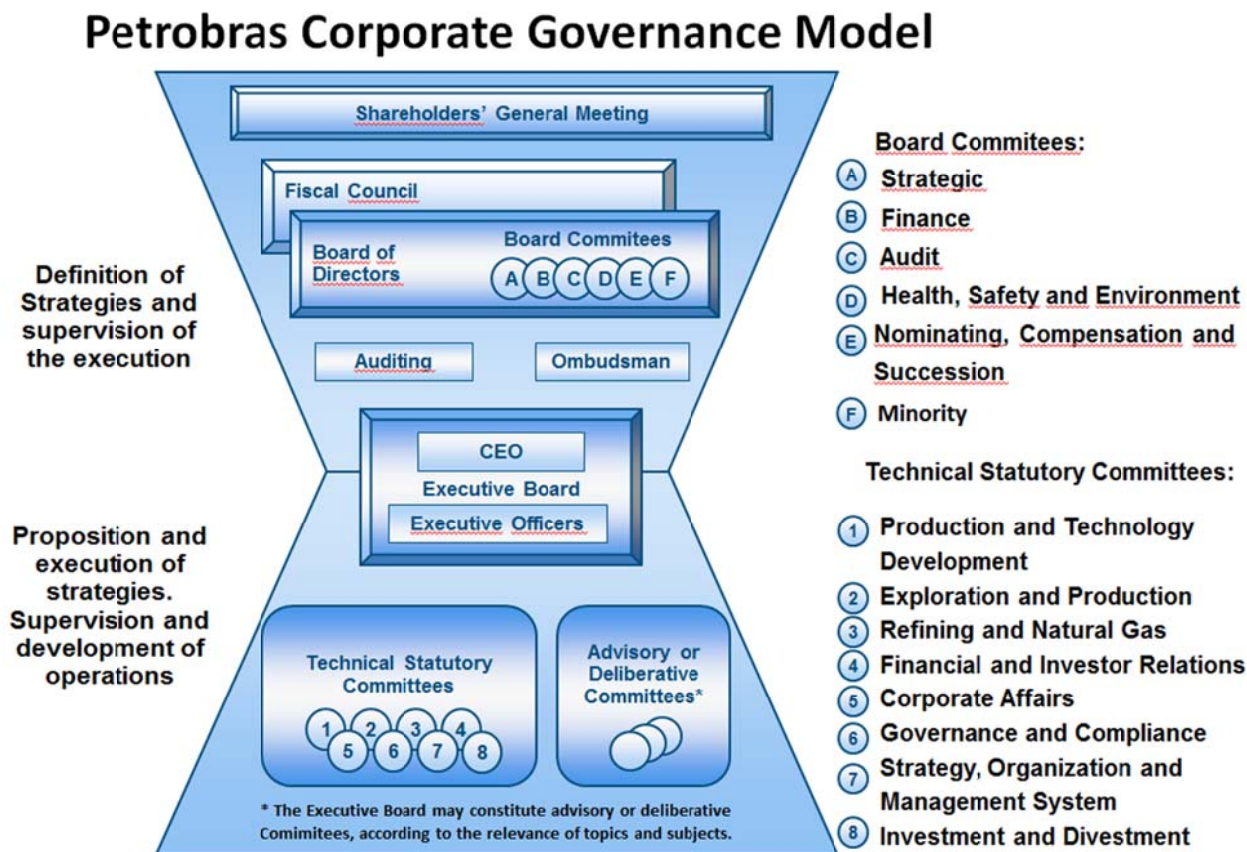
Figure 6: Petrobras Organizational Structure



## CORPORATE GOVERNANCE

Our corporate governance model consists of the General Shareholders Meeting, the Audit Committee, the Board of Directors (“BD”) and its committees, auditing (internal and external), Ombudsman’s Office, and Executive Board (“EB”) and its committees.

Figure 7: Petrobras Corporate Governance Model



In 2015, we initiated a review of our governance and organizational management model, with the definition of our new organizational structure and the implementation of several improvements. We formalized the creation of five Statutory Committees subordinate to the Board of Directors; we completed the structuring of new area of Governance, Risk and Compliance (GRC); we reviewed the limits of authority for the Board of Directors and the Executive Board; we increased the level of accountability of our administrators and began to prioritize collegiate decisions over individual decisions, strengthening the transparency of our decision-making process.

In 2016, we continued the implementation process of corporate governance improvements. The main highlights were:

- **implementation of Statutory Technical Committees:** advisory committees composed of executive managers with specific assignments for analysis and recommendation on matters of competence of the members of the Executive Board. Members are subject to the same duties and responsibilities as administrators, pursuant to article 160 of Law 6,404/76.
- **implementation of Executive Committees:** multidisciplinary committees of deliberative and/or advisory nature, intended to propose and analyze matters of competence of the Executive Board and to issue recommendations on such matters.
- **implementation of the Statutory Audit Committee (CAE):** the Board of Directors approved the revision of the Audit Committee Internal Rules, enabling its effective implementation as CAE, pursuant to CVM Instruction no. 308/99, as amended by CVM Instruction no. 509/11. As such, CAE duties were reinforced, increasing transparency in

the Committee's work by publishing an annual report (for more information on the CAE, see item "Statutory Audit Committee" in this chapter).

- **disclosure of corporate governance instruments:** availability of internal rules of the Audit Committee, the Board of Directors and its committees, and the Executive Board on the company's website.
- **review of our Bylaws:** the General Shareholders Meeting approved three amends to our Bylaws, which promoted, among other measures: (i) amendment to the term of office for Board of Directors and Executive Board members to two years, with a limit of three consecutive reelections; (ii) deletion of substitute members for the Board of Directors; (iii) the prohibition of the Board of Directors Chair and President of the Company positions being occupied by the same person; (iv) report of the Executive Officer of Governance and Compliance (DGC) to the Board of Directors, in compliance to the cases provided for in art. 9 of Law 13,303/16.
- **evaluation of the Board of Directors, its Committees, and the Executive Board:** an external expert company was hired to implement and conduct a performance review of the Board of Directors and its committees and the Executive Board. Such review is currently in progress.
- **nomination of Executive Officers and Executive Managers:** we included in our Bylaws, as a duty of the Board of Directors, the approval of nominations of Executive Officers and Executive Managers of the company. The selection of current senior management members was submitted to the assessment of the (at the time) Committee on Compensation and Succession prior to approval by the Board of Directors. In this assessment, integrity and technical and management qualification criteria were adopted. In the case of the selection of executives outside the company, an expert company was used.
- **succession process of the Executive Board, senior management members and BD staff and technical advisers:** establishes criteria and procedures for: (i) the identification and development of potential successors to Executive Officer and senior management member positions; (ii) the nomination and selection for Executive Officer and senior management positions, as well as staff and technical advisors to the Board of Directors and its committees.
- **updating the Code of Best Practices:** our code currently consists of the Policy on disclosure of Material Act or Fact and Securities Trading; Petrobras Corporate Compliance Policy; Petrobras Corporate Risk Management Policy; Policy and Guidelines of the Petrobras System Ombudsman Office; Dividend Distribution Policy; Policy on Nomination of Petrobras Audit Committee, Board of Directors, and Executive Board Members; Communications Policy; and Petrobras Policy on Related Party Transactions.
- **Training and Qualification Program in Corporate Governance:** dissemination of information on relevant issues of corporate governance, aiming to reach all employees and administrators in the Petrobras System. Additionally, we approved the new model for training of Board of Directors and Executive Board members of Petrobras, consisting of an Introduction Program for New Administrators and a Periodic Training Program for 2017.

- **Policy on Nomination of Petrobras Audit Committee, Board of Directors, and Executive Board Members:** establishes minimum requirements and impediments for the nomination of Audit Committee, Board of Directors, and Executive Board members, as well as external participants of advisory committees to the Petrobras BD, whereas the Statutory Committee on Nomination, Compensation and Succession is tasked with confirming the compliance of this process in the light of the requirements set forth. In order to meet the provisions in legislation, we created in February 2017 the Eligibility Committee, temporary in nature, tasked with issuing an opinion in order to assist shareholders in the nomination of administrators and Audit Committee members on compliance with requirements and absence of impediments to their corresponding elections, as provided for in Law No. 13,303/16, Decree 8,945/16 and in our Bylaws.
- **Petrobras Policy on Related Party Transactions:** reinforces the principles of ethical conduct, commutativity, equity, and transparency in transactions with our related parties.
- **Dividend Distribution Policy:** grounded on the provisions set forth in our Bylaws and in Law 6,404/76 (Brazilian Corporation Act). In September, the Board of Directors approved the Petrobras Dividend Distribution Policy, which seeks to ensure the company's continuity and financial sustainability in the short, medium, and long term, adopting flexibility and financial strength as premises for maintaining its business. Such a policy complies with Law 13,303/16.
- **Petrobras Policy on Disclosure of Material Act or Fact and Securities Trading:** establishes the rules and procedures to be followed in the disclosure of information to the market representing a material act or fact and in the trading of securities issued by the company, in order to avoid the misuse of privileged information, ensure fair treatment to investors, and the compliance and transparency in the trading of securities issued by Petrobras. The policy provides for the establishment of the Executive Committee on Disclosure, whose purpose is to monitor and improve the company's information disclosure process to the market; it was implemented in July 2016, with monthly meetings.
- **Communications Policy:** governs communication within the company and reinforces the commitment to open, continuous dialogue with all the stakeholders, and includes guidance on spokespersons.
- **Minority Shareholders Committee:** intended for analysis and recommendations on related-party transactions involving Petrobras and the Federal Government, its autarchies, and foundations within level of approval of the Board of Directors, particularly with regard to the Transfer of Rights Contract Review process, in order to provide greater alignment to the best practices in corporate governance, ensuring the transparent, impartial transactions to minority shareholders.

## STATUTORY AUDIT COMMITTEE

Permanent body composed of three to five members selected among Board of Directors members. Most Committee members shall all of the independence criteria set out in applicable regulations, including those defined in article 22, paragraph 1 under Law

13,303/16 and in article 31-C, paragraph 2 of CVM Instruction no. 308/99, as amended by CVM Instruction no. 509/11, whereas all Statutory Audit Committee (CAE) members shall meet the independence criteria required under U.S. law.

The duties of this Committee include, among others: (i) advise the Board of Directors in the analysis of annual and quarterly consolidated financial statements; (ii) receive, retain and process complaints about accounting and financial issues, whether or not such complaints are confidential, either internal or external to the company, establishing internal procedures relating to such matters; (iii) advise the Board of Directors in establishing global policies relating to the evaluation and management of risks.

In 2016, 29 meetings were held with the participation of executive managers, internal and independent auditors and, eventually, Executive Board members, members of the other Advisory Committees to the Board of Directors, and members of the Audit Committee.

More information on the Statutory Audit Committee can be found at: <http://www.investidorpetrobras.com.br/pt/governanca-corporativa/orgaos-de-governanca/comites>.

## **RISK MANAGEMENT**

We believe that the integrated and proactive management of risks is fundamental to the delivery of safe and sustainable results.

We adopt a comprehensive approach to risk management that is restricted only to a traditional economic and financial view of the risks, but also incorporates elements of preservation of life, health, our rights, processes, assets, proprietary information and our image and reputation. Our Corporate Risk Management Policy has as fundamental principles the respect for life in all of its diversity, ethical performance in compliance with legal and regulatory requirements, as well as the full alignment and coherence with our Strategic Plan, with integrated risk management and with the orientation of risk response actions aimed at adding or preserving value to shareholders.

Insofar as authorities and responsibilities are concerned, our risk management policy applies the three lines of defense concept. The first relates to the managers responsible for the company's processes. In this sense, it is up to the managers of operating units or businesses to identify risks and manage them according to corporate-defined limits, including timely communication of identified risks under the responsibility of others. The second line of defense is responsible for establishing the risk management duties in the first line, as well as to monitor their operation continuously. In our company, the second line is present in, but is not limited to, risk management, compliance, internal controls, health, safety, and environment, comptroller, legal, corporate security, and quality teams. Finally, the third line of defense is exercised by the internal audit team, which is responsible for systematically assessing the risk management process and recommending improvements, providing senior management and governance bodies with reviews with the highest level of transparency and independence. This governance structure is designed to allow an adequate segregation of duties between the risk takers and those responsible for defining their limits and exposure, and corresponding periodical monitoring.

In addition to defining the authorities, responsibilities and principles that guide risk management actions at Petrobras, the policy serves as a reference for identifying risks in the different activities of the company, since it explains the categories of risks to which the company is exposed, and gathers them in 5 main groups, according to treatment strategies: operating, strategic, business, compliance, and financial.

- **Operating Risks:** we believe that it is possible to work without accidents and it is the duty of all to care for safety, which is why we included the shared safety target in the performance review system of all the company's managers, including the President and Executive Officers.

We also believe that life should be respected in all its diversity and protected against threats resulting from intentional or unintentional actions. This naturally leads us to prioritize the safety and reliability of our processes and our facilities as a way of protecting people and the environment. Management of this risk takes place from strict inspections and maintenance programs in our facilities, in addition to a continuous effort to train our workforce for the correct compliance with safety requirements, pursuant to international best practices.

- **Strategic Risks and Business Risks:** our risk management system is fully aligned and consistent with the Strategic Plan of Petrobras; risks are considered in all of our strategic decisions and management is always performed in an integrated way, taking advantage of the benefits inherent to diversification.

Once risks are identified, response actions are evaluated against the potential cumulative long-term and long-range consequences of risks, and prioritized according to the aggregation or preservation of value for shareholders.

Due to the peculiarity of the market in which it operates, Petrobras is naturally exposed to a series of strategic and business risks, both manageable and non-manageable, such as the risks associated with price fluctuation of its products in the international market, geological risks, changes in consumption patterns of society, actions of competitors, performance of suppliers, regulatory or tax changes, macroeconomic and industry evolution, among others. Management of these risks in turn occurs from a robust planning process and portfolio management that values economy in the selection of projects, diversification of business lines, and the strict compliance with targets, which are periodically monitored at various hierarchical levels. In addition, we continuously monitor the evolution of the international scenario and the performance of our various stakeholders.

- **Compliance Risks:** risk management is part of Petrobras' commitment to act ethically and in compliance with the legal and regulatory requirements defined in countries where it operates. Compliance risks, particularly risks of fraud, corruption, money laundering, and reliability of financial reporting, are mitigated by internal controls and constant publicity of our Code of Ethics, Code of Conduct, Petrobras Corruption Prevention Program, and other instruments for preventing this type of risk.

Periodic training, both in-person and remotely, are systematically offered to the entire workforce at all levels, including for all Executive Officers, the President, and Board members.

The nomination of administrators, Executive Officers, Presidents, and other Senior Management members meets integrity and absence of conflict of interest criteria (Integrity Background Check) while procurement of goods and services depends on the appropriate degree of supplier risks gathered from audits carried out by our compliance team Integrity Due Diligence (for information on Integrity Background Check and Integrity Due Diligence, see chapter Compliance).

- **Financial Risks:** The management of financial risks is always performed in an integrated manner, favoring the benefits inherent to diversification. Petrobras actively manages its financial risks its considering various operational flows, the application of financial availabilities, indebtedness conditions and other positions in assets, liabilities, disbursements, and receivables to mitigate the exposure to risk in the price of commodities, currencies, and interest rates. Derivative contract can also be applied in the treatment of these risks. More detailed information regarding the management of financial risks is presented in explanatory note 33 of the financial statements for the year ended on 31 December 2016.

On March 3, 2017, we received Official Letter no. 30/2017/CVM/SEP/GEA-5, through which the technical department of CVM ordered *“re-preparation, resubmission, and republication of the full annual financial statements as of 12/31/2013, 12/31/2014, and 12/31/2015, plus re-preparation and resubmission of the corresponding financial statements , as well as the re-preparation and resubmission of the quarterly financial information presented in the course of the financial years of 2013 (2Q and 3Q), 2014, 2015, and 2016, contemplating the reversals in the recognized accounting effects originated from the application of hedge accounting.”*

Pursuant to CVM Deliberation no. 463/03, we filed an appeal before with the Autarchy on 17 March 2017.

CVM’s technical area accepted the request for suspensive effect forwarded by us regarding the order for re-preparation, until the merits of the filed appeal is evaluated .

As disclosed to the market in 2013, we began applying hedge accounting to future exports starting in May of that year. Based on this accounting practice, we assign hedge relations between “highly likely future exports” and particular obligations in U.S. dollars, so that the foreign exchange effects on both are recognized at the same time in the result statement.

Our understanding is that we use the accounting practice correctly, and we reiterate that the financial statements relating to the years 2013, 2014 and 2015 are in accordance with the accounting practices adopted in Brazil, as well as international accounting standards (IFRS) and have been audited by independent auditor, who issued an opinion without reservations that said statements fairly presented in all material respects, the financial and equity position of Petrobras.

More information on hedge accounting applied to highly likely future exports is presented in explanatory note 33 of the financial statements for the year ended on 31 December 2016.

### *Risk Governance*

Upon the organizational restructuring carried out in 2016, various governance enhancements within Petrobras contributed to strengthening corporate risk management.

The centralization of risk management teams in a single organizational unit reinforces the necessary segregation of duties between risk takers and those responsible for their monitoring. Currently, the risk structure is subordinated to the Executive Officer for Strategy, Organization and Management System (DEORG).

Additionally, we structured an Executive Risk Committee, with the purpose of advising the Executive Board (EB) in the analysis of specific matters of risk management or, eventually, to deliberate on specific issues upon prior delegation from the EB.

Finally, the manager in charge of risk structure is one of the standing members of the recently created Statutory Technical Committee For Investment and Divestments, responsible for advising the Executive Board on the approval of investment and divestment projects.

More information on our Policy on Corporate Risk Management can be found at:

<http://www.investidorpetrobras.com.br/pt/governanca-corporativa/instrumentos-de-governanca/codigo-de-boas-praticas>

## COMPLIANCE AND INTERNAL CONTROLS

### COMPLIANCE

Our Executive Office for Governance and Compliance has been improving the compliance of our processes to, among other goals, mitigate risks such as fraud and corruption, with a focus on the compliance to laws, norms, internal and external standards and regulations.

In March 2016, we approved our Policy on Corporate Compliance, with principles and guidelines that aim to describe and disclose the commitments made by us in relation to the promotion of the highest ethical values and transparency in the conduct of its business, with zero tolerance to fraud, corruption and money laundering.

The policy contributes to the integration and strengthening of compliance initiatives within the Petrobras System, in particular the Petrobras Corruption Prevention Program (PPPC), in line with the best practices currently demanded by the market, in addition to complying with anti-corruption legislation in force, particularly Law 12,846/2013, the Foreign Corrupt Practices Act (FCPA) of 1977, and the UK Bribery Act, of 2010.

Among the initiatives, we can highlight the following:

**Oversight Committee:** We created the Oversight Committee, to reinforce the system of consequences of company, guide, standardize and monitor the application of disciplinary sanctions in cases related to fraud or corruption. Subordinated to the Executive Officer of Governance and Compliance, the Committee is composed of the Legal, Human Resources, and Compliance executive managers.

This is an important initiative for us because, upon its creation, there is now a centralized instance to advise managers and oversee their actions, ensuring the compliance with the principles of immediacy, transparency and equality.

In 2016, the Committee analyzed 63 investigative processes initiated based on suspicions of fraud and corruption.



**Communication and Training:** to continue the movement “Petrobras in Compliance,” to raise workforce awareness on issues related to integrity, ethics, and compliance with legislation, rules and procedures, we carry out publicity actions with guidelines on conduct and reinforcement of our ethical values through publications and internal releases. Additionally, we publish videos in the hot site [daquiprafrente.hot sitespetrobras.com.br](http://daquiprafrente.hot sitespetrobras.com.br), with the measures adopted for the improvement of company processes.

In parallel, we conduct training for our employees, including to the President and Executive Officers, with specific modules on “corruption prevention” provided by the United Nations Global Pact. In addition to training for new employees held since 2014, on-site courses on aspects of our PPPC were offered to audiences with greater exposure to compliance risks, such as employees involved in the contracting process and the company’s managers. Additionally, Presidents and Executive Officers of Petrobras and subsidiaries, and executive managers of the holding, participated in face-to-face training on integrity and conflict of interest, offered by a representative from the Ministry of Transparency, Oversight and Federal Comptroller General. Meanwhile, the members of our Board of Directors attended specific training on Brazilian Anti-Corruption Laws and Money Laundering Prevention, associated with the importance of the Compliance Program.

**Compliance Agents:** We reviewed the initiative “Compliance Agents,” in order to adapt it to our new structure and to expand the activities developed by the professionals assigned to unfolding our governance and compliance actions, especially those related to prevention of fraud, corruption, and money laundering. To meet this challenge, we created “Adjunct Compliance Agents,” which, in partnership with the other Compliance Agents, amounted to 150 assigned professionals to contribute to the development of dissemination and promotion of compliance and the Petrobras Corruption Prevention Program in the different business units of the company.

**Integrity Due Diligence:** focused on ethics and transparency in our procurement of goods and services, we adopted in August 2015 new criteria for supplier evaluation, called “Integrity Criteria.”

In compliance with these criteria, all companies interested in initiating a process of enrollment, renewal or reclassification in our corporate register or in our simplified register must provide information on organizational and business structure, relationship with public agents, integrity history, relationship with third parties and integrity program. This information ground the Integrity Due Diligence (DDI) procedure, which results in the classification of the Integrity Risk Degree (GRI) for the supplier, which can be high, medium or low.

GRI, as well as the result of technical, legal, economic and health, safety, and environment and (SMS) evaluations, is considered in selecting the companies to be invited to participate in our contracting processes. In 2016, 12 thousand DDI processes were completed by the Register System.

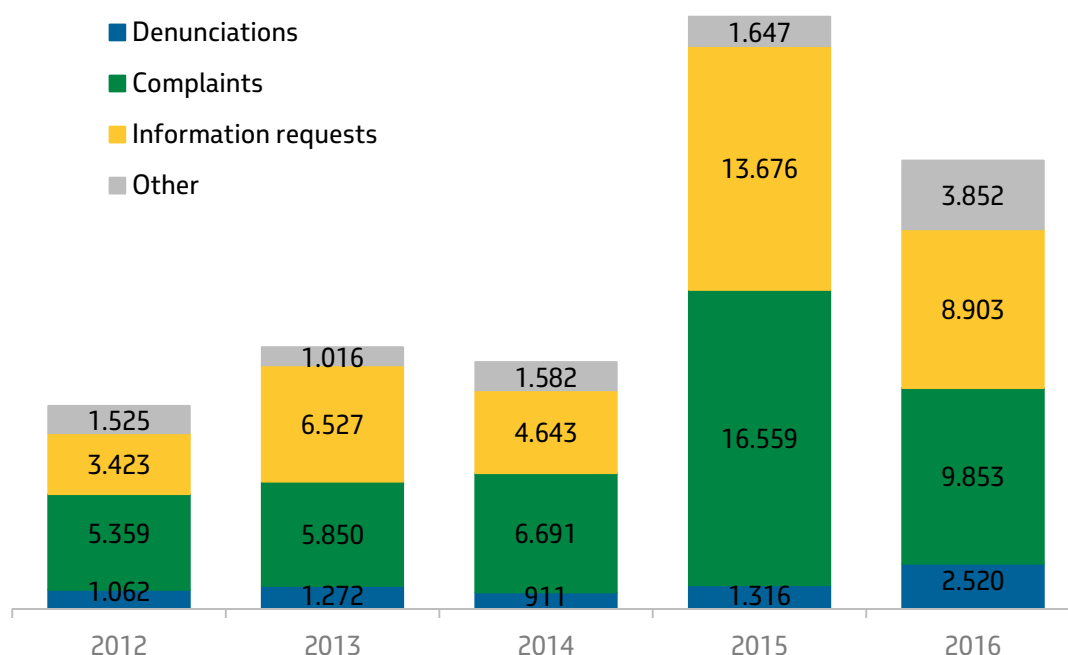
**Specialized and Independent Whistleblowing Channel:** We use an independent Whistleblowing Channel, which provides confidentiality to the whistleblower, secrecy and integrity of information, traceability of processes and treatment of all the complaints.

Managed by an external company, the new Whistleblowing Channel, called Contato Seguro [Safe Contact], which is the same for the entire Petrobras System, is responsible for

receiving and the formal record of internal and external complaints related to fraud, corruption, money laundering and serious irregularities, with a guarantee of anonymity and the commitment on our part, not to retaliate the whistleblower.

We observed a greater effectiveness in the use of the Whistleblowing Channel, as illustrated below:

Chart 19: Demands received by the Ombudsman’s Office



**Integrity Background Check (BCI):** to provide administrators with information on integrity before the decision-making process for nominating individuals to key company positions, we started performing the Integrity Background Check. This report consists of a summary of public information from free or paid sources, and information from the company’s internal systems, demonstrating the degree of exposure to integrity risks of the assessed entities, taking into account the best practices in integrity relating to the prevention of fraud, corruption, and money laundering.

We applied BCI in the nomination of employees to senior management positions of Petrobras System companies in Brazil and abroad, in addition to managerial functions in Petrobras.

**Monitoring of the System of Consequences:** We analyze the investigative processes initiated in the company with suspicion of fraud and corruption, following the recovery of values; the forwarding to external control bodies and judicial bodies; the application of disciplinary measures to employees; and the opening of new investigative procedures arising from controversial facts identified in investigations that couldn’t be fleshed out (for information on values recovered in the Car Wash proceeding, see chapter Operation Car Wash).

We incorporated the system of consequences to Petrobras senior management and Audit Committee members to our process. This is another initiative that aims at strengthening the

compliance environment in the company. Until then, Board of Directors (and its committees), Executive Board and senior management members responded to the system set forth in the Brazilian Corporations Act. Now, this audience responds both to the internal and the external standard. Penalties relating to senior management and Audit Committee members include the application of written warning, temporary suppression of duties, up to the dismissal of the position. Employees who suffer sanctions arising from irregularities committed during the performance of their duties as members of the Board of Directors and its committees, Executive Directors, members of the Audit Committee or members of Statutory Technical Committee (CTE) may be cumulatively sanctioned by the disciplinary regime applicable to other Petrobras employees.

**Perception Survey on Compliance Actions:** In 2016, as another initiative related to the Petrobras Corruption Prevention Program (PPPC), we carried out the second issue of Perception Survey on Compliance Actions, whose main goals are to evaluate the awareness and perception of employees about our compliance actions, and identify improvements in these actions. The research included the participation of more than 22 thousand Petrobras employees (parent company).

Based on survey results, we found that the overall awareness on compliance-related initiatives in the company has increased, where it is possible to highlight: Ninety-one percent of participants stated they are aware of PPPC (in 2015, this percentage was 53%), while 86% stated that they are aware of the company's Whistleblowing Channel (in 2015, this percentage was 56%).

## INTERNAL CONTROLS

Our management is responsible for establishing, evaluating the effectiveness, and maintaining adequate internal control over financial reporting.

Our internal control over financial reporting is a process overseen by our Board of Directors and carried out by management and other employees, designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external purposes, in accordance with international accounting standards (IFRS), as issued by the IASB.

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

Our management has assessed the effectiveness of our internal control over financial reporting as of 31 December 2016, based upon the criteria established in *Internal Controls - Integrated Framework* (2013), issued by the Committee of Sponsoring Organizations of Treadway Commission (COSO). Based on this assessment, in using the classification of internal control deficiencies set by the Brazilian standard NBC TA 265 (Brazilian Accounting Standard 265), and due to the non-remedied significant deficiencies described below, our management has concluded that internal control over financial reporting was not fully effective as of December 31, 2016.

## *Evolution of Remediation of Significant Deficiencies in Internal Controls over Financial Statements*

A significant deficiency is a deficiency or a combination of deficiencies in internal control that, in the auditor's professional opinion, is sufficiently important to deserve the attention of those in charge of governance.

Once the existence of control deficiencies which either individually or collectively constitute significant deficiencies are identified, we are actively engaged in the development and implementation of remediation efforts to correct them, as well as to identify potential risks in other areas.

In this sense, our efforts were able to remedy the following significant deficiencies identified in previous years:

- **Management Override of Controls** refers to the possibility of control override by administrators ("*management override of controls*");
- **Review and Approval of Manual Journal Entries** refers to the possibility that manual accounting entries occur without proper authorization and review;
- **Property, plant and equipment (partially)**: related to the possibility of (i) incorrect record of provisions and reversals for impairment of fixed assets and (ii) untimely record of fixed assets depreciation.

Despite of improvements in internal controls and the remediation plans adopted, the following significant deficiencies persisted in the 2016 fiscal year:

- **Property, plant and equipment**

In 2014, our management identified control failures which collectively constituted a [significant deficiency] related to property, plant and equipment, related to the identification of possible risks arising from the economic and financial condition of suppliers. Such deficiencies resulted in failures: (i) in the identification of the need to write down payments advances to suppliers, that would not result in future economic benefits, (ii) in the identification of the need to recognize expenses related to the dissolution of such contracts.

These deficiencies resulted in a failure of our internal control over financial reporting from previous years, specifically in 2014, 2015 and 2016, to detect an overstatement of property, plant and equipment and understatement of expenses however, all material aspects were reflected in the consolidated financial statements.

Our management recognizes that the remediation actions for the deficiencies identified in the years 2014, 2015 and 2016 weren't sufficient. In response, we will expand the performance of controls so that (i) they are able to capture different events related to dissolution of or advance payments to suppliers, and (ii) they are registered in a timely manner.

- ***Provisions and contingent liabilities for legal proceedings***

In 2015, our management identified deficiencies in design related to the controls to capture and record judicial proceedings to which the Company is a party. Additionally, a deficiency was identified related to the adequate posting of the classification of likelihood of contingency loss as likely, possible or remote. In specific cases, control operation did not guarantee with precision the change of classification of likelihood of loss for specific contingencies.

In response to the significant deficiency identified in 2015, our management adopted measures to remedy deficiencies and conform the operation of controls, which resulted in improvements to the design of processes, controls and internal procedures for provision and contingent liabilities.

In this context, our management understands that the process shows evolution and maturity in mitigating risks, whereas there still are areas of improvement and strengthening of the control environment that deserve the attention of those charged with governance, but which do not constitute, either individually or collectively, a reasonably likelihood that material failure is not prevented or detected and reported by the filing of quarterly or annual financial reports.

This deficiency did not have an impact on our financial reporting in 2015 or 2016.

- ***System access management and segregation of duties in business and information technology processes***

In 2013, we identified deficiencies in the operation of controls related to procedures for granting access and segregation of duties analysis in certain operations that, when evaluated together, constituted a [significant deficiency].

The identified control deficiencies related to the management, review and monitoring of access, including critical functions and segregation of duties in business processes within the Enterprise Resource Planning - ERP environment (corporate management system) showed exceptions, especially in the operation of controls.

This deficiency did not have an impact on our financial reporting in 2013, 2014, 2015 or 2016.

In 2016, we performed actions to remedy control deficiencies, including improvement of procedures and automation in the management of access to users in the ERP environment.

Our management believes that the actions taken to remedy the significant deficiency of Access Restriction and Segregation of Duties represent an evolution in mitigating risks and in the control environment for this process. However, pursuant to the outlook of the aggregate results of tests, the control environment has not yet reached the appropriate maturity to conclude that the significant deficiency has been remedied.

Our management remains committed to the strengthening and maturity of the control environment, in order to remedy the significant deficiency identified.

- ***Calculation of company net actuarial liabilities***

In 2015, we identified deficiencies in the data generation process used to calculate the actuarial liabilities related to our healthcare plan (AMS) and the pension plan (Petros). These deficiencies referred to the totality of the sample and to the accuracy of its individual information in the databases used for the actuarial calculation.

Such deficiencies resulted from failure of our internal control over financial reporting to detect an overvaluation of liabilities and an understatement of comprehensive income in fiscal years 2015 and 2016. However, these deficiencies had no impact on our financial statements in 2015 or 2016.

In 2016, our management created a new set of controls which cover processes of inclusion, alteration or exclusion of employees, dependents or retirees in the databases for the health care plan (AMS) and the pension plan (Petros).

Though the actions taken represent an improvement, our management recognizes that the control environment has not yet demonstrated adequate maturity to conclude that the significant deficiency of actuarial liabilities was remedied.

Additionally, in 2016 we identified deficiencies in its controls over the monitoring of specific benefit plan assets managed by Petros and their adjusted reflexes in Petrobras' financial statements. Despite the actions taken by our management to mitigate those risks, mainly by strengthening the role of oversight and monitoring exercised by the Sponsor (Petrobras), we understand that such actions were still not sufficient to ensure adequate monitoring of all assets.

Our management remains committed to the strengthening and maturity of the control environment, in order to remedy the significant deficiency identified.

These significant deficiencies were analyzed by our management, and all necessary adjustments were made in our consolidated financial statements.

From the above, we concluded that our consolidated financial statements fairly present, in all material respects, our financial condition, results of operations and cash flows at and for the periods presented. The impact of all the facts known to management, so far, has been reflected in the consolidated financial statements.

## **SOCIAL RESPONSIBILITY**

In the area of Social Responsibility, we highlight social risk management, environmental investment and community outreach. These activities contribute to integrate social responsibility in the Petrobras System, both in strategic decisions and in the performance of everyday activities, and increase our ability to generate value for the business due to the prevention or mitigation of social risks and the strengthening of the relationship with our stakeholders, in particular with the communities around our units and installations.

In 2016, we approved our standard on social risks, a development of the Policy on Corporate Risk Management, to meet the Securities and Exchange Commission of Brazil (CVM) Instruction 552/14. The standard includes the identification and classification of social risks, considering their impact and likelihood of occurrence. Such risks involve issues such as human rights in supply chain and the dynamic with local communities.

Social risk management should take place in all of our processes and activities, and in all stages of the life cycle of our projects. The results of the analysis of these risks should help us in the decision-making process and are integrated into other risks that may impact our business and the relationship with stakeholders.

In order to assist our Executive Board, the Executive Committee for Communication and Social Responsibility was created. The issues discussed by the committee include the Communication Policy and the guidelines for the Petrobras Social and Environmental Program.

We invested approximately R\$ 120 million in 470 initiatives related to social and environmental projects that we support. The amount for the Petrobras System was 55.7% lower than in the previous year, considering our capital discipline initiatives.

Our Social and Environmental Program encompasses partnerships with more than 700 entities, such as the United Nations Children's Fund (Unicef), the Network of Educational Sports Multiplying Partners, the Pro-Tamar Foundation and the Baleia Jubarte Institute.

In the period from 2014 to 2016, program-supported projects mobilized 895 thousand people in education actions, and had 72 thousand participants in professional training courses. In the environmental area, these initiatives produced about 90 thousand publications, studies, technical documents and databases. In addition, they covered around 430 fauna species, one thousand flora species, and 1.6 million hectares in productive reconversion activities, recovery of degraded areas, and conservation/management of forests and natural areas (73% of which refer to conservation actions of natural areas in indigenous lands or Conservation Units).

Our project portfolio also allows us to meet the challenges of our businesses. Due to our activities in the Brazilian coast, the demands of various stakeholders regarding environmental risks have grown, especially for marine biodiversity. We sponsor the projects by Rede Biomar, which are a reference in marine biodiversity conservation in Brazil and generated technical and scientific information that contributed with inputs to our responses to licensing organs due to our offshore performance. Currently, the network includes the projects Tamar, Baleia Jubarte, Coral Vivo, Golfinho Rotador, and Albatroz.

We also highlight, in our social responsibility performance, the following initiatives:

**Community Outreach:** through a methodology-based participatory process called Agenda 21, we are active in promoting the development of action plans in 193 neighboring communities to our operating units. Community diagnoses were developed that subsidized the development of these plans, with a focus on health, public safety, education, and employment and income. In the year 2016, about 4.4 thousand people were certified at 229 social management training workshops (training of entrepreneurs, preparation of projects, and incorporation of legal entities) and community communication, aiming to promote the implementation of these plans.

**Gender and race equality:** we signed in April 2016, the statement of commitment for the sixth edition of the Pro Gender and Race Equality Program, an initiative led by the Special Secretariat for Woman Policies with the support of UN Women, the International Labor Organization, and the Secretariat of Policies to Promote Racial Equality. The purpose of the program is to promote equality between men and women in the labor market, contributing to the elimination of all manner of discrimination in access to employment, professional remuneration, career advancement and stay at work.

## RESEARCH AND DEVELOPMENT

Our activities in Research and Development ("R&D") are coordinated by the Research and Development Center Leopoldo Américo Miguez de Mello ("Cenpes") and aim to develop technologies to facilitate our Business and Management Plan, in addition to anticipate trends and invest in technological routes aligned to our Strategic Planning. Cenpes has 1,458 employees, 1,345 of whom dedicated exclusively to the P&D area, whereas 21% hold master's degrees and 14% hold doctor's degrees. Additionally, it works in partnership with over domestic and foreign 100 universities and research institutions, suppliers, and other companies.

In 2016, R&D investments totaled R\$ 1,826 million, a 9.78% reduction compared to the previous year.

Our main results in P&D this year, were:

- installation of Stationary Production Unit control simulator and dynamic virtual compression plant, enabling improvements and corrections in control settings, as well as adjustments to new operation scenarios, reducing involved risks and optimizing compressor operation, startup and outage (the use of this simulator prevented unscheduled outages at 23 P-43, representing a gain of approximately R\$ 2.5 million);
- optimization of the anchoring system of platforms P-67, P-68, P-69, P-70, P-74, P-75, P-76 and 77, reducing the need for 30 anchoring under original designs and providing Petrobras with potential savings of R\$ 470 million, referring to the reduction of material and installation costs;
- Use of the real-time drilling diagnostics program of in (PWDA), a software developed by Petrobras that receives real-time information on well drilling, identifies risk situations, and alerts to the occurrence of operational problems. Its use has enabled to reduce the use of probe in 18 days, generating savings of R\$ 34.4 million in 2016.
- use of the ENDFlex tool, developed by Petrobras to define new deadlines for the inspection of pipelines, risers, and subsea umbilicals. The software uses technical criteria based on risk classification and history, and consequences of failures in the field. In the Campos Basin Operating Unit, due to the new inspection deadlines, the potential for cost reduction is R\$ 120 million by reducing the fleet of vessels.
- establishment of new recommendations for the procedure to open producer wells in the Marlim field, in Campos Basin, considering laboratory tests and numerical simulations, which enabled progressive increase in flow, avoiding production losses and generating additional revenue of R\$ 125 million in the year.



- operation startup in our first multiphase pumping system in onshore fields. Conventional machines essentially operate with liquid (pumps) or gaseous (compressors) fluids. The multiphase pumps are a hybrid system that can operate with two fluids (100% liquid or up to 95% gas). Designed to operate with 25 producing wells at the same time, they are capable of significantly reducing the pressure on these wellheads, enabling an increase in oil production by up to 30%. This technology can enable production in marginal deposits and/or increase the recovery factor of so-called mature fields.
- development of sedimentologic and stratigraphic models in the Lula, Búzios, and Sapinhoá fields, in the Santos Basin pre-salt layer, used to minimize exploration and production risks by increasing the degree of reliability of future locations for the exploitation of these fields.
- availability of two new real-time investigation techniques of contaminated areas - induced fluorescence by laser-induced fluorescence (LIF) and x-ray fluorescence (XRF), which enable greater precision, reduced response time by up to 50%, and consequent reduction of the costs of investigation and remediation of contaminated areas by 40%, at least. Pilots have been conducted in the fields of Carmópolis, in Sergipe, the Dom João Treatment Plant and Oil Transfer, in the Bahia Operating Unit (UO-BA), and in the Cacimbas, Espírito Santo Gas Treatment Unit (UTGC).
- application of a system of membranes in a floating unit located in ultra-deep waters, to separate the CO<sub>2</sub> contained in natural gas. The work enabled to achieve the injection threshold of more than 3 million tons of CO<sub>2</sub> in the Lula and Sapinhoá fields, avoiding the emission into the atmosphere and increasing oil recovery.
- development of the Multi-Size Feeler PIG (tool for internal inspection of oil and gas production pipelines), successfully used in the fields of Espírito Santo Operating Unit (UO-ES) and the Santos Basin Operational Unit (UO-BS).
- development of first filling diesel, which ensures protection to new vehicles are stored in the courtyard of the automakers for a period of up to 180 days prior to sale. The product reduces the occurrence of oxidation reactions and minimizes the formation of deposits in the injection system, reducing wear of parts and reducing human exposure to the degraded product. The reduction of fuel and worn parts disposal brings a significant environmental gain and meets fuel specifications, in addition to environmental and logistical requirements.
- application of new technology of catalysts in one of two catalytic cracking units in the Paulínia Refinery (Replan), in Sao Paulo, which, together with other initiatives, made it possible to reduce emissions of particulate matter by 22%. The use of the technology has provided an increase in the conversion of heavy fractions for diesel and gasoline production, with estimated R\$ 35 million annual gain, in addition to anticipating compliance with Conama resolution 436, without relevant capital investment; and
- filing of 62 patent applications, 24 of which in Brazil and 38 abroad.

Cenpes also works in the provision of technical assistance for the solution of operating problems, seeking efficiency gains, operating optimization, and cost reduction. As an example, it worked on the thermo-mechanical revaluation of the 18-inch Sapinhoá Norte pipeline, due to changes in design bases. The work enabled the start of production by FPSO -

Sapinhoá Norte, which operates in the Sapinhoá field, in the Santos Basin pre-salt layer, and ensured the start of exports of 2 million/day of gas on the scheduled date, avoiding last-minute design changes and the consequent loss of production of 60 thousand boe/day. It is also worth mentioning the application of non-destructive testing techniques in the detection and sizing of cracks in welds and in delayed coking unit equipment at Replan. The work enabled a more precise evaluation of the defects detected and a reduction in the scope of planned repairs, reducing the time of interventions, postponing scheduled outages, and recording R\$ 37.5 million savings for the company.

## HUMAN RESOURCES

### STAFF EVOLUTION

The Petrobras System closed 2016 with 68,829 employees, a 12.29% reduction compared to 2015. The number of employees by region, turnover and the educational level are listed in the following tables:

Table 10: Number of Employees by Petrobras System Region

Staff by Region	2016	2015
<b>Petrobras Holding</b>	<b>51,255</b>	<b>56,874</b>
Southeast	36,883	40,326
South	2,529	2,740
Northeast	10,565	12,344
North	1,078	1,214
Midwest	200	250
<b>Controlled Companies - Brazil</b>	<b>13,936</b>	<b>14,740</b>
Southeast	8,760	9,396
South	1,826	1,816
Northeast	2,242	2,267
North	527	655
Midwest	581	606
<b>Controlled Companies - Abroad</b>	<b>3,638</b>	<b>6,856</b>
<b>Total Petrobras System</b>	<b>68,829</b>	<b>78,470</b>

Table 11: Employee Turnover

Turnover	2016	2015
<b>Petrobras Holding</b>	<b>6.66**</b>	<b>1.96</b>
<b>Controlled Companies - Brazil</b>	<b>5.53</b>	<b>5.88</b>
<b>Controlled Companies - Abroad</b>	<b>20.3</b>	<b>25.4</b>

\* There was greater turnover due to Volunteer Dismissal Incentive Programs (PIDVs) in 2014 and 2016.

Table 12: Educational Level of Employees

<b>Educational Level</b>	<b>2016</b>	<b>2015</b>
<b>Petrobras Holding</b>	<b>51,255</b>	<b>56,874</b>
<b>High School</b>	<b>30,601</b>	<b>34,999</b>
<b>Higher Education</b>	<b>20,654</b>	<b>21,875</b>

The Strategic Plan establishes an innovative, flexible people management model, based on the valuation of employees, which aims to contribute to our sustainability. The Human Resources area supports our strategy by seeking both the allocation and the retention of talents, in terms of quantity and competence, and the satisfaction, commitment, and productivity of our employees, through various initiatives, among which we highlight the following:

- (i) the adequacy of manpower, through specific programs such as the Volunteer Dismissal Incentive Program (PIDV) and the Internal Transfer of Employees Program (Mobiliza);
- (ii) the development of our employees; and
- (iii) performance management strengthening, by deploying the meritocracy system both in career development and in management succession processes.

## **ADEQUACY OF MANPOWER**

To adjust the workforce to the challenges of PE and PNG 2017-2021 and to reconcile our needs to the interests of employees, we highlight two programs: the Volunteer Dismissal Incentive Program (PIDV), and Mobiliza.

In 2016, we launched a new Volunteer Dismissal Incentive Program (PIDV). Similarly to the PIDV implemented in 2014, the new program was based on the principles of knowledge management, management succession, and operating continuity, in order to enable the planned and systematic dismissal of enrolled employees.

The 2016 PIDV was open to all our employees (Petrobras Holding) and today there are 11,866 individuals enrolled. According to the rules of this PIDV, employees who enrolled in the program in 2016 may give up at any time up to the date of approval of employment contract termination. A more accurate figure for the number of employees who will leave the company based on the program will be effectively known in the first half of 2017, when the last dismissal of employees whose employment contract is not suspended or interrupted should occur.

The total number of Petrobras Holding employees already dismissed as a result of PIDVs 2014 and 2016, was 12,190 as of 12/31/2016. It is estimated that 6,502 more employees will be dismissed.

Total indemnity borne by Petrobras Holding amounted to R\$ 3.7 billion with both programs (PIDVs 2014 and 2016). On the other hand, the financial return of the program by 2021 is

expected to be R\$ 18.9 billion (based on estimate and the calculation of funding in the PNG 2017-2021, considering a percentage of 20% withdrawal).

In 2016, our subsidiary Petrobras Distribuidora also launched a volunteer dismissal program, which registered a total of 1,105 enrolled individuals (up to the enrollment deadline on 12/31/16).

As for the Internal Transfer of Employees Program (Mobiliza), since 2013, we've had an internal transfer program exclusive to employees on non-managerial positions, created to adjust the staff of units to the company's needs, seeking to reconcile the interests of employees through conditions established in specific rules. In 2016, 155 employees changed areas.

With the challenges of PE and PNG 2017-2021, the transfer of staff has become even more relevant to the development of activities in the company, which is why, in December, we structured the program to make it continuous (Continuous Corporate Transfer Process).

## **DEVELOPMENT OF HUMAN RESOURCES**

Investments in employee training totaled R\$ 76 million, a 56% reduction compared to the previous year, reflecting the reduction in travel costs from the intensification of training carried out in the units themselves and the greater use of educational technology. We recorded nearly 249,000 participations in training courses for new employees and continuing education in Brazil and abroad, reaching an average of 41 hours of training per employee. We highlight the staging of 1,098 participations in compliance training actions, and about 60 thousand participations relating to remote training on corruption prevention available to employees in the holding company and in Petrobras System companies.

## **CAREER AND MANAGEMENT SUCCESSION**

In 2016, we approved the internal standard for the succession process of Executive Board and Senior Management members, and Staff and Technical Advisors to the Board of Directors. We also approved the performance review process for the BD, its committees and the Executive Board.

Between October and December 2016, internal selection processes were carried out for the role of Executive Officer for Finance of System companies: Petrobras Singapore, Petrobras Colombia, Petrobras Biocombustível, and Petrobras Logística, in compliance with Law 13,303/2016 of the Legal Statute for Mixed-Capital Companies and their Subsidiaries, and the Policy for Nomination of Petrobras Audit Committee, Board of Directors, and Executive Board members, approved by the BD on 9/28/2016.

Another front in progress is the Review of Managerial and Specialist Positions, seeking to adapt such positions to the new challenges of the company in qualitative terms, enabling the allocation of professionals on the basis of the profiles required for managerial and experts positions. This review process will allow the development of a model based on meritocracy and focused on results.

## **MAIN BENEFITS OFFERED TO EMPLOYEES**

We offer our employees benefits that are compatible with the size of the company and which seek the valuation of employees. All employees are entitled to the same benefits, regardless of positions or duties. Among the main benefits, we highlight private pension plans, medical assistance, and pharmacy benefit.

We sponsor two private pension plans. One of the plans, called Petrobras System Petros Plan (PPSP), is designed as a defined benefit closed to new accessions, and benefits granted under it are supplementary to Social Security (INSS). The new plan, known as Petros Plan-2, entered into effect on 7/1/2007 and was offered to all employees not enrolled in PPSP. The Petros Plan-2 was incorporated as a variable contribution plan. Contributions intended for the payment of future benefits are accumulated in individual employee accounts, whose profitability will be based on the results of the investments made by Fundação Petrobras de Seguridade Social (Petros), the entity in charge of managing the company's pension plans. Together, these plans cover 96.86% of our employees.

We maintain a supplementary health care plan (Multidisciplinary Health Assistance-AMS), which provides medical and hospital assistance and dental services to all employees, retirees, pensioners and their dependents. The plan is designed as a monthly contribution model, considering income and age brackets, for carrying out procedures classified as High Risk (surgeries, emergencies and some chronic treatments), and co-participation percentage, which varies according to income bracket, for carrying out procedures classified as Small Risk (consultations, exams and therapies). Plan costs are borne by the contribution of beneficiaries, which corresponds to 25% of the total expenditure, whereas the remaining costs are borne by the company.

The AMS benefit also provides coverage of supplementary programs through differentiated costing schedule, such as the Pharmacy Benefit program. By joining the AMS plan, the beneficiary is automatically enrolled in the program, which allows coverage of medication currently registered at Anvisa (except for a few exceptions), whereas the program is funded through a schedule of monthly contribution that varies according to the income bracket of the plan holder.

For more information on the benefits above, please read explanatory note 22 in our consolidated financial statements.

In addition to the aforementioned benefits, we have implemented other measures aimed at the welfare of our employees. In this regard, we highlight that, in 2016, an allowance of up to non-cumulative 120 hours per year was granted to employees who have children with disabilities enrolled in the Special Care Program, who require an escort in consultation and/or therapies. In addition, in the Addendum to the Collective Labor Agreement 2015-2017, as well as in policy that we adopted for maternity leave, we expanded paternity leave to 20 days, including employees whose spouse or partner is on maternity leave with benefits recognized by INSS. We also created for breastfeeding employees an allowance of up to 2 hours per day for breastfeeding their own children until the first year of age, upon presentation of medical certificate.

## **OPERATION CAR WASH**

In 2009, the Federal Police of Brazil launched an investigation to look into money-laundering practices by criminal organizations in several states in the nation, named "Operation Car Wash." This scheme involved a set of companies that, between 2004 and April 2012, organized in cartel to obtain contracts with Petrobras, imposing additional expenses in these contracts and using such additional values to fund undue payments to political parties, elected politicians or other political agents, employees of contractors and suppliers, former Petrobras employees, and others parties involved in this scheme. The investigations also showed specific cases in which other companies that did not participate in the cartel acted individually, by imposing additional expenses and using such values to finance undue payments.

Currently, there are still ongoing investigations relating to alleged crimes in disfavor of Petrobras. Petrobras has undertaken efforts to the wide investigation of the facts revealed by Operation Car Wash, including those related to any public officials who have perpetrated unlawful acts towards the company.

We do not tolerate any corrupt practice and continue to implement measures to strengthen our internal control structure. We are working to recover damages incurred as a result of the improper payments scheme. For this purpose, we filed in eight lawsuits of administrative misconduct and assistants to the prosecution by the Federal Prosecutor's Office in 31 criminal actions, in addition to participating in five other criminal actions as interested party.

At this time, we have received as compensation for incurred damages the amount of R\$ 661 million, which also includes an amount received as a result of criminal action in proceedings in the Federal Court of Rio de Janeiro (SBM case). As proceedings and investigations evolve, we may be entitled to receive other amounts.

Lastly, Petrobras reinforces that is officially recognized by public authorities as a victim in this investigation process.

## **CLASS ACTION AND RELATED PROCESSES**

A Consolidated Securities Class Action and 33 individual lawsuits were filed by investors before the Federal Court for the Southern District of New York (USA) and one lawsuit was filed by an individual investor in the Federal Court for the Eastern District of Pennsylvania (USA), all with similar allegations.

The authors contend that Petrobras, through material facts and other information filed with the Securities and Exchange Commission (SEC), allegedly reported materially false information and made omissions capable of inducing investors to error, especially in relation to the value of its assets, expenses, net income, effectiveness of its internal controls over the financial statements, and anti-corruption policies, which supposedly increased the price of company securities artificially.

In February 2016, the judge in charge of the trial of the class action issued a decision certifying two classes of investors. The first class, whose claims are based on the Securities

Act, represented by authors Employees' Retirement System of the State of Hawaii and North Carolina Department of State Treasurer; and the second class, whose claims are based on the Exchange Act, represented by author Universities Superannuation Scheme Limited. Both classes have the office Pomerantz LLP as attorney.

Pursuant to a decision by the Court of Appeals for the Second Circuit, the appellate court that examines appeals against decisions issued by the Federal Court for the Southern District of New York, in August 2016, the class action and the individual actions therein consolidated for trial purposes were suspended until the outcome of the appeal filed by the company against the decision that certified the classes of investors. In November 2016, oral arguments were held in a hearing on the topic. The company awaits a decision, without a forecast for such. It is possible that months go by until a collegiate decision on the subject is issued.

In October 2016, we executed agreements to terminate four individual actions filed before the Federal Court of New York, by PIMCO Total Return Fund (and others), Dodge & Cox International Stock Fund (and others), Janus Overseas Fund (and others) and Al Shams Investments.

In November 2016, we executed agreements to end eleven other individual actions filed before the Federal Court of New York, by Abbey Life Assurance Company Limited (and others), Aberdeen Emerging Markets Fund (and others), Aberdeen Latin American Income Fund Limited (and others), Delaware Enhanced Global Dividend and Income Fund (and others), Dimensional Emerging Markets Fund (and others), Manning & Napier Advisors, LLC (and others), Russell Investment Company (and others), Skagen (and others), State of Alaska Department of Revenue, Treasury Division (and other), State Street Cayman Trust Co., Ltd, and Ohio Public Employees Retirement System.

In February 2017, we celebrated agreements to end four other individual actions filed before the Federal Court of New York, by New York City Employees Retirement System (and others), Transamerica Income Shares, Inc. (and others), Internationale Kapitalanlagegesellschaft mbH, and Lord Abbett Investment Trust Lord Abbett Short Duration – Income Fund (and others).

On such agreements, we clarify to the market that they do not represent any acknowledgment of guilt by the company, aiming to eliminate the uncertainties, burden and costs associated with the continuation of these disputes.

In the balance sheet of the third and fourth quarters of 2016, provisioned values remain as a result of the agreements reached and the stage of negotiations in progress with other authors of individual actions, and the nineteen agreements informed are already included in this provision.

These actions involve very complex issues, subject to substantial uncertainties that depend on such factors as: originality of legal theses, schedule set by the Court, time of legal decisions, production of evidence in the possession of third parties or opponents, court decision on key issues, expert analysis, and the possibility that the parties negotiate a potential agreement in good faith.

In addition, the claims made are broad, cover several years, involve a diversity of activities and, in particular, the authors' arguments in the class action and the individual actions on the

value of alleged damage are varied, causing the impact of the course of litigation at the current stage to be complex and uncertain. The uncertainties inherent to all of these issues affect the amount and the time of the final decision in these lawsuits.

As a result, it is not possible to provide a safe estimate of potential loss in the class action and the individual actions for which we did not recognize provision.

Depending on the outcome of the case, we may have to pay substantial values, which could have material adverse effect on our financial condition, our consolidated results or our consolidated cash flow in a given period.

Regardless, we believe that we have been victims of the corruption system unveiled by Operation Car Wash, and we seek to demonstrate and prove that position, as already recognized by the Brazilian Judiciary.

## **INFORMATION ON PROVISION OF SERVICES OTHER THAN EXTERNAL AUDIT BY INDEPENDENT AUDITORS – CVM INSTRUCTION 381/2003**

Our corporate management instruments are based on our Code of Ethics and our Code of Best Practices and on the Corporate Governance Guidelines.

Article 30 of our Bylaws defines that independent auditors may not provide us consulting services during the term of the audit contract.

PricewaterhouseCoopers Independent Auditors provided specialized technical services in accounting audit for the financial periods from 2014 to 2016.

In 2016, PricewaterhouseCoopers (PWC) Independent Auditors provided the following services, including our subsidiaries and controlled companies:

Table 13: Services Provided by PWC

	<u>R\$ thousand</u>
Accounting Audit	48,739
SOX Audit	4,984
Additional audit-related services	8,253
Tax Audit	2,251
Total services	<u><u>64,227</u></u>

We hired KPMG Independent Auditors (KPMG) to provide independent auditing services for the years 2017 to 2019, with the possibility of renewal for a further two years.



# FINANCIAL ANALYSIS

Petrobras presents the financial analysis on its consolidated financial statements, except where otherwise stated.

## CONSOLIDATED RESULTS

### MAIN ITEMS AND INDICATORS OF FINANCIAL ANALYSIS

	R\$ million		
	2016	2015	2016 x 2015 (%)
Sales revenue	282,589	321,638	(12)
Gross profit	89,978	98,576	(9)
Operating profit (loss)	17,111	(12,391)	238
Net financial result	(27,185)	(28,041)	3
Loss - Petrobras Shareholders	(14,824)	(34,836)	57
Loss per share	(1.14)	(2.67)	58
Adjusted EBITDA	88,693	76,752	16
Free Cash Flow	41,572	15,889	162
Gross margin (%)	32	31	1
Operating margin (%)	6	(4)	10
Net margin (%)	(5)	(11)	6
<b>Average dollar ask price (R\$)</b>	3.48	3.34	4
<b>Final dollar ask price (R\$)</b>	3.26	3.90	(16)
<b>Variation - Final dollar ask price (R\$)</b>	(16.5)	47.0	(64)
<b>Basic derivatives price - Domestic market (R\$/bbl)</b>	227.47	228.18	-
<b>Brent (R\$/bbl)</b>	150.89	172.66	(13)
<b>Brent (US\$/bbl)</b>	43.69	52.46	(17)
<b>Sale price - Brazil</b>			
Crude (US\$/bbl)	39.36	42.16	(7)
Natural gas (US\$/bbl)	31.29	36.24	(14)
<b>Sale price - International</b>			
Crude (US\$/bbl)	43.52	55.99	(22)
Natural gas (US\$/bbl)	21.40	22.62	(5)

## Gross Profit

Gross profit decreased 9% from 2015, reaching R\$ 89.978 million due to the 8% drop in sales of derivatives in the domestic market, mainly diesel and fuel oil, and the lesser electric power generation. The smaller volume of natural gas sold in the domestic market, the drop in oil and derivate export prices, and increased depreciation due to reduction in reserve estimates also contributed to this result. On the other hand, there were larger margins in diesel and gasoline, and lower expenditures with imports and government stake in Brazil.

## Operating Profit

Operating profit reached R\$ 17.111 million, reversing the losses recorded in 2015. This result reflects the recognition of impairment 57% lower in comparison to 2015. Also contributing to the operating result were: the review of abandonment of oil and gas areas, which occurred on 3Q 2016, the gains recorded with asset sales, and lower expenses for return of fields. However, the result was affected by the higher expenditures of the new PIDV, the reclassification of losses with foreign exchange depreciation (accumulated conversion adjustments - CTA, as a result of the sale of PESA) and by higher expenditures on drilling rig idleness.

## Financial Result

The R\$ 27.185 million net financial expense was R\$ 856 million lower due to lesser negative impact of monetary and foreign exchange variations. Meanwhile, expenses with interests have increased, due to the depreciation of the average rate of the real against the dollar.

## Net Result

The company recorded a R\$ 14.824 million loss in 2016, mostly due to the impairment of assets and investments in subsidiaries, to the amount of R\$ 20.891 million.

## Adjusted EBITDA

Adjusted EBITDA increased by 16% from 2015, amounting to R\$ 88.693 million, due to higher diesel and gasoline margins and lower expenditures on imports and government stakes. Adjusted EBITDA margin was 31% in 2016.

## Free Cash Flow\*

The greater operating generation and the reduction of investments resulted in positive free cash flow of R\$ 41.572 million, 2.6 times higher than recorded in 2015. The higher free cash flow and the divestments carried out, with cash inflow of R\$ 7.231 million, contributed to our deleveraging.

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\* **Free cash flow** – Resources generated by operating activities minus investments in business areas. Free cash flow measurement is not provided for in international accounting standards, and it should not be considered in isolation or as a substitute to cash and cash equivalents calculated under IFRS. In addition, it should not be a basis for comparison with other companies, however Management believes it is an additional information that helps investors evaluate the liquidity and assists in leverage management.

## RECONCILIATION OF ADJUSTED EBITDA

	R\$ million		
	2016	2015	2016 X 2015 (%)
Loss in the period	(13,045)	(35,171)	63
Net Financial Result	27,185	28,041	(3)
Income tax and social contribution	2,342	(6,058)	139
Depreciation, depletion and amortization	48,543	38,574	26
EBITDA	65,025	25,386	156
Result of participations in investments	629	797	(21)
<i>Impairment.</i>	20,297	47,676	(57)
Accumulated conversion adjustments - CTA	3,693	-	-
Result with asset sales/write-offs	(951)	2,893	(133)
Adjusted EBITDA	88,693	76,752	16

EBITDA is an indicator calculated as net profit for the period plus the taxes on profit, net financial income, depreciation and amortization. Petrobras discloses EBITDA, as provides for in CVM Instruction no. 527, as of October 4, 2012, adjusted for items such as: result from participation in investments and impairment of assets.

Starting 2016, the company revised the presentation of adjusted EBITDA to better reflect the Management vision on the composition of the result for current company activities, additionally considering as adjustments the effects of accumulated foreign exchange conversion adjustments (CTA), which are reclassified to the result, plus the result of asset sale and write-off. Values from previous periods are re-presented for comparison purposes.

Adjusted EBITDA is not provided for in the international accounting standards - IFRS. In addition, adjusted EBITDA should not be a basis for comparison with disclosures by other companies and should not be considered as a substitute for any other measurement calculated in accordance with IFRS. Management presents adjusted EBITDA as a additional information on profitability, and it should be considered together with other performance measurements and indicators for a better understanding of the company's performance.

## SALES VOLUME

SALES VOLUME - thousand barrels/day

	2016	2015	2016 x 2015 (%)
Diesel	780	923	(15)
Gasoline	545	553	(1)
Fuel oil	67	104	(36)
Naphtha	151	133	14
LPG - Liquefied Petroleum Gas	234	232	1
QAV - Aviation Kerosene	101	110	(8)
Other	186	179	4
<b>Total derivatives</b>	<b>2,064</b>	<b>2,234</b>	<b>(8)</b>
Alcohols, renewable nitrogenous and other	112	123	(9)
Natural gas	333	432	(23)
<b>Total domestic market</b>	<b>2,509</b>	<b>2,789</b>	<b>(10)</b>
Export	554	510	9
International sales	418	546	(23)
<b>Total foreign market</b>	<b>972</b>	<b>1,056</b>	<b>(8)</b>
<b>Total overall</b>	<b>3,481</b>	<b>3,845</b>	<b>(9)</b>

The volume of domestic sales was 10% lower, with highlights for the following products:

- Diesel: i) lesser consumption, reflecting the downturn in economic activity in the period; II) increased sales by importers; and iii) lower sales for thermal power generation.
- Fuel oil: i) lower sales to thermal plants due to lower economic activity, which affected the demand for energy, greater supply of energy through wind power, and improvement of reservoirs in the country; and ii) strong reduction in industrial production.
- Naphtha: the greater sales volume stems from the execution in December 2015 of a new, long-term contract to supply Braskem, which maintained the supply volume under the prior agreement, which was terminated in 2014. In 2015, there was a reduction in the amount hired, with consequent increase in imports carried out directly by Braskem.
- Natural Gas: reduction in demand from the thermal power sector.

Exports were 9% higher due to the growth in domestic production of oil and retraction of demand in the domestic market.

International sales were 23% lower due to the sale of PESA assets in Argentina.

## RESULT BY BUSINESS AREA

Petrobras is a company that operates in an integrated manner, with most of the oil and natural gas production transferred from Exploration and Production area to other business areas in the company. In the calculation of results by business area, third-party transactions with and between companies in the Petrobras System are considered, in addition to transfers between business areas valued by internal prices set by methodologies based on market parameters.

On April 28, 2016, the Extraordinary General Meeting of shareholders approved the statutory adjustments according to the new organizational structure of the company and its new management and governance model, aiming to align the organization to the new realities of the oil and gas sector and to prioritize profitability and capital discipline. On December 31, 2016, the presentation of segmented information reflected our senior management's evaluation structure in relation to performance and resource allocation of the businesses.

	R\$ million		
	2016	2015	2016 x 2015 (%)
<b>GROSS PROFIT</b>			
E&P	29,847	34,190	(13)
Downstream	49,495	46,017	8
Gas & Energy	8,980	8,695	3
Distribution	7,538	8,407	(10)
Biofuel	(80)	(77)	4
<b>OPERATING PROFIT</b>			
E&P	6,761	(17,938)	138
Downstream	31,119	25,438	22
Gas & Energy	4,086	817	400
Distribution	292	(1,249)	123
Biofuel	(292)	(423)	(31)

## Exploration and Production

The lower gross profit was due to increased depreciation, resulting from the reduction of reserves in 2015, which is more relevant in the composition of segment costs than lifting cost reductions and government stakes.

Gross profit reduction abroad stems mainly from the sale of PESA, in Argentina, in July 2016.

Operating profit reversed the loss recorded in 2015 due to expenditure reduction with impairment.

Internationally, there was a reduction of operating loss due to lower impairment expenditures and exploration expenses in the United States.

## Downstream

The increase in gross profit is due to the following factors: (i) lower cost with acquisition/transfer of oil, as a result of the reduction in Brent price; (ii) increased proportion of domestic oil in processed load; and (iii) lower participation of imported derivatives in the mix of sales, mainly diesel. On the other hand, there was a reduction in the price of the exported oil basket and in domestic market sales, as well as increasing diesel and petrol offer by third parties.

The increase in operating profit is due to the higher gross profit associated with lower operating expenses, primarily related to tax, due to adherence to REFIS, and legal contingencies, both occurring in 2015. These factors were partially offset by greater spending on impairment.

## Gas and Energy

The higher gross profit resulted from lower costs of acquisition, mainly due to the smaller imported volumes of natural gas and LNG. On the other hand, there was a reduction in natural gas sales and lower revenue from power generation, due to the improvement of the country's hydrological context.

The increase in the operating profit resulted from lower expenses with tax and impairment, and income from contractual fines applied, despite the higher provision for losses on receivables in the electricity sector in 2016.

## Distribution

The decrease in gross profit reflected the lower sales volume, mainly due to the lower level of economic activity in Brazil.

Operating profit, in contrast to the loss in the previous year, reflected a reduction in the provision for losses on receivables in the electricity sector, despite the lower gross profit and the provision for expenses with the new PIDV of Petrobras Distribuidora.

## IMPAIRMENT

The company recognized R\$ 20.297 million losses on recoverability of assets in the 2016 period, mainly in:

- Oil and gas production fields in Brazil (R\$ 7,381 million), predominantly related to the fields of Polo Norte, Polo Ceará Mar, Guaricema, Bijupirá and Salema, Dourado, Maromba, Trilha, Papa-Terra, Pampo, Frade, Polo Uruguá, Badejo, Bicudo, Riachuelo, Fazenda Bálamo, and Polo Água Grande, due to the appreciation of the real against the U.S. dollar, review of price assumptions, annual review of provision for dismantling areas, as well as the increase in the discount rate due mainly to the larger risk premium for Brazil. Additionally, there is a reversal of the provision for Plo Centro Sul, due to the redesign of field operations, provided for in the Business and Management Plan PNG 2017-2021;
- Suape Petrochemical Complex (R\$ 3,445 million), of which: i) R\$ 2.011 million in September 2016, due to the reduction of market projections and appreciation of the real against the U.S. dollar; and ii) R\$ 1.434 million in December 2016, caused by the difference between the value of the sale and the book value of investments adjusted for the value of financial debt to be settled;
- Equipment related to the oil and gas production and drilling activity in Brazil (R\$ 2.772 million), mainly due to uncertainties about the continuity of the construction of the hulls for FPSOs P-71, P-72 and P-73, in the amount of R\$ 1,925, referring to the balance of these assets;
- 2nd line of the Abreu e Lima refinery (R\$ 2,531 million), essentially by the increase of the discount rate and the postponement of the expected project cash inflow to 2023, considering completing the work with own resources, provided for in the Business and Management Plan PNG 2017-2021; and

- Comperj (R\$ 1,315 million), due to the re-evaluation of the project in the second quarter of 2016, which maintained its units postponed until December 2020 (Line 1), with efforts in search of partners to continue investments. The Line 1 refinery utilities which also service the Natural Gas Processing Unit (UPGN) remain in progress, as part of the necessary infrastructure for the discharge and processing of natural gas from the Santos Basin pre-salt layer area.

## LIQUIDITY AND CAPITAL RESOURCES

	R\$ million	
	2016	2015
<b>Adjusted availabilities* at the beginning of the period</b>	<b>100,887</b>	<b>68,946</b>
Federal public securities and time deposits over 3 months from period start	(3,042)	(24,707)
<b>Cash and cash equivalents at beginning of period</b>	<b>97,845</b>	<b>44,239</b>
Resources generated by operating activities	89,709	86,670
Resources used in investment activities	(40,064)	(44,152)
Investments in business área	(48,137)	(70,781)
Receivables from the sale of assets (divestments)	7,231	658
Investments in bonds and securities	842	25,971
<b>(=) Net cash flow</b>	<b>49,645</b>	<b>42,518</b>
Net financing	(66,609)	(14,434)
Capital Raising	64,786	56,158
Amortization of principal and interest	(131,395)	(70,592)
Dividends paid to shareholders	(239)	(263)
Minority interest	122	243
Receivables from the sale of stakes, without loss of control	-	1,934
Effect of foreign exchange on cash and cash equivalents	(11,656)	23,608
<b>Cash and cash equivalents at end of period</b>	<b>69,108</b>	<b>97,845</b>
Federal public securities and time deposits over 3 months at period end	2,556	3,042
<b>Adjusted availabilities* at the end of the period</b>	<b>71,664</b>	<b>100,887</b>
<b>Reconciliation of free cash flow</b>		
Resources generated by operating activities	89,709	86,670
Investments in business área	(48,137)	(70,781)
<b>Free Cash Flow</b>	<b>41,572</b>	<b>15,889</b>

\* Sum of availabilities and investments in government bonds and financial investments abroad in time deposits from frontline financial institutions with maturities greater than three months from the date of investment, considering the expected realization of these investments in the short term. Adjusted availabilities measurement is not provided for in international accounting standards, and it should not be considered in isolation or as a substitute to cash and cash equivalents calculated under IFRS. In addition, it should not be a basis for comparison with other companies, however Management believes it is an additional information that helps investors evaluate the liquidity and assists in leverage management.

As of December 31, 2016, cash and cash equivalent balance amounted to R\$ 69,108 million, and adjusted availabilities totaled R\$ 71,664 million. The main applications of funds in 2016 were aimed at meeting debt service in the period and financing of investments in the business areas. These funds were partially provided by an operating cash generation of R\$ 89,709 million and R\$ 64,786 million in fundraising. The balance of adjusted availability was negatively impacted in 2016 by the effect of foreign exchange variation on investments abroad.

The operating cash generation of R\$ 89,709 million was primarily driven by higher margins for diesel and gasoline, reduction in government stake in Brazil, and imports of oil, derivatives, and natural gas, as well as greater participation of domestic oil in processed load. These effects were partially offset by lower prices for oil and derivatives exports, as well as by the decrease in sales volume in Brazil due to the downturn in economic activity.

Investments in the company's business amounted to R\$ 48,137 million in 2016, a 32% decline over the same period last year, whereas 85% of investments were in exploration and production. This reduction does not impact the prospects of oil and natural gas production.

Free cash flow was positive by R\$ 41,572 million in 2016, 2.6 times higher than the same period last year.

In 2016, the company raised R\$ 64,786 million, using the traditional sources of funding (Export Credit Agencies - ECAs, banking market, capital market and development banks) to obtain the resources necessary to rollover debt and finance investments. Highlight to the offer of securities in the international capital market (Global Notes), to an amount of US\$ 9.75 billion and 5 and 10 year maturities, to repurchase securities (tender offer) amounting to US\$ 9.3 billion. In addition, the company prepaid debt transactions with BNDES that totaled US\$ 6.75 billion.

Additionally, a sale and leaseback transaction was carried out with the Industrial and Commercial Bank of China (ICBC) in the amount of US\$ 1 billion, and financing with the China Development Bank (CDB) in the amount of US\$ 5 billion was effected.

Amortization of principal and interest totaled R\$ 131,395 million in 2016, and nominal flow (cash view) of principal and interest of financing by maturity is presented below:

Date	R\$ million							12/31/201	12/31/201
	2017	2018	2019	2020	2021	2022 onward	6	5	
Principal	28,711	36,929	68,765	53,735	61,606	140,481	390,227	497,289	
Interest	23,353	21,749	19,123	14,739	10,456	100,932	190,352	230,531	
<b>Total</b>	<b>52,064</b>	<b>58,678</b>	<b>87,888</b>	<b>68,474</b>	<b>72,062</b>	<b>241,413</b>	<b>580,579</b>	<b>727,820</b>	



## INDEBTEDNESS

Consolidated indebtedness, referring to loans and financing in the country and abroad, is R\$ 385,784 million, as demonstrated below:

### CONSOLIDATED DEBT

	R\$ million		
	12/31/2016	12/31/2015	Δ%
Short-Term Indebtedness	31,855	57,407	(45)
Long-Term Indebtedness	353,929	435,616	(19)
<b>Total</b>	<b>385,784</b>	<b>493,023</b>	<b>(22)</b>
Available Funds	69,108	97,845	(29)
Federal government bonds and Time Deposits (maturity higher than 3 months).	2,556	3,042	(16)
<b>Adjusted availabilities</b>	<b>71,664</b>	<b>100,887</b>	<b>(29)</b>
Net Indebtedness*	314,120	392,136	(20)
Net debt/(net debt+equity)	55%	60%	(5)
Total net liability**	733,281	799,248	(8)
Capital structure (net third-party capital / net total liability)	66%	68%	(2)
Net Debt/adjusted EBITDA Index	3.54	5.11	(31)

\* Gross indebtedness minus adjusted availability. This metric is not provided for in international accounting standards - IFRS and should not be considered in isolation or as a substitute to total long-term indebtedness, calculated in accordance with IFRS. Net indebtedness calculation should not be a basis for comparison with other companies, however Management believes it is an additional information that helps investors evaluate the liquidity and assists in leverage management.

\*\* Total liability minus adjusted availabilities.

	US\$ million		
	12/31/2016	12/31/2015	Δ%
Short-Term Indebtedness	9,773	14,702	(34)
Long-Term Indebtedness	108,597	111,560	(3)
<b>Total</b>	<b>118,370</b>	<b>126,262</b>	<b>(6)</b>
Net Indebtedness	96,381	100,425	(4)
Average debt maturity (years)	7.46	7.14	0.32

Compared to December 31, 2015, the gross debt of the Petrobras System retreated 22% and net debt dropped by 20%, mainly due to the appreciation of the real by 16.5% and the amortization of debt using proceeds from divestments.

Short and long-term debt includes Commercial and Financial Leases in the amount of R\$ 59 million and R\$ 736 million as of December 31, 2016, respectively (R\$ 73 million and R\$ 303 million as of December 31, 2015).

As of December 31, 2016, the average maturity of debt stood at 7.46 years (7.14 years as of December 31, 2015).

The net debt to adjusted EBITDA ratio decreased from 5.11 as of December 31, 2015, to 3.54 as of December 31, 2016, due to the reduction of debt and the increase in Adjusted EBITDA.

## ASSETS AND LIABILITIES SUBJECT TO FOREX VARIATION

The company has assets and liabilities subject to foreign exchange variations, for which the main gross exposures refer to the real against the US dollar and the US dollar against the Euro.

The company adopts hedge accounting since 2006. Starting May 2013, the company extended hedge accounting to protect highly likely future exports.

As of December 31, 2016, obligations amounting to US\$ 61,763 million (R\$ 201,292 million) were designated as hedging instruments, as follows:

#### MOVEMENT IN REFERENCE VALUE (PRINCIPAL AND INTEREST)

	US\$ million	R\$ million
Designation as of December 31, 2015	61,520	240,222
New designations, cancellations and re-designations	23,275	79,211
Realization by exports	(2,621)	(9,074)
Amortization of debt	(20,411)	(68,740)
Foreign Exchange Variation	-	(40,327)
<b>Amount as of 31 December 2016</b>	<b>61,763</b>	<b>201,292</b>

The balances of assets and liabilities in foreign currency of subsidiaries abroad are not included in the exposition below, when they are realized in currencies equivalent to their respective functional currencies.

As of December 31, 2016, the net foreign exchange exposure of the company is passive, as shown in the table below:

#### ITEMS

	R\$ million	
	12/31/2016	12/31/2015
Asset	44,303	67,040
Liability	(271,531)	(350,695)
Hedge Accounting	201,292	240,222
<b>Total</b>	<b>(25,936)</b>	<b>(43,433)</b>

## CONTINGENCIES

Petrobras sets up provisions in a sufficient amount to cover likely losses and for which a reliable estimate can be made, which resulted in the recognition of R\$ 4,817 million expense in 2016 (R\$ 5,583 million in 2015).

#### PROVISIONED LEGAL PROCEEDINGS

	12/31/2016	12/31/2015
Labor proceedings	3,995	3,323
Tax proceedings	4,981	3,087
Civil proceedings	1,873	2,069
Environmental proceedings and other	203	297
<b>Total</b>	<b>11,052</b>	<b>8,776</b>

The main actions with likely expectation of loss recognized in 2016 were:

- individual lawsuits by subcontractors;
- use of ICMS credits on platform imports;
- claims for breach of contract related to platform construction; and
- indemnity resulting from land expropriation lawsuits for the establishment of easement.

## CONTRACTUAL OBLIGATIONS

The following table summarizes our obligations and commitments as of 12/31/2016:

### CONTRACTUAL OBLIGATIONS

	R\$ million			
	Payments Due by Period			
	Total	2017	2018-2021	2022 onward
<b>Balance Sheet Items: *</b>				
Debt liabilities**	384,989	31,796	219,032	134,161
With transfer of benefits, risks and control of assets	795	59	272	464
Provision for Decommissioning	33,412	1,317	6,732	25,363
Total balance sheet items	<u>419,196</u>	<u>33,172</u>	<u>226,036</u>	<u>159,988</u>
<b>Other contractual commitments</b>				
Natural gas ship or pay ***	54,145	11,496	42,649	-
Contracted services	203,745	62,220	75,799	65,726
NG purchase commitment ***	25,064	3,634	21,430	-
With transfer of benefits, risks and control of assets	315,865	37,136	101,922	176,807
Purchase commitments	43,989	33,611	7,821	2,557
Total other commitments	<u>642,808</u>	<u>148,097</u>	<u>249,621</u>	<u>245,090</u>
<b>Total</b>	<u>1,062,004</u>	<u>181,269</u>	<u>475,657</u>	<u>405,078</u>

\* Except the amount of R\$ 123,329 million related to our obligations for pensions and medical benefits, which are partially funded by R\$ 50,661 million in plan assets. Information on post-retirement benefit plans of employees, including an expected maturity calendar of pension liabilities and health benefits, can be found in explanatory note 22 to our audited consolidated financial statements.

\*\* Includes accrued interest, short-term debt and long-term debt (current and non-current portion). Information on our future payments of principal and interest (undiscounted) for the coming years can be found in explanatory note 33.6 to our audited consolidated financial statements.

\*\*\* The current import contract is set to expire initially on December 31, 2019 and is automatically extended until the entire maximum volume contracted is removed by Petrobras, which indicates its duration at least through December 2021. Petrobras and YPF may renegotiate conditions for removal of the balance contracted volume not consumed. Such conditions can enter in force from 2022 onward.

# ACKNOWLEDGMENTS

We thank our employees for their dedication and commitment, which has enabled the recovery of the company, and our shareholders, the market and society, for the confidence in the company's recovery process, pride of all Brazilians.

## GLOSSARY:

Terms not listed in this glossary are defined in the text.

**A-3 Energy Auction:** bidding process for the procurement of electricity from new generation projects, carried out three years in advance of the start of supply.

**Agenda 21:** consists of methodologies for participatory diagnostics resulting of Rio 92 - United Nations Conference on the Environment and Development. It analyzes the current situation of a country, state, city and/or region and plan actions for its sustainable development.

**Alert Threshold:** maximum permissible parameter of a given indicator in a set period, used for the application of corrective actions and process improvements.

**Boed:** Barrels of oil equivalent per day.

**Brent:** Oil used as one of the main references in the international oil market. Dated contracts for Brent or its derivatives in the financial market reference several contracts of purchase and sale of oil in the world.

**Carbon Disclosure Project (CDP):** independent non-profit international organization. Every year, it formulates a collective questionnaire (formulated by institutional investors) and addresses them to companies listed on major stock exchanges in the world. Its main objectives are the disclosure of information and the performance review referring to the management of greenhouse gas emissions - GHG, the use of energy and the risks and opportunities arising from climate change.

**Cernambi Pipeline –Cabiúnas Terminal (Tecab) :** the pipeline project represents section 2 and 3 of the Route 2 Gas Pipeline, and belongs to the Cabiúnas 1 Consortium (Petrobras-55%; BG-25%, Petrogal-10% and Repsol 10%), which connects the Santos Basin Pre-Salt Area (PPSBS) to UTG Cabiúnas, approximately 382 km in length and flow capacity of 16 million m<sup>3</sup>/day of natural gas. Its strategic goal is the discharge of gas to this unit, enabling the production of oil in pre-salt fields. It is in operation since 02/20/2016.

**Class action:** It is a kind of collective action set forth in US law that allows a class composed of individuals who have suffered the same damage, or harmed by the same fact and, therefore, with a common interest, claim compensation together for damages suffered.

**Clear derivatives:** liquid, slightly viscous oil derivatives, such as gasoline, kerosene and diesel.

**Climate Convention (COP):** it is an international environmental treaty aimed at stabilizing greenhouse gas concentrations in the atmosphere resulting from human actions, in order to prevent them from interfering in a harmful and permanent manner, in the planet's climate system.

**CNCL:** Transpetro's National Center for Logistics Control, a structure that uses the latest technology to monitor and operate remotely and centrally, the pipeline transportation of the company.

**CO:** carbon monoxide.

**Combined Cycle:** gas and steam turbines associated in a single plant, both generating electrical power by burning the same fuel. For such, the existing heat in the exhaust gases from gas turbines is recovered to produce the steam necessary to drive the turbine.

**Completion:** oil exploration phase in which occurs the installation in the well of the equipment necessary to controllably bring to the surface the desired fluid, and allow the installation of monitoring equipment in the well.

**Conama Resolution 436:** defines the maximum emission levels of atmospheric pollutants from stationary sources installed or with installation license application prior to January 2, 2007.

**Concession model:** regime of exploration and production of oil and natural gas in which a company or a consortium of companies performs these activities in an area granted by the government. In Brazil, if oil or gas is found, the companies securitize the volumes produced and, in return, pay government stake - royalties and special stake (the latter when applicable to the field in production). In Brazil, concessions are granted through bidding of areas for oil exploration and production, promoted by the National Agency of Petroleum, Natural Gas and Biofuels (ANP), which also performs the technical regulation of exploration and production activities. The concession model is applied in all Brazilian sedimentary basins, except for the areas defined in the pre-salt polygon. It should be noted that the concession model is adopted in cases where the areas were tendered prior to the effectiveness of the production sharing scheme that defined the pre-salt polygon.

**Condensate:** hydrocarbon mixture in a gaseous state in the reservoir which, on the surface, becomes liquid under normal atmospheric conditions.

**Dark derivatives:** high viscosity oil derivatives, such as fuel oil and asphalt.

**Diesel S-10:** product with a maximum of 10mg/kg total sulfur intended for vehicles approved under the criteria of Proconve P7 stage, equivalent to Euro 5 standard (with high quality and very low sulfur content).

**Discovery Assessment Plan (PAD):** document containing the set of operations to be carried out in an area where there was a discovery, to assess its economic viability. A PAD must be submitted by the concessionaire to the approval of the Regulatory Agency of the Oil and Gas Industry.

**Euro V:** type of diesel with high quality and very low sulfur content.

**FFR:** Federal Funds Rate, the base rate of US interest.

**Foreign Corrupt Practices Act (FCPA) of 1977:** US federal law to fight corruption, to which we are subject due to the fact that we have ADRs (American Depositary Receipts) traded on the New York Stock Exchange.

**FPSO:** vessel with capacity to produce, store and discharge oil and/or natural gas to shuttle tankers.

**Gasduc II:** Cabiúnas-Reduc Gas Pipeline, responsible for carrying rich gas to be processed at Reduc.

**Gasoline C5 +:** extracted from natural gas, it can be mixed with gasoline for specification, reprocessed, or added to the oil stream.

**Green diesel:** diesel produced from renewable raw materials that can be mixed in any proportion with oil derivatives, without requiring changes in engines.

**HSE Conduct Treatment System:** system to assist managers in making decisions regarding expected HSE behaviors, with valuation of positive practices and/or attitudes, and HSE behaviors that are not expected, differentiating error from violation, enabling the application of employee recognition program and the Petrobras disciplinary system.

**Impairment:** loss in the recovery value of assets.

**Intelligent completion:** set of operations to coat and equip the well for production or injection of water or gas, using different well monitoring sensors and valves with remote operations to control the produced or injected flow.

**Law 12,846/2013:** governs the administrative and civil liability of legal persons for the practice of acts against national or foreign public administration.

**Medium distillates:** oil-based products such as diesel, kerosene, naphtha and jet fuel.

**NOx:** nitrogen oxides.

**Occupational exams:** examinations made periodically for monitoring, prevention and promotion of workers' health. They include medical, dental and nutritional assessment, with custom approach of clinical and occupational history.

**Ocvap II:** oil pipeline about 70 km long and capable of carrying 50 thousand m<sup>3</sup>/month of C5+ gasoline. It is part of the network of pipelines linking the Gas Treatment Unit Monteiro Lobato (UTGCA) in Caraguatatuba, and Revap.

**Opasc:** Paraná-Santa Catarina oil pipeline, with a length of 266 km, responsible for transporting derivatives of the Presidente Getúlio Vargas Refinery, Repar, in Paraná, to Santa Catarina state.

**Orsol I and II:** these oil pipelines are 281 km long and 280 long, respectively, interconnecting the Arara Area in Manaus to the Coari Waterway Terminal, and transport oil and liquefied petroleum gas (LPG).

**Osbra:** Sao Paulo-Brasília oil pipeline, 964 km long, responsible for transporting derivatives from the Paulinia Refinery (Replan) in São Paulo, to the Midwest region.

**PLD:** settlement price of differences used to appraise the energy sold in the short term, i.e., the spot market price.

**Proconve P7:** Proconve P7 phase, equivalent to the Euro 5 standard, stage that features requirements to ensure the reduction of pollutant emissions in vehicles equipped with diesel engines.

**Proconve:** Motor Vehicle Air Pollution Control Program, established by the National Council for the Environment (Conama).

**Production sharing model:** regime of exploration and production of oil and natural gas in which a company performs these activities through a production sharing contract between a state-owned company, which represents government interests, and a company or consortium of companies (contractors) for the exploration and production of oil by compensating the parties upon sharing the production of an oil field. Companies or consortia responsible for production must pay *royalties* to the government. In Brazil, Pre-Salt S.A. (PPSA) inspects the costs and has specific powers in consortia formed to carry out the activities under sharing. The current production sharing model is adopted only for areas of the pre-salt polygon, without the effect of amending concession contracts for the areas already under contracts executed prior to Law 12,351/2010. With the advent of the recent Law 13,365, dated of November 29, 2016, Petrobras no longer has the obligation to be the operator and hold 30% stake in the blocks to be granted under this regime, providing the company, however, with the option to express preference in being hired by the government.

**Public Ethics Commission (CEP):** the Public Ethics Commission, under the Office of the President of the Republic, was created by decree on May 26, 1999 tasked with acting as advisory body to the President of the Republic and Ministers on matters of public ethics; manage the implementation of the Code of Conduct of the Federal High Administration, submitting to the President of the Republic measures to improve the document; resolve questions regarding the interpretation of its norms, deciding on omissions; investigate upon complaints or ex officio, conducts in breach of the rules therein defined when practiced by authorities subject to it; resolve questions of interpretation on the rules of the Code of Professional Ethics for Public Civil Servants of the Federal Executive Branch as addressed by Decree no. 1,171/1994; coordinate, evaluate and supervise the Federal Executive Branch's Public Ethics Management System; approve its internal rules and select its chair.

**Ramp up:** stage of gradual increase in oil and gas production from a platform until the system reaches productive potential. This stage usually begins after the first well connection to the system.

**Refining line:** set of processing units that mainly involves the separation of oil into derivatives, the conversion of oil's heavier parts of lower value into smaller molecules, originating nobler derivatives, and treatment to adjust derivatives to market-required quality.



**Reserve replacement ratio:** measures the replacement of production by adding reserves, extensions, revisions of estimates or recovery enhancements.

**Reserve/production ratio:** measures the longevity of current proven reserves considering the constant level of production.

**Revap:** Henrique Lage Refinery, located in the Presidente Dutra highway in São José dos Campos, in Vale do Paraíba. It began operations in March 1980. Currently, it is responsible mainly for supplying the São Paulo market and the Midwest of the country.

**Ring fence:** exploration area contiguous to a field where there has been previous findings.

**Route 2 Gas Pipeline Project:** project conducted by partnerships ("Joint Operating Agreement" - JOA), consists of three sections: (i) Section 1 - offshore (Lula-NE to Cernambi): 18" Gas Pipeline/approx. 19 km. BM-S-11 Consortium: Petrobras-65%; BG-25% and Petrogal-10%; (ii) Section 2 - offshore (Cernambi to Praia do Lagomar - Macaé): 24" Gas Pipeline/approx. 377.5 km. Cabiúnas 1 Consortium; and (iii) Section 3 - onshore (Praia do Lagomar to Tecab): 24" Gas Pipeline/approx. 4.5 km. Cabiúnas 1 Consortium. "represents gas pipeline sections 2 and 3.

**Second generation ethanol (2G):** ethanol from agricultural residues obtained by fermentation of the sugars contained in its cellulosic structure (e.g., sugarcane bagasse and straw). The final product is chemically identical to conventional (corn) or advanced (sugarcane) ethanol. The differential of this technology is to increase ethanol production in the same planted area, contributing to more efficient land use and higher reduction in CO<sub>2</sub> emissions compared to fossil fuels.

**Selo Combustível Social [Social Fuel Seal]** awarded by the Ministry of Agrarian Development to biodiesel producers that use raw material from family farming, a condition for participation in auctions held exclusively for producers with such stamp, sales that account for 80% of the total volume of biodiesel purchased by distributors.

**Simple cycle:** turbine operating alone.

**Snox:** catalytic process for the reduction of emissions from gas streams, removing solid, liquid and gaseous contaminants and generating commercial sulfuric acid.

**SOx:** sulfur oxides.

**Suezmax:** oil tanker class with dimensions that allow its passage through the Suez Canal.

**TAR:** Recordable Injury Rate or number of recordable injury with or without lost time, and with casualty, for every million man hours of exposure to risk in the period considered.

**Transfer of Rights Contract:** regime for the exploration and production of oil and natural gas specific to certain fields located in the pre-salt polygon. Petrobras was directly hired by the Federal Government to find and produce reserves with a maximum production limitation of up to five billion barrels of oil and natural gas.

**UK Bribery Act of 2010** : Anti-corruption law of the United Kingdom that allows British courts to judge crimes related to fraud and corruption committed by companies incorporated in the United Kingdom or which carry out operations on its territory.

**Vetting Inspections:** inspections responsible for ensuring that the vessel is able to operate in safe conditions in any port, whether domestic or foreign, ensuring the preservation of the environment and the operators involved.

**WTI (West Texas Intermediate):** Designates the stream that gathers conventional offshore production of light, low-sulfur oils from the PADD3 region in the United States. WTI is one of the main references for oil purchase and sale contracts in the Atlantic Basin and is treated as a global benchmark in the oil market.

**Zero Based Budgeting (ZBB):** strategic tool used by organizations in the preparation or review of the budget for a given period considering a zeroed basis, disregarding revenues, costs, expenses and prior year investments (so-called historical basis).

**21st Climate Convention (COP 21):** The 21st Conference of Parties (COP-21) to the United Nations Framework Convention on Climate Change established the new international climate agreement - The Paris Agreement - which applies to all signatories to the Climate Convention, in order to keep global warming below 2°C in relation to pre-industrial levels by the end of the century .

# ***FINANCIAL STATEMENTS***

*December 31, 2016 and 2015 with  
auditor's report*

*(A free translation of the original in  
Portuguese)*

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(A free translation of the original in Portuguese)

## Independent auditor's report on the financial statements

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To the Board of Directors and Stockholders  
Petróleo Brasileiro S.A. - Petrobras

### Opinion

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We have audited the accompanying parent company financial statements of Petróleo Brasileiro S.A. - Petrobras (the "Company"), which comprise the balance sheet as at December 31, 2016 and the statements of income, comprehensive income, changes in equity and cash flows for the year then ended, as well as the accompanying consolidated financial statements of Petróleo Brasileiro S.A. - Petrobras and its subsidiaries ("Consolidated"), which comprise the consolidated balance sheet as at December 31, 2016 and the consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Petróleo Brasileiro S.A. - Petrobras and of Petróleo Brasileiro S.A. - Petrobras and its subsidiaries as at December 31, 2016, and the financial performance and cash flows for the year then ended, as well as the consolidated financial performance and the cash flows for the year then ended, in accordance with accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

### Basis for opinion

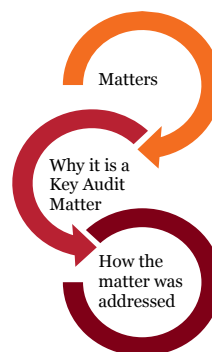
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We conducted our audit in accordance with Brazilian and International Standards on Auditing. Our responsibilities under those standards are further described in the "Auditor's responsibilities for the audit of the financial statements" section of our report. We are independent of the Company and its subsidiaries in accordance with the ethical requirements established in the Code of Professional Ethics and Professional Standards issued by the Brazilian Federal Accounting Council, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Key Audit Matters

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Key Audit Matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.



**1 - "Car Wash Operation" and its effects on the Company (Note 3)**

In 2009, the Brazilian Federal Police initiated an investigation called "Car Wash Operation", aiming to investigate money laundering practices by criminal organizations in several Brazilian states. As from 2014, the Federal Public Prosecution Office focused some of its investigations on irregularities committed by Petrobras suppliers and discovered an extensive scheme of undue payments, involving several participants, including former employees of Petrobras. This scheme consisted of a group of companies that, between 2004 and April 2012, were organized in cartel to obtain contracts with Petrobras and impose additional expenditures linked to these contracts, using these amounts to make undue payments.

The amounts paid by the Company under the contracts with the suppliers involved in the scheme were included in the historical costs of the respective property, plant and equipment items. The Company's management understood that the undue payments represent additional expenditures and, consequently, recorded a write-off of R\$ 6,194 million (R\$ 4,788 million in the Parent Company) in prior years.

The "Car Wash Operation" and its effects on the Company were considered as one of the key audit matters due to: (i) the potential effects and inherent limitations that are particularly significant in cases like this; (ii) necessity of monitoring the information related to the investigations in progress conducted by the authorities to confirm the reasonableness of the effects already consigned in the financial statements; and (iii) the need to improve the governance structure and internal controls related to the processes for contracting suppliers of goods and services, which constituted a significant deficiency identified by the Company in its internal control environment in 2015.

According to the Management Report, that significant deficiency was considered as remedied for the year ended December 31, 2016.

Significant aspects of our audit response involved, among others, those described below.

We have enhanced our understanding of the governance structure and how the parties responsible for management perform the general oversight to identify and respond to risks related to the process of contracting suppliers of goods and services, considering the changes introduced by management in its processes and controls in order to address the identified fraud.

We also obtained an understanding of the new internal policies introduced and tested the significant internal controls implemented and transactions related to the process for contracting suppliers of goods and services and corresponding payments. Our objective was to identify and test the transactions selected and the corresponding payments made during the year and evaluate the compliance with the internal policies and applicable laws and regulations. In addition, we analyzed Petrobras Program for Prevention of Corruption ("PPPC"), tested the key controls related to the complaints channel established within the Ombudsman structure, evaluating the integrity of the information, handling of complaints and reporting of the results to the applicable governance bodies.

We followed up the Company's main investigative actions conducted by the Internal Assessment Commissions and independent law firms, which are led by a Special Committee composed of two independent members and the Governance, Risk and Compliance Officer. We discussed the investigations with the Audit Committee, the Board of Directors and the Company's legal advisors and evaluated whether the disclosures in the notes are consistent with the results of those investigations.

We consider that the disclosures in the explanatory notes are consistent with the information and representation obtained.

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**2 - Class action and related proceedings (Note 30.4)**

During 2015, a class action was filed against the Company before the Federal Court for the Southern District of New York, alleging that the Company, through material facts, communications and other information filed at the U.S. Securities and Exchange Commission (SEC), would allegedly have reported materially false information and made omissions capable of artificially raising the price of the Company's securities and misleading investors.

In June 2016, the Federal Court of Appeals accepted the Company's request to appeal against the decision on the "class" certification. As a result,

Significant aspects of our audit response involved the following main procedures:

- understanding of the procedural stage of the class action and individual actions;
- interviews with the Company's external legal advisors in order to understand the impossibility of producing a reliable estimate of the loss arising from the class action and individual actions not yet provided for;
- confirmation, in writing, of the Company's

the request was accepted by the Federal Court of Appeals and the proceeding is currently suspended up to the judgment of the appeal.

In addition to the class action, thirty actions (three of them suspended) were filed by individual investors before the same Federal Court for the Southern District of New York with similar claims as those filed in the class action. In addition, a similar action was filed by individual investors in the Eastern District of Pennsylvania.

In 2016, the Company reached agreements to close some of these individual actions. The Company is also negotiating agreements with other authors of individual actions and, based on the agreements already entered into and on the stage of the negotiations in progress with other authors of individual actions, the Company recognized a provision of R\$ 1,215 million in the result for 2016.

As described in Note 30.4, due to the uncertainties inherent to the proceeding, the Company's management is not capable of producing a reliable estimate of the potential loss arising from the class action and individual actions not yet provided for.

This matter has been considered one of the key audit matters due to the significant judgments and substantial uncertainties related to the class action and individual actions that affect the amount and timing estimated for a final decision for those actions.

external legal advisors on: (i) the procedural stage of the class action and individual actions; and (ii) impossibility of producing a reliable estimate of the potential loss and classification of probability of loss between probable, possible and remote;

- evaluation of the technical ability of the internal and external legal advisors used by the Company; and
- evaluation of the accounting policy adopted for the provision of individual actions and review of the assumptions on which the estimates of the provisioned amounts are based.

We consider that the criteria and assumptions adopted by the Management to determine the provision for the individual actions, as well as the disclosures in the notes in relation to the class action and individual actions are reasonable, in all material respects, within the context of the financial statements.

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### **3 - Impairment of property, plant and equipment (Notes 12 and 14)**

At December 31, 2016, the assets classified in the property, plant and equipment group amounted to R\$ 571,876 million.

Potential impairment losses on property, plant and equipment are determined based on estimates of the value in use of these assets.

The calculation of value in use requires the exercise of significant judgments on certain assumptions, such as: (i) estimation of the volume of oil and natural gas reserves; (ii) estimation of future oil and natural gas prices; (iii) average foreign exchange rate (Brazilian reais/U.S. dollars); and iv) definition of the discount rate.

In addition, the definition of Cash-Generating Units (CGUs) also requires significant judgments by management, as well as the establishment of controls to review changes in these CGUs. Changes in the aggregation or breakdown of assets that comprise the CGUs may result in reversals or additional impairment losses.

This matter was considered as one of the key audit matters due to: (i) the significance of the Company's property, plant and equipment; (ii) the significant judgments and estimates involved in the calculation of the value in use of the assets; and (iii) the deficiencies in the controls for the review of changes in certain CGUs that

Significant aspects of our audit response involved, among others, the understanding of the controls related to the processes of impairment and tests of the effectiveness of the controls considered key in these processes. Regarding the testing of detail in operations or transactions, our approach considered the following main procedures:

- (i) The evaluation of the definition of CGU by management, based on tests of changes of CGU, and review of the composition of CGU vis-à-vis the criteria established by Technical Pronouncement CPC 01 - Impairment of Assets.
- (ii) Support from our team of asset valuation experts in implementing the following key audit procedures:
  - comparison of key assumptions with the 2017-2021 Business and Management Plan and sensitivity analysis of these assumptions;
  - evaluation of the reasonableness of the key assumptions, including comparisons with benchmarks, understanding of the main variations of the period and retrospective review of the projections;
  - evaluation of the criteria used to determine the discount rate and inflation and foreign

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**Why it is a Key Audit Matter****How the matter was addressed in the audit**

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constituted a significant deficiency identified by the Company in its internal control environment in 2015.

According to the Management Report, that significant deficiency was considered as remedied for the year ended December 31, 2016.

exchange rate projections;

- review of the internal estimates of oil and gas reserves compared to estimates prepared by independent experts; and
- assessment of the technical ability of the experts responsible for the independent estimate of proven oil and natural gas reserves.

We consider that the criteria and assumptions adopted by the Management to determine the impairment losses, as well as the disclosures in the notes, are reasonable, in all material respects, within the context of the financial statements.

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**4 - Judicial Proceedings and Contingencies (Note 30)**

At December 31, 2016, the Company had provisions of R\$ 11,052 million in connection with judicial provisions whose loss expectation was classified as probable. Additionally, the Company is a party to litigations whose losses are classified as possible, in the amount of R\$ 216,003 million.

Provisions and contingent liabilities have inherent uncertainties regarding their term and settlement value. Also, the recognition and measurement of contingent provisions and liabilities require the Company to exercise significant judgments to estimate the amounts of the obligations and the likelihood of outflow of resources of the judicial and administrative proceedings to which the Company is a party. This evaluation is based on the opinions of internal and external legal advisors and on management's own judgments.

This matter was considered as one of the key audit matters due to (i) the significance of the amounts of the litigations provided for (contingent liabilities disclosed) in a Note; (ii) the significant judgments on different doctrinal and jurisprudential interpretations used to estimate the amounts and likelihood of outflow of resources arising from these proceedings; and (iii) deficiencies in the controls on completeness and the evaluation of the probability of loss of contingencies, which constituted a significant deficiency identified by the Company in its internal control environment in 2015.

According to the Management Report, that significant deficiency was maintained for the year ended December 31, 2016.

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Our audit approach considered the understanding of controls related to judicial proceedings and contingencies, and tests on the effectiveness of controls considered as key. Additionally, in our audit strategy, we involved our team of experts in the labor and tax areas, as appropriate, to read and discuss the judicial proceedings, including the classification of the prognosis of loss attributed by the Company's internal and external legal advisors.

Other significant aspects of our audit approach included evaluating the technical ability of the Company's legal counsel, testing the recalculation of the amount of exposure of judicial and administrative proceedings, testing for financial update in accordance with applicable legislation, obtaining confirmations from external legal advisors and testing of unrecognized contingent liabilities, based on searches on the websites of the relevant courts of law.

We consider that the criteria and assumptions adopted by the Management to determine the provision for lawsuits and contingencies, as well as the disclosures on contingent liabilities, are reasonable, in all material respects, within the context of the financial statements.



**5 - Benefits granted to employees (Note 22)**

At December 31, 2016, the amounts provided for in the balance sheet totaled R\$ 72,668 million.

The amount of the actuarial liability is determined through actuarial calculations prepared by an independent actuary hired by the Company's management, net of guaranteeing assets. The calculation is made based on actuarial assumptions and information recorded of participants of the pension plans and health care.

This matter was considered as one of the key audit matters due to (i) the significance of the balance provided for in the balance sheet referring to benefits granted to employees; (ii) significant judgments regarding the assumptions of the benefit plans; and (iii) the deficiencies in controls over the data generation process to calculate the actuarial liability, which constituted a significant deficiency identified by the Company in its internal control environment in 2015.

According to the Management Report, the internal control deficiencies over the data generation process and assumptions for the calculation of the actuarial liability and valuation of certain guaranteeing assets constituted a significant deficiency for the year ended December 31, 2016.

Our audit approach considered the understanding of key controls related to the process of measuring the actuarial liability and tests on the effectiveness of controls considered as key. In addition, our audit response considered testing of details on the individual information recorded in the databases used to calculate the actuarial liability. The audit evidence deemed necessary was obtained by testing the databases of active and assisted participants in pension and medical care plans.

Other significant aspects of our audit approach included evaluating key assumptions that support the calculation of actuarial liabilities, such as salary growth projections, mortality and disability tables, medical costs and discount rate estimates. These procedures were performed with the support of our team of actuarial calculation experts and included the following key procedures:

- Review of the logical consistency and arithmetic consistency of the model used to estimate the value of the actuarial liability.
- Evaluation of the technical ability of the independent external actuary responsible for preparing the actuarial calculation.
- Review of the reconciliation of the actuarial report with the balances of the Company's financial statements.

In addition, we obtained confirmations from third parties regarding the custody of the plans' guaranteeing assets and tested the fair value of these assets with the support of our team of specialists in the valuation of financial instruments.

We consider that the criteria and assumptions adopted by the Management to determine the value of the actuarial liability, as well as the disclosures in the notes are reasonable, in all material respects, within the context of the financial statements.

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**6 - Trade receivables - Electricity sector (Note 8.4)**

At December 31, 2016, the net balance of trade receivables related to the electricity sector totaled R\$ 10,062 million.

A significant portion of the funds used to settle the trade receivables comes from the Fuel Consumption Account (*Conta de Consumo de Combustível (CCC)*). However, amendments to the legislation imposed restrictions that reduced the amounts reimbursed by the CCC, increasing the risk of default of the distributors that operate in this sector and purchase fuel to be used in their thermal plants.

Our audit approach considered the understanding of the key controls related to the process of measuring impairment losses on trade receivables related to the electricity sector trade receivables and tests of the effectiveness of controls considered as key. As regards the testing of details in operations and transactions, our approach considered the review of the debt acknowledgment agreements entered into between the Company and the companies of the Eletrobras System, understanding of the current stage of the negotiations with the Federal Government and Eletrobras, reading of the official letters and ordinances of the National

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**Why it is a Key Audit Matter****How the matter was addressed in the audit**

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This matter was considered as one of the key audit matters due to those circumstances and the consequent significant judgments in relation to the assumptions used in the determination of the losses on impairment of trade receivables and the significance of the balance of trade receivables.

Electric Energy Agency (ANEEL) and the Ministry of Mines and Energy (MME), as well as the payments received and the reconciliation of the provision for impairment of trade receivables recorded for the total trade receivables of the Electricity sector overdue or without actual guarantees.

We consider that the criteria and assumptions adopted by the Management to determine the impairment losses on trade receivables related to the trade receivables of the electricity sector, as well as the disclosures in the notes, are reasonable, in all material respects, within the context of the financial statements.

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**7 - Mutual rescissions and advances to suppliers - Shipbuilders (Note 14.4)**

In 2016, the Company recognized provisions and write-offs totaling R\$ 5,263 million, as follows: (i) provision for impairment of R\$ 1,925 million, due to uncertainties on the continuity of the construction of the hulls of platforms P-71, P-72 and P-73; (ii) provision for losses of R\$ 2,353 million, referring to the remaining balance of the advances to the suppliers Ecovix and Enseada; (iii) write-off of investments made in the Rio Grande shipbuilder, in the amount of R\$ 505 million, and (iv) write-offs of other investments related to the construction of the hulls of platforms P-71, P72 and P73, in the amount of R\$ 480 million.

Due to the strategic importance of certain assets and the financial difficulties faced by the suppliers contracted for their construction, the Company implemented, in 2015, a blocked account system to make feasible the development of the execution of the work. In the third quarter of 2016, the Company revalued whether the blocked accounts should be kept, which resulted in the recognition of those provisions and write-offs.

This matter was considered as one of the key audit matters due to the significance of the amounts involved and of the deficiencies in the controls related to the necessity of writing off the advances to suppliers that would not result in future economic benefits and recognizing expenses related to the mutual rescission of related agreements, which constituted a significant deficiency identified by the Company in its internal control environment in 2015.

According to the Management Report, that significant deficiency was maintained for the year ended December 31, 2016.

Our audit approach considered the understanding of the main controls related to the process of advances to suppliers and mutual rescissions, as well as tests on the effectiveness of controls considered as key. Additionally, our audit response considered tests on details of transfers made to the blocked accounts, provision for losses referring to advances to the suppliers Ecovix and Enseada and write-offs of investments related to the shipbuilder Rio Grande and the construction of the hulls of platforms P-71, P72 and P73.

Other significant aspects of our audit approach included review of the main contracts and mutual rescissions related to the subject-matter, inspection of subrogation of debt agreements and testing of details in relation to the subsequent financial settlement of the liabilities recorded, as well as the impairment test for the remaining assets.

We consider that the criteria and assumptions adopted by the Management to determine the provisions and write-offs related to the construction of platforms hulls by the suppliers Ecovix and Enseada, as well as the disclosures in the notes, are reasonable, in all material respects, within the context of the financial statements.

**8 - Cash flow hedge accounting  
(Notes 4.3.6 and 33.2)**

At December 31, 2016, the Company presented R\$ 25,119 million, net of the tax effects, recognized in other comprehensive income, in equity.

The Company designates hedging relationships, in which highly probable future exports are defined as hedged items, and liabilities denominated in foreign currency are used as hedging instruments. The purpose of this accounting practice is to recognize the foreign exchange effects of both the hedged item and the hedging instrument at the same time in the statement of income.

The estimate of highly probable future exports requires the use of significant judgments by the Company's management. Such an estimate can be significantly influenced by changes in the price projections for oil and its byproducts and the future production curve.

This matter was considered as one of the key audit matters in view of the critical estimates and significant judgments used by management to estimate the "highly probable" future exports and the significance of the accumulated balance of foreign exchange variation recognized in Equity arising from the application of the cash flow hedge accounting.

Our audit approach considered the understanding of key controls related to the process of hedge accounting and tests on the effectiveness of controls considered as key. Regarding the testing of detail in operations or transactions, our approach involved evaluating the reasonableness of the main assumptions used by management to estimate future exports. This work was carried out with the support of our team of asset valuation experts.

The audit procedures also included reviewing the criteria used by management to define the portion of future exports deemed "highly probable", in accordance with the criteria established by Technical Pronouncement CPC 38 - Financial Instruments: Recognition and Measurement (CPC 38). In this regard, we reviewed historical export data used by Management to define the highly probable portion, as well as sensitivity analysis of key assumptions and evaluation of potential impacts within a range of possible outcomes.

Other significant aspects of our audit approach included: (i) analysis of the application of hedge accounting by the Company vis a vis the requirements established by CPC 38; (ii) review of the documentation of hedge designations; (iii) test for the recalculation of the foreign exchange variation; and (iv) recalculation of prospective and retrospective effectiveness tests.

We consider that the application of the hedge accounting by the Company, which can be made by the management under the terms of CPC 38, meets the requirements established by that technical pronouncement. Additionally, we consider that the assumptions adopted by the Management to determine the highly probable future exports and foreign exchange losses and gains recorded in other comprehensive income are reasonable, and the disclosures in the notes are appropriate.

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**Supplementary information****Statements of Value Added**

The parent company and consolidated Statement of Value Added for the year ended December 31, 2016, prepared under the responsibility of the Company's management and presented as supplementary information for IFRS purposes, was submitted to the same audit procedures performed in conjunction with the audit of the Company's financial statements. For the purposes of forming our opinion, we evaluated whether these statements are reconciled with the financial statements and accounting records, as applicable, and if their form and content are in accordance with the criteria defined in Technical Pronouncement CPC 09 - "Statement of Value Added". In our opinion, these Statements of Value Added are prepared in all material respects, in accordance with the criteria established in the Technical Pronouncement and are consistent with the parent company and consolidated financial statements taken as a whole.

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**Other information accompanying the financial statements and the independent auditor's report**

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The Company's management is responsible for the other information that comprises the Management Report and the Financial Market Report ("RMF").

Our opinion on the financial statements does not cover the Management Report and the Financial Market Report, and we do not express any form of audit conclusion thereon.

In connection with the audit of the financial statements, our responsibility is to read the Management Report and the Financial Market Report and, in doing so, consider whether these reports are materially inconsistent with the financial statements or with our knowledge obtained in the audit or otherwise appear to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement in the Management Report and the Financial Market Report, we are required to communicate the matter to those charged with governance. We have nothing to report in this regard.

### **Responsibilities of management and those charged with governance for the financial statements**

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Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

### **Auditor's responsibilities for the audit of the financial statements**

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Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Brazilian and International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Brazilian and International Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the parent company and consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Company and its subsidiaries.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Company to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Rio de Janeiro, March 21, 2017

PricewaterhouseCoopers  
Auditores Independentes  
CRC 2SP000160/O-5 "F" RJ

Marcos Donizete Panassol  
Contador CRC 1SP155975/O-8 "S" RJ

# Statement of Financial Position

December 31, 2016 and 2015 (In millions of reais, unless otherwise indicated)



Assets	Note	Consolidated		Parent Company		Liabilities	Note	Consolidated		Parent Company	
		2016	2015	2016	2015			2016	2015	2016	2015
<b>Current assets</b>						<b>Current liabilities</b>					
Cash and cash equivalents	7	69,108	97,845	6,267	16,553	Trade payables	16	18,781	24,888	24,384	28,172
Marketable securities	7	2,556	3,047	2,487	2,982	Finance debt	17	31,796	57,334	62,058	52,913
Trade and other receivables, net	8	15,543	21,685	31,073	27,701	Finance lease obligations	18.1	59	73	1,091	1,568
Inventories	9	27,622	29,057	23,500	24,015	Income taxes payable	21.1	412	410	-	-
Recoverable income taxes	21.1	1,961	3,839	786	1,520	Other taxes payable	21.1	11,826	13,139	11,219	11,762
Other recoverable taxes	21.1	6,192	6,893	5,064	4,986	Payroll and related charges		7,159	5,085	6,158	4,212
Advances to suppliers		540	421	361	208	Pension and medical benefits	22	2,672	2,556	2,533	2,436
Others		3,716	5,225	3,466	2,979	Others		6,857	7,599	5,818	3,696
		127,238	168,012	73,004	80,944			79,562	111,084	113,261	104,759
Assets classified as held for sale	10.3	18,669	595	8,260	535	Liabilities on assets classified as held for sale	10.3	1,605	488	170	488
		145,907	168,607	81,264	81,479			81,167	111,572	113,431	105,247
<b>Non-current assets</b>						<b>Non-current liabilities</b>					
Long-term receivables						Finance debt	17	353,193	435,313	206,421	245,439
Trade and other receivables, net	8	14,832	15,301	10,262	7,335	Finance lease obligations	18.1	736	303	4,975	5,426
Marketable securities	7	293	342	286	260	Deferred income taxes	21.6	856	906	-	-
Judicial deposits	30.2	13,032	9,758	11,735	8,590	Pension and medical benefits	22	69,996	47,618	64,903	44,546
Deferred income taxes	21.6	14,038	23,490	4,873	15,156	Provisions for legal proceedings	30.1	11,052	8,776	8,391	7,282
Other tax assets	21.1	10,236	11,017	9,326	9,485	Provision for decommissioning costs	20	33,412	35,728	32,615	34,641
Advances to suppliers		3,742	6,395	510	1,017	Others		1,790	1,989	1,122	1,334
Others		10,378	9,550	9,106	8,216			471,035	530,633	318,427	338,668
		66,551	75,853	46,098	50,059	Total liabilities		552,202	642,205	431,858	443,915
Investments	11	9,948	13,772	121,191	115,536	<b>Shareholders' equity</b>					
Property, plant and equipment	12	571,876	629,831	424,771	442,439	Share capital (net of share issuance costs)	23.1	205,432	205,432	205,432	205,432
Intangible assets	13	10,663	12,072	8,764	9,133	Capital transactions	23.2	1,035	21	1,251	237
		659,038	731,528	600,824	617,167	Profit reserves	23.3	77,800	92,612	77,584	92,396
						Accumulated other comprehensive (deficit)	23.4	(34,037)	(43,334)	(34,037)	(43,334)
						Attributable to the shareholders of Petrobras		250,230	254,731	250,230	254,731
						Non-controlling interests	11.5	2,513	3,199	-	-
						Total equity		252,743	257,930	250,230	254,731
<b>Total assets</b>		<b>804,945</b>	<b>900,135</b>	<b>682,088</b>	<b>698,646</b>	<b>Total liabilities and shareholder's equity</b>		<b>804,945</b>	<b>900,135</b>	<b>682,088</b>	<b>698,646</b>

The Notes form an integral part of these Financial Statements.

**Statement of Income**
*December 31, 2016 and 2015 (In millions of reais, unless otherwise indicated)*

	Note	Consolidated		Parent Company	
		2016	2015	2016	2015
Sales revenues	24	282,589	321,638	223,067	251,023
Cost of sales		(192,611)	(223,062)	(153,725)	(174,717)
<b>Gross profit</b>		<b>89,978</b>	<b>98,576</b>	<b>69,342</b>	<b>76,306</b>
Income (expenses)					
Selling expenses		(13,825)	(15,893)	(17,023)	(15,130)
General and administrative expenses		(11,482)	(11,031)	(8,242)	(7,561)
Exploration costs	15	(6,056)	(6,467)	(5,533)	(5,261)
Research and development expenses		(1,826)	(2,024)	(1,823)	(2,011)
Other taxes		(2,456)	(9,238)	(1,305)	(7,730)
Impairment of assets	14	(20,297)	(47,676)	(11,119)	(33,468)
Other expenses, net	25	(16,925)	(18,638)	(9,707)	(17,547)
		(72,867)	(110,967)	(54,752)	(88,708)
<b>Income (loss) before finance income (expense), results in equity-accounted investments and income taxes</b>		<b>17,111</b>	<b>(12,391)</b>	<b>14,590</b>	<b>(12,402)</b>
Net finance income (expenses):	27	(27,185)	(28,041)	(25,704)	(26,187)
Finance income		3,638	4,867	2,418	3,303
Finance expense		(24,176)	(21,545)	(18,967)	(18,951)
Foreign exchange gains (losses) and inflation indexation charges		(6,647)	(11,363)	(9,155)	(10,539)
Results in equity-accounted investments	11	(629)	(797)	(4,576)	(4,294)
<b>Loss before income taxes</b>		<b>(10,703)</b>	<b>(41,229)</b>	<b>(15,690)</b>	<b>(42,883)</b>
Income taxes	21.7	(2,342)	6,058	866	8,047
<b>Loss</b>		<b>(13,045)</b>	<b>(35,171)</b>	<b>(14,824)</b>	<b>(34,836)</b>
Net income (loss) attributable to:					
Shareholders of Petrobras		(14,824)	(34,836)	(14,824)	(34,836)
Non-controlling interests		1,779	(335)	-	-
<b>Loss</b>		<b>(13,045)</b>	<b>(35,171)</b>	<b>(14,824)</b>	<b>(34,836)</b>
Basic and diluted loss per common and preferred share (in R\$)	23.6	(1.14)	(2.67)	(1.14)	(2.67)

The Notes form an integral part of these Financial Statements.



# Statement of Comprehensive Income

December 31, 2016 and 2015 (in millions of reais, unless otherwise indicated)



	Consolidated		Parent Company	
	2016	2015	2016	2015
Loss for the period	(13,045)	(35,171)	(14,824)	(34,836)
Other comprehensive income				
<b>Items that will not be reclassified to the statement of income:</b>				
Actuarial losses on defined benefit pension plans	(17,449)	(202)	(15,510)	(208)
Deferred Income tax and social contribution	3,485	(53)	3,219	(2)
	(13,964)	(255)	(12,291)	(210)
Share of other comprehensive income in equity-accounted investments	(12)	(1)	(1,679)	45
<b>Items that may be reclassified subsequently to the statement of income:</b>				
Unrealized gains / (losses) on cash flow hedge - exports				
Recognized in shareholders' equity	40,327	(68,739)	36,607	(60,712)
Reclassified to the statement of income	9,935	7,088	8,994	6,200
Deferred Income tax and social contribution	(17,089)	20,961	(15,504)	18,534
	33,173	(40,690)	30,097	(35,978)
Unrealized gains / (losses) on cash flow hedge - others				
Recognized in shareholders' equity	30	35		-
Cumulative translation adjustments in investees (*)				
Recognized in shareholders' equity	(15,585)	24,545	(11,209)	23,826
Reclassified to the statement of income	3,693		-	
	(11,892)	24,545	(11,209)	23,826
Share of other comprehensive income in equity-accounted investments	1,285	(2,863)	4,391	(7,631)
<b>Total other comprehensive income (loss)</b>	<b>8,620</b>	<b>(19,229)</b>	<b>9,309</b>	<b>(19,948)</b>
<b>Total comprehensive income (loss)</b>	<b>(4,425)</b>	<b>(54,400)</b>	<b>(5,515)</b>	<b>(54,784)</b>
Comprehensive income (loss) attributable to:				
Shareholders of Petrobras	(5,520)	(54,785)	(5,515)	(54,784)
Non-controlling interests	1,095	385		
<b>Total comprehensive income (loss)</b>	<b>(4,425)</b>	<b>(54,400)</b>	<b>(5,515)</b>	<b>(54,784)</b>

(\*) Includes, in the consolidated, a debit of R\$ 1,063 (a credit of R\$ 2,825 in 2015) relating to cumulative translation adjustments in associates and joint ventures.

The Notes form an integral part of these Financial Statements.

# Statement of Cash Flows

December 31, 2016 and 2015 (in millions of reais, unless otherwise indicated)



	Consolidated		Parent Company	
	2016	2015	2016	2015
<b>Cash flows from Operating activities</b>				
Loss	(13,045)	(35,171)	(14,824)	(34,836)
Adjustments for:				
Pension and medical benefits (actuarial expense)	8,001	6,388	7,409	5,872
Results in equity-accounted investments	629	797	4,576	4,294
Depreciation, depletion and amortization	48,543	38,574	37,150	28,039
Impairment assets	20,297	47,676	11,119	33,468
Inventory write-down to net realizable value	1,320	1,547	-	14
Allowance for impairment of trade receivables	3,843	3,641	1,072	669
Exploratory expenditures written off	4,364	4,921	3,940	3,784
(Gains) losses on disposal / write-offs of assets	(951)	2,893	(1,399)	3,075
Foreign exchange, indexation and finance charges	27,854	30,752	25,604	26,094
Deferred income taxes, net	(3,280)	(8,911)	(1,010)	(8,047)
Reclassification of cumulative translation adjustment - CTA	3,693	-	-	-
Review and unwinding of discount on the provision for decommissioning costs	(2,591)	1,307	(2,601)	1,274
Decrease (Increase) in assets				
Trade and other receivables, net	397	(1,496)	(22,470)	1,485
Inventories	(2,010)	1,730	515	546
Judicial deposits	(3,357)	(2,526)	(3,145)	(2,640)
Other assets	(1,214)	(2,474)	(2,961)	(3,191)
Increase (Decrease) in liabilities				
Trade payables	(4,154)	(3,890)	(3,302)	(11,896)
Other taxes payable	3,216	4,510	539	3,740
Income taxes paid	(1,284)	(1,794)	-	-
Pension and medical benefits	(2,634)	(2,367)	(2,465)	(2,232)
Other liabilities	2,072	563	(486)	528
<b>Net cash provided by operating activities</b>	<b>89,709</b>	<b>86,670</b>	<b>37,261</b>	<b>50,040</b>
<b>Cash flows from Investing activities</b>				
Capital expenditures	(49,289)	(71,311)	(33,512)	(50,589)
Increase in investments in investees	(455)	(344)	(26,782)	(29,229)
Proceeds from disposal of assets - Divestment	7,231	658	4,304	223
Divestment (Investment) in marketable securities (*)	842	25,971	(1,652)	6,054
Dividends received	1,607	874	3,859	4,699
<b>Net cash used in investing activities</b>	<b>(40,064)</b>	<b>(44,152)</b>	<b>(53,783)</b>	<b>(68,842)</b>
<b>Cash flows from Financing activities</b>				
Investments by non-controlling interest	122	243	-	-
Proceeds from financing	64,786	56,158	105,886	117,844
Repayment of principal	(105,832)	(49,741)	(91,877)	(82,544)
Repayment of interest	(25,563)	(20,851)	(7,773)	(6,973)
Dividends paid to non-controlling interests	(239)	(263)	-	-
Proceeds from sale of interest without loss of control (**)	-	1,934	-	1,934
<b>Net cash used in financing activities</b>	<b>(66,726)</b>	<b>(12,520)</b>	<b>6,236</b>	<b>30,261</b>
Effect of exchange rate changes on cash and cash equivalents	(11,656)	23,608	-	-
<b>Net increase / (decrease) in cash and cash equivalents</b>	<b>(28,737)</b>	<b>53,606</b>	<b>(10,286)</b>	<b>11,459</b>
Cash and cash equivalents at the beginning of the year	97,845	44,239	16,553	5,094
<b>Cash and cash equivalents at the end of the period</b>	<b>69,108</b>	<b>97,845</b>	<b>6,267</b>	<b>16,553</b>

(\*) In the Parent Company, includes amounts relating to changes in the investment in FIDC-NP (receivables investment fund).

(\*\*) Reclassified from Investing activities.

The Notes form an integral part of these Financial Statements.

# Statement of Changes in Shareholders' Equity

December 31, 2016 and 2015 (in millions of reais, unless otherwise indicated)



	Accumulated other comprehensive income						Profit reserves			Retained earnings	Shareholders' equity attributable to shareholders of Petrobras	Non-controlling interests	Total consolidated shareholders' equity	
	Share capital (net of share issuance costs)	Capital transactions	Cumulative translation adjustment	Losses on pension plans	Cash flow hedge - highly probable future exports	Other comprehensive income (loss) and deemed cost	Legal	Statutory	Tax incentives					Profit retention
Balance at January 1, 2015	205,432	(430)	9,959	(14,545)	(17,601)	(1,189)	16,524	4,503	1,393	104,802	-	308,848	1,874	310,722
Realization of deemed cost of associates						(10)					10	-	-	-
Change in interest in subsidiaries		667										667	1,161	1,828
Loss											(34,836)	(34,836)	(335)	(35,171)
Other comprehensive income (loss)			23,826	(255)	(40,690)	(2,829)						(19,948)	719	(19,229)
Distributions:												-	-	-
Offsetting of loss against reserves										(34,826)	34,826	-	-	-
Dividends												-	(220)	(220)
Balance at December 31, 2015	205,432	237	33,785	(14,800)	(58,291)	(4,028)	16,524	4,503	1,393	69,976	-	254,731	3,199	257,930
	205,432	237				(43,334)				92,396		254,731	3,199	257,930
Realization of deemed cost of associates						(12)					12	-	-	-
Capital transactions		1,014										1,014	(1,363)	(349)
Loss											(14,824)	(14,824)	1,779	(13,045)
Other comprehensive income (loss)			(11,209)	(13,958)	33,173	1,303						9,309	(689)	8,620
Distributions:												-	-	-
Offsetting of loss against reserves										(14,812)	14,812	-	-	-
Dividends												-	(413)	(413)
Balance at December 31, 2016	205,432	1,251	22,576	(28,758)	(25,118)	(2,737)	16,524	4,503	1,393	55,164	-	250,230	2,513	252,743
	205,432	1,251				(34,037)				77,584		250,230	2,513	252,743

The Notes form an integral part of these Financial Statements.

# Statement of Added Value

December 31, 2016 and 2015 (in millions of reais, unless otherwise indicated)



	Consolidated		Parent Company	
	2016	2015	2016	2015
<b>Income</b>				
Sales of products, services provided and other revenues	373,081	414,859	307,808	338,059
Gains and losses on impairment of trade receivables	(3,843)	(3,641)	(1,072)	(669)
Revenues related to construction of assets for own use	49,476	68,703	36,710	53,634
	418,714	479,921	343,446	391,024
<b>Inputs acquired from third parties</b>				
Materials consumed and products for resale	(65,864)	(94,453)	(42,210)	(67,401)
Materials, power, third-party services and other operating expenses	(72,846)	(109,876)	(56,412)	(88,143)
Tax credits on inputs acquired from third parties	(19,766)	(22,311)	(17,880)	(19,753)
Impairment of property, plant and equipment, intangible and other assets	(20,297)	(47,676)	(11,119)	(33,468)
Inventory write-down to net realizable value (market value)	(1,320)	(1,547)	-	(14)
	(180,093)	(275,863)	(127,621)	(208,779)
<b>Gross added value</b>	238,621	204,058	215,825	182,245
Depreciation, depletion and amortization	(48,543)	(38,574)	(37,150)	(28,039)
<b>Net added value produced by the Company</b>	190,078	165,484	178,675	154,206
<b>Transferred added value</b>				
Share of profit of equity-accounted investments	(629)	(797)	(4,576)	(4,294)
Finance income	3,638	4,867	2,418	6,208
Rents, royalties and others	358	377	860	420
	3,367	4,447	(1,298)	2,334
<b>Total added value to be distributed</b>	193,445	169,931	177,377	156,540
<b>Distribution of added value</b>				
<b>Personnel and officers</b>				
Direct compensation				
Salaries	18,685	19,068	14,445	14,219
	18,685	19,068	14,445	14,219
<b>Benefits (**)</b>				
Short-term benefits	4,629	1,452	4,313	1,110
Pension plan	5,069	4,133	4,304	3,705
Medical plan	4,821	3,778	4,359	3,433
	14,519	9,363	12,976	8,248
FGTS	1,273	1,301	1,118	1,151
	34,477	29,732	28,539	23,618
<b>Taxes</b>				
Federal (*)	50,141	50,297	44,449	45,198
State	49,565	51,888	31,352	33,074
Municipal	690	725	301	377
Abroad (*)	5,351	6,879	-	-
	105,747	109,789	76,102	78,649
<b>Financial institutions and suppliers</b>				
Interest, and exchange and indexation charges	36,819	38,768	32,605	37,180
Rental and affreightment expenses	29,447	26,813	54,955	51,929
	66,266	65,581	87,560	89,109
<b>Shareholders</b>				
Non-controlling interests	1,779	(335)	-	-
Absorbed losses	(14,824)	(34,836)	(14,824)	(34,836)
	(13,045)	(35,171)	(14,824)	(34,836)
<b>Added value distributed</b>	193,445	169,931	177,377	156,540

(<sup>1</sup>) Includes government holdings.

(<sup>2</sup>) In 2016, include R\$ 4,082 in the Consolidated (R\$ 418 in 2015), relating to spending on Voluntary Separation Incentive Plan - PIDV (R\$ 3,647 in 2016 and R\$ 326 in 2015 in the Parent Company).

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 of financial statements

The financial statements include:

### Consolidated financial statements

The consolidated financial statements are being presented in accordance with accounting practices adopted in Brazil, including the pronouncements issued by the Accounting Pronouncements Committee (*Comitê de Pronunciamentos Contábeis* - CPC) and with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and present all relevant information related to financial statements, and only them, corresponding to the information used by the Company’s management.

### Individual financial statements

The individual financial statements had been prepared in accordance with accounting practices adopted in Brazil, issued by the CPC. These accounting practices do not differ from IFRS standard to separate financial statement, since 2014, when it permitted investments in associates, subsidiaries and joint ventures to be accounted for by the equity method. Therefore, the individual financial statements are in accordance with the IFRS issued by the IASB. Both individual and consolidated financial statements are disclosed together.

The standards, interpretations and orientations of CPC converge with the International Accounting Standards issued by IASB.

The financial statements have been prepared under the historical cost convention, except for available-for-sale financial assets, financial assets and 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 financial statements were approved and authorized for issue by the Company’s Board of Directors in a meeting held on March 21, 2017.

### 2.1. Statement of added value

The statement of added value present information related to the value added by the Company (wealth created) and how it has been distributed. This statement is presented as supplementary information under IFRS and was prepared in accordance with CPC 09 – Statement of Added Value, approved by CVM Deliberation 557/08.

### 2.2. Functional currency

The functional currency of Petrobras and all of its Brazilian subsidiaries is the Brazilian Real, which is the currency of its primary economic environment of operation. The functional currency of most of the entities that operate in the international economic environment is the U.S. dollar.

The income statements and statement of cash flows of non-Brazilian Real functional currency subsidiaries, joint ventures and associates in stable economies are translated into Brazilian Real using the monthly average exchange rates prevailing during the year. Assets and liabilities are translated into Brazilian Real at the closing rate at the date of the financial statements and the equity items are translated using the exchange rates prevailing at the dates of the transactions or valuation where items are remeasured.

All exchange differences arising from the translation of the financial statements of non-Brazilian Real subsidiaries, joint ventures and associates are recognized as cumulative translation adjustments (CTA) within accumulated other comprehensive income in the shareholders' equity and transferred to profit or loss in the periods when the disposal of the investments affects profit or loss.

### **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 Parent Company and Consolidated, in the amount of R\$ 974, previously accounted for as current assets, were reclassified to trade and other receivables, net within non-current assets;
- Finance lease installments, in the Consolidated, amounting to R\$ 25 were reclassified from trade payables to finance lease obligations within current liabilities, as well as finance lease installments amounting to R\$ 149 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 Parent Company and Consolidated, in the amount of R\$ 1,934, previously presented in the Statement of Cash Flows as investing activities, were reclassified to financing activities;
- The investment, in the Parent Company, in the receivables investment fund (FIDC-NP), in the amount of R\$ 7,812, was reclassified from Marketable Securities – Held-to-maturity to Trade receivables;
- Fair value of finance debt changed from R\$ 385,017 to R\$ 426,282 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 R\$ 6,194 (R\$ 4,788 in the parent company) 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 (*Polícia 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.

So far, the Company recognized the accumulated amount of R\$ 661 as compensations for damages relating to the "Lava Jato" Operation (R\$ 432 in 2016) 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 consortia including entities so identified.

(2) Identify the period: the Company concluded from the 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. Information available to the Company included:

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 the investigations for additional information and will review its potential impact on the adjustment made.

### **3.3. Investigation 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 presented in these consolidated financial statements.

### 4.1. Basis of consolidation

The consolidated financial statements include the financial information of Petrobras and the entities it controls (its 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. Accounting policies of subsidiaries have been changed, where necessary, to ensure consistency with the policies adopted by Petrobras.

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

Petrobras has no equity interest in certain structured entities and control is not determined by voting rights, but by the power the Company has over the relevant activities of such entities. Consolidated structured entities are set out below:

Consolidated structured entities	Country	Main segment
Charter Development LLC – CDC	U.S.A	E&P
Companhia de Desenvolvimento e Modernização de Plantas Industriais – CDMPI	Brazil	RT&M
PDET Offshore S.A.	Brazil	E&P
Fundo de Investimento em Direitos Creditórios Não-padronizados do Sistema Petrobras	Brazil	Corporate
Fundo de Investimento em Direitos Creditórios Padronizados do Sistema Petrobras	Brazil	Corporate

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

### 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 information of 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 operates selling 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 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.

In the parent company's financial statements, investments in associates, subsidiaries and joint ventures are accounted for by the equity method from the date on which they become an associate, a joint venture or a subsidiary. In the parent company's financial statements, only joint operations structured through separate vehicles are accounted for by the equity method. For other joint operations the Company recognizes the amount of its share of 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 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 of the 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. In the individual financial statements, this goodwill is presented in investments.

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 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 of 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 occurs within 12 months after the 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 classification as held for sale. However, 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 it 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 it 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 tax.

#### **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 tax authority, when a legally 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 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 the 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 about 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**

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 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 and then discount rates for impairment testing would be increased.

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 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 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 the second refining unit of Abreu e Lima refinery. In 2014, the Company decided to postpone this project for an extended period of time;

iv) Petrochemical CGU: This CGU was composed of the PetroquímicaSuape and Citepe petrochemical plants until November 2016. 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, considering 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, converge 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), 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 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 R\$ 6,194 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

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Cash at bank and in hand	1,926	3,157	17	4
Short-term financial investments				
- In Brazil				
Single-member funds (Interbank Deposit) and other short-term deposits	3,845	3,599	849	1,100
Other investment funds	427	42	1	2
	4,272	3,641	850	1,102
- Abroad				
Time deposits	10,053	51,842	-	-
Automatic investing accounts and interest checking accounts	31,875	34,471	5,400	15,447
Treasury bills	17,004	-	-	-
Other financial investments	3,978	4,734	-	-
	62,910	91,047	5,400	15,447
Total short-term financial investments	67,182	94,688	6,250	16,549
Total cash and cash equivalents	69,108	97,845	6,267	16,553

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

	Consolidated						Parent Company	
	12.31.2016			12.31.2015			12.31.2016	12.31.2015
	In Brazil	Abroad	Total	In Brazil	Abroad	Total	Total	Total
Trading securities	2,556	-	2,556	3,042	-	3,042	2,487	2,982
Available-for-sale securities	1	-	1	21	5	26	1	2
Held-to-maturity securities	292	-	292	271	50	321	285	258
Total	2,849	-	2,849	3,334	55	3,389	2,773	3,242
Current	2,556	-	2,556	3,042	5	3,047	2,487	2,982
Non-current	293	-	293	292	50	342	286	260

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

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Trade receivables				
Third parties	21,182	28,358	7,585	10,975
Related parties				
Investees (note 19.7)	1,809	2,085	20,304	15,176
Investments in the Receivables Investment Fund - FIDC-NP (note 19.4)(*)	-	-	11,301	7,812
Receivables from the electricity sector (note 8.4)	16,042	13,335	5,995	3,940
Petroleum and alcohol accounts - receivables from Brazilian Government (note 19.8)	875	857	875	857
Other receivables	8,149	6,625	2,951	2,790
Allowance for impairment of trade receivables	48,057	51,260	49,011	41,550
(17,682)	(14,274)	(7,676)	(6,514)	
<b>Total</b>	<b>30,375</b>	<b>36,986</b>	<b>41,335</b>	<b>35,036</b>
Current	15,543	21,685	31,073	27,701
Non-current	14,832	15,301	10,262	7,335

(\*) In 2015, reclassified from Marketable securities.

### 8.2. Trade receivables overdue - Third parties

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Up to 3 months	1,313	1,229	609	328
From 3 to 6 months	218	701	90	412
From 6 to 12 months	1,339	3,135	412	2,775
More than 12 months	8,637	6,775	4,332	2,498
<b>Total</b>	<b>11,507</b>	<b>11,840</b>	<b>5,443</b>	<b>6,013</b>

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

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Opening balance	14,274	8,956	6,514	4,873
Additions (*)	4,532	7,133	1,400	3,830
Write-offs	(28)	(41)	-	-
Reversals	(595)	(2,476)	(238)	(2,189)
Cumulative translation adjustment	(501)	702	-	-
<b>Closing balance</b>	<b>17,682</b>	<b>14,274</b>	<b>7,676</b>	<b>6,514</b>
Current	6,551	6,727	4,414	4,150
Non-current	11,131	7,547	3,262	2,364

(\*) In 2016, includes additions mainly relating to: R\$ 1,242 from electricity sector and R\$ 2,045 from losses on advances to suppliers, debts assumptions and termination costs relating to agreement with Ecovix shipyard. In 2015, includes additions mainly relating to: R\$ 4,056 from electricity sector and R\$ 1,206 from losses on fines executed.

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

	Consolidated							As of 12.31.2016
	As of 12.31.2015	Sales	Amounts received	Transfers (*)	Allowance for impairment Recognition, net of reversals		Inflation indexation	
<b>Related parties (Eletrobras Group)</b>								
AME(**)	7,793	1,707	(2,513)	2,445	(1,070)	(1,255)	958	8,065
Ceron(***)	1,111	175	(237)	-	-	-	152	1,201
Others	302	319	(347)	-	(9)	-	48	313
<b>Subtotal</b>	<b>9,206</b>	<b>2,201</b>	<b>(3,097)</b>	<b>2,445</b>	<b>(1,079)</b>	<b>(1,255)</b>	<b>1,158</b>	<b>9,579</b>
<b>Third parties</b>								
Cigás	558	2,321	(1,069)	(2,445)	(153)	1,255	1	468
Others	168	1,123	(1,274)	-	(10)	-	8	15
<b>Subtotal</b>	<b>726</b>	<b>3,444</b>	<b>(2,343)</b>	<b>(2,445)</b>	<b>(163)</b>	<b>1,255</b>	<b>9</b>	<b>483</b>
<b>Trade receivables, net</b>	<b>9,932</b>	<b>5,645</b>	<b>(5,440)</b>	<b>-</b>	<b>(1,242)</b>	<b>-</b>	<b>1,167</b>	<b>10,062</b>
Trade receivables - Eletrobras Group	13,335	2,201	(3,097)	2,445	-	-	1,158	16,042
(-) Allowance for impairment	(4,129)	-	-	-	(1,079)	(1,255)	-	(6,463)
<b>Subtotal</b>	<b>9,206</b>	<b>2,201</b>	<b>(3,097)</b>	<b>2,445</b>	<b>(1,079)</b>	<b>(1,255)</b>	<b>1,158</b>	<b>9,579</b>
Trade receivables - Third parties	3,018	3,444	(2,343)	(2,445)	-	-	9	1,683
(-) Allowance for impairment	(2,292)	-	-	-	(163)	1,255	-	(1,200)
<b>Subtotal</b>	<b>726</b>	<b>3,444</b>	<b>(2,343)</b>	<b>(2,445)</b>	<b>(163)</b>	<b>1,255</b>	<b>9</b>	<b>483</b>
<b>Trade receivables - Total</b>	<b>16,353</b>	<b>5,645</b>	<b>(5,440)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,167</b>	<b>17,725</b>
(-) Allowance for impairment	(6,421)	-	-	-	(1,242)	-	-	(7,663)
<b>Trade receivables, net</b>	<b>9,932</b>	<b>5,645</b>	<b>(5,440)</b>	<b>-</b>	<b>(1,242)</b>	<b>-</b>	<b>1,167</b>	<b>10,062</b>

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

(\*\*) 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 the 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 R\$ 8,601 to the Company, of which R\$ 7,380 were collateralized. 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 R\$ 1,876 as allowance for impairment of trade receivables (net of reversals) with respect to uncollateralized receivables outstanding since December 1, 2014.

In 2016, the Company recognized an allowance for impairment of trade receivables (net of reversals) in the amount of R\$ 1,242 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

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Crude oil	11,485	11,305	9,961	10,425
Oil products	8,634	8,613	7,091	6,612
Intermediate products	2,281	2,390	2,281	2,390
Natural gas and LNG (*)	435	989	310	436
Biofuels	686	616	74	65
Fertilizers	85	239	66	190
<b>Total products</b>	<b>23,606</b>	<b>24,152</b>	<b>19,783</b>	<b>20,118</b>
Materials, supplies and others	4,053	4,967	3,755	3,935
<b>Total</b>	<b>27,659</b>	<b>29,119</b>	<b>23,538</b>	<b>24,053</b>
Current	27,622	29,057	23,500	24,015
Non-current	37	62	38	38

(\*) LNG - Liquid Natural Gas

Inventories are presented net of a R\$ 92 allowance reducing inventories to net realizable value (R\$ 607 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 R\$ 1,320 allowance charge (net of reversals) reducing inventories to net realizable value (R\$ 1,547 in the same period of 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 R\$ 6,449 (R\$ 6,711 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 (R\$ 527) and to provision for decommissioning costs (R\$ 493), 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 million 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 R\$ 684 on this sale, as other expenses, net. In addition, the amount of R\$ 3,627 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 million, 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 approval 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 million, of which US\$ 90 million were received via distribution of dividends after taxes on December 9, 2016 and the remaining US\$ 380 million 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 R\$ 2.9 billion 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 million) and the signing of the unitization agreement (US\$ 950 million).

#### **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 R\$ 2.31 billion, based on 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*), as occurred on October 24, 2016.
- 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 (R\$ 2.6 billion) and transfer of all its interest in NTS to Petrobras, as occurred on October 24, 2016 pursuant to 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 million) 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 R\$ 436. This transaction is still subject to price adjustments.

In addition, a loss of R\$ 66 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 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 R\$ 2.7 billion 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 R\$ 219 accounted for within results in equity-accounted investments.

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

#### **Disposal of Petroquímica 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 Petrotex 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 million, 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 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 million with respect to these transactions, comprising US\$ 1,675 million in cash for assets and services, a line of credit in the amount of US\$ 400 million that can be used by the Company for investments in the lara fields, as well as US\$ 150 million 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. (PBIO) entered into an agreement with São Martinho group which establishes the merger of PBIO interests in Nova Fronteira Bioenergia S.A. (49%) into São Martinho.

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

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

### 10.3. Assets classified as held for sale

						Consolidated	
						12.31.2016	12.31.2015
	E&P	Distributi on	RT&M	Gas & Power	Biofuel	Total	Total
<b>Assets classified as held for sale (*)</b>							
Cash and Cash Equivalents	-	328	27	-	-	355	11
Trade receivables	-	247	420	-	-	667	43
Inventories	-	170	390	-	-	560	-
Investments	-	87	20	-	1,126	1,233	-
Property, plant and equipment	3,381	640	921	9,467	-	14,409	541
Others	-	114	999	332	-	1,445	-
<b>Total</b>	<b>3,381</b>	<b>1,586</b>	<b>2,777</b>	<b>9,799</b>	<b>1,126</b>	<b>18,669</b>	<b>595</b>
<b>Liabilities on assets classified as held for sale (*)</b>							
Trade Payables	-	245	166	29	-	440	-
Finance debt	-	-	45	-	-	45	488
Provision for decommissioning costs	170	-	-	-	-	170	-
Others	32	96	256	566	-	950	-
<b>Total</b>	<b>202</b>	<b>341</b>	<b>467</b>	<b>595</b>	<b>-</b>	<b>1,605</b>	<b>488</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, Liqueigás, 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 8, 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 about direct subsidiaries, joint arrangements and associates (Parent Company)

	Main business segment	% Petrobras' ownership	% Petrobras' voting rights	Shareholders' equity (deficit)	Net income (loss) for the year	Country
<b>Consolidated entities</b>						
<b>Subsidiaries</b>						
Petrobras Netherlands B.V. - PNBV (i)	E&P	100.00	100.00	70,631	477	Netherlands
Petrobras International Braspetro - PIB BV (i) (ii)	Several segments (iii)	99.99	99.99	21,800	(4,764)	Netherlands
Transportadora Associada de Gás S.A. - TAG	Gas & Power	100.00	100.00	8,887	7,396	Brazil
Petrobras Distribuidora S.A. - BR	Distribution	100.00	100.00	7,410	(314)	Brazil
Petrobras Logística de Exploração e Produção S.A. - PB-LOG	E&P	100.00	100.00	4,205	1,224	Brazil
Nova Transportadora do Sudeste S.A. - NTS	Gas & Power	100.00	100.00	4,101	473	Brazil
Petrobras Transporte S.A. - Transpetro	RT&M	100.00	100.00	4,008	286	Brazil
Petrobras Gás S.A. - Gaspetro	Gas & Power	51.00	51.00	1,871	315	Brazil
Petrobras Biocombustível S.A.	Biofuels	100.00	100.00	1,347	(886)	Brazil
Petrobras Logística de Gás - Logigás	Gas & Power	100.00	100.00	1,191	453	Brazil
Liquigás Distribuidora S.A.	RT&M	100.00	100.00	967	200	Brazil
Termomacaé Ltda.	Gas & Power	99.99	99.99	705	28	Brazil
Breitener Energética S.A.	Gas & Power	93.66	93.66	676	17	Brazil
Termobahia S.A.	Gas & Power	98.85	98.85	573	92	Brazil
Braspetro Oil Services Company - Brasoil (i)	Corporate	100.00	100.00	543	22	Cayman Islands
Baixada Santista Energia S.A.	Gas & Power	100.00	100.00	228	(63)	Brazil
Araucária Nitrogenados S.A.	Gas & Power	100.00	100.00	194	(620)	Brazil
Fundo de Investimento Imobiliário RB Logística - FII	E&P	99.20	99.20	111	45	Brazil
Petrobras Comercializadora de Energia Ltda. - PBEN	Gas & Power	99.91	99.91	96	15	Brazil
Petrobras Negócios Eletrônicos S.A. - E-Petro	Corporate	99.95	99.95	34	1	Brazil
Termomacaé Comercializadora de Energia Ltda	Gas & Power	99.99	99.99	15	6	Brazil
Downstream Participações Ltda.	Corporate	99.99	99.99	3	-	Brazil
5283 Participações Ltda.	Corporate	100.00	100.00	1	(1)	Brazil
Companhia Integrada Têxtil de Pernambuco S.A. - CITEPE	RT&M	100.00	100.00	(124)	(1,244)	Brazil
Companhia Petroquímica de Pernambuco S.A. - PetroquímicaSuape	RT&M	100.00	100.00	(479)	(1,315)	Brazil
<b>Joint operations</b>						
Ibiritermo S.A.	RT&M	50.00	50.00	234	48	Brazil
Fábrica Carioca de Catalizadores S.A. - FCC	RT&M	50.00	50.00	229	71	Brazil
<b>Nonconsolidated entities</b>						
<b>Joint ventures</b>						
Logum Logística S.A.	RT&M	15.10	15.10	615	(183)	Brazil
Cia Energética Manauara S.A.	Gas & Power	40.00	40.00	160	44	Brazil
Refinaria de Petróleo Riograndense S.A.	RT&M	33.20	33.33	151	87	Brazil
Petrocoque S.A. Indústria e Comércio	RT&M	50.00	50.00	144	42	Brazil
Brentech Energia S.A.	Gas & Power	30.00	30.00	85	4	Brazil
Brasympe Energia S.A.	Gas & Power	20.00	20.00	79	4	Brazil
Eólica Mangue Seco 4 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	44	5	Brazil
Eólica Mangue Seco 3 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	42	5	Brazil
Metanol do Nordeste S.A. - Metanor	RT&M	34.54	34.54	40	(10)	Brazil
Eólica Mangue Seco 1 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	38	5	Brazil
Eólica Mangue Seco 2 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	51.00	51.00	38	5	Brazil
Companhia de Coque Calcinado de Petróleo S.A. - Coquepar	RT&M	45.00	45.00	4	(2)	Brazil
Participações em Complexos Bioenergéticos S.A. - PCBIOB	Biofuels	50.00	50.00	-	-	Brazil
<b>Associates</b>						
Braskem S.A.	RT&M	36.20	47.03	2,728	(452)	Brazil
UEG Araucária Ltda.	Gas & Power	20.00	20.00	571	(171)	Brazil
Deten Química S.A.	RT&M	27.88	27.88	347	108	Brazil
Energética SUAPE II	Gas & Power	20.00	20.00	266	87	Brazil
Termoelétrica Potiguar S.A. - TEP	Gas & Power	20.00	20.00	99	9	Brazil
Fundo de Investimento em Participações de Sondas - FIP Sondas	E&P	4.59	4.59	1	(3,388)	Brazil
Nitroclor Ltda.	RT&M	38.80	38.80	1	-	Brazil
Bioenergética Britarumã S.A.	Gas & Power	30.00	30.00	-	-	Brazil
Sete Brasil Participações S.A.	E&P	5.00	5.00	(21,777)	(393)	Brazil

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

(ii) 5283 Participações Ltda holds a 0.0050% interest.

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

## 11.2. Changes in investments (Parent Company)

	Balance at 12.31.2015	Investments	Capital transactions	Restructurin g, capital decrease and others (*)	Share of results of investments (**)	Cumulative translation adjustments (CTA)	Other comprehensi ve results	Dividends	Transfers to held for sale	Balance at 12.31.2016
<b>Subsidiaries</b>										
PNBV	76,324	5,150	224	-	(80)	(13,451)	-	-	-	68,167
PIB BV	6,491	16,646	-	-	(5,322)	2,238	23	-	-	20,076
TAG (***)	2,832	538	1,556	(2,632)	4,346	-	3,076	(1,222)	-	8,494
BR Distribuidora	9,703	-	-	-	(209)	-	(1,453)	(747)	-	7,294
Transpetro	5,095	-	-	-	367	(241)	(156)	(1,186)	-	3,879
PB-LOG	3,093	-	-	-	760	-	-	(505)	-	3,348
PBIO	1,124	772	-	-	(980)	141	293	-	-	1,350
Logigás	1,100	-	-	-	460	-	(7)	(363)	-	1,190
Gaspetro	950	-	-	31	106	-	-	(135)	-	952
Termomacacé Ltda	717	-	-	-	32	-	(2)	(42)	-	705
Breitener	609	-	-	-	16	-	-	8	-	633
Araucária Nitrogenados	842	-	-	-	(620)	-	(28)	-	-	194
Liquigás	1,051	-	-	-	191	-	(12)	(161)	(1,069)	-
NTS (***)	-	2,632	1,360	-	473	-	-	(364)	(4,101)	-
Citepe	562	554	-	1,014	(1,220)	-	-	-	(910)	-
Petroquímica Suape	378	433	-	1,576	(1,310)	-	-	-	(1,077)	-
Other subsidiaries	675	6	-	(34)	124	72	(2)	(33)	-	808
<b>Joint operations</b>	223	-	-	-	59	-	-	(49)	-	233
<b>Joint ventures</b>	280	-	-	-	92	-	(4)	(54)	-	314
<b>Associates</b>										
Braskem	3,142	-	-	-	(338)	32	984	(452)	-	3,368
Other associates	325	-	-	-	(90)	-	-	(68)	-	167
<b>Subsidiaries, joint operations/joint ventures and associates</b>	115,516	26,731	3,140	(45)	(3,143)	(11,209)	2,712	(5,373)	(7,157)	121,172
<b>Other investments</b>	20	-	-	(1)	-	-	-	-	-	19
<b>Total investments</b>	115,536	26,731	3,140	(46)	(3,143)	(11,209)	2,712	(5,373)	(7,157)	121,191
<b>Result of companies classified as held for sale - provision for losses with Citepe and Suape disposal</b>					(1,433)	-	-			
<b>Earnings in equity-accounted investments</b>					(4,576)	(11,209)	2,712			

(\*) Debts of Citepe and Petroquímica Suape reclassified to other current liabilities, as they are not connected to the disposal operation.

(\*\*) Includes unrealized profits from transactions between companies.

(\*\*\*) TAG transferred all its interest in NTS to Petrobras, as disclosed in note 10.1.

### 11.3. Changes in investments in joint ventures and associates (Consolidated)

	Balance at 12.31.2015	Investments	Restructuring, capital decrease and others	Share of results in investments (*)	Cumulative translation adjustments (CTA)	Other comprehensiv e income	Dividends	Transfers to held for sale	Balance at 12.31.2016
<b>Joint Ventures</b>									
Petrobras Oil & Gas B.V. - PO&G	6,031	-	-	97	(970)	-	(504)		4,654
State-controlled natural gas distributors	980	-	-	236	-	-	(140)		1,076
Nova Fronteira Bionergia S.A.	465	-	-	103	-	-	-	(568)	-
Compañía Mega S.A. - MEGA	174	-	-	91	(41)	-	(109)		115
Compañía de Inversiones de Energia S.A. - CIESA	170	-	-	9	(25)	-	(5)	(149)	-
Other petrochemical joint ventures	81	-	-	18	-	-	(16)		83
Other joint ventures	381	90	-	(94)	(1)	-	(39)	-	337
<b>Associates</b>									
Braskem S.A.	3,142	-	-	(338)	32	984	(452)		3,368
Associates in Venezuela	851	-	-	(6)	(80)	-	-	(765)	-
Guarani S.A.	759	268	(92)	(487)	140	289	-	(877)	-
Other petrochemical associates	95	-	-	30	-	-	(29)		96
UEG Araucária Ltda.	169	-	-	(149)	-	-	(20)	-	-
Other associates	429	-	-	146	(132)	-	(89)	(185)	169
Other investments	45	-	(9)	-	14	-	-		50
<b>Total</b>	<b>13,772</b>	<b>358</b>	<b>(101)</b>	<b>(344)</b>	<b>(1,063)</b>	<b>1,273</b>	<b>(1,403)</b>	<b>(2,544)</b>	<b>9,948</b>

(\*) Does not include results in investees transferred to assets held for sale, in the amount of R\$ 285 (credit).

### 11.4. Investments in listed companies

Company	Thousand-share lot		Type	Quoted stock exchange prices (R\$ 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	-	2,38	-	3,229
						-	3,229
<b>Associate</b>							
Braskem S.A.	212,427	212,427	Common	29.99	15.91	6,371	3,380
Braskem S.A.	75,762	75,762	Preferred A	34.25	27.62	2,595	2,093
						8,966	5,473

(\*) 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.

### 11.5. Non-controlling interest

The total amount of non-controlling interest at December 31, 2016 is R\$ 2,513 (R\$ 3,199 in 2015), of which R\$ 917 and R\$ 323 relate to non-controlling interest of the subsidiaries Gaspetro and Transportadora Brasileira Gasoduto Brasil-Bolívia (TBG), respectively (R\$ 916, R\$ 213 and R\$ 1,432 relating to Gaspetro, TBG and Petrobras Argentina, respectively, at December 31, 2015), and R\$ 570 refer to Consolidated Structured Entities (debt of R\$ 153 at December 31, 2015).

Condensed financial information is set out as follows:



	Gaspetro		Structured entities		TBG		Petrobras Argentina
	2016	2015	2016	2015	2016	2015	2015
Current assets	269	317	2,429	2,119	1,073	743	3,106
Long-term receivables	275	230	5,452	7,473	2	3	281
Investments	1,279	1,183	-	-	-	-	1,078
Property, plant and equipment, net	3	4	277	286	2,087	2,205	4,234
Other noncurrent assets	304	310	-	-	9	9	6
	2,130	2,044	8,158	9,878	3,171	2,960	8,705
Current liabilities	150	69	1,657	1,777	1,284	551	2,111
Non-current liabilities	109	106	5,931	8,254	1,228	1,973	2,229
Shareholders' equity	1,871	1,869	570	(153)	659	436	4,365
	2,130	2,044	8,158	9,878	3,171	2,960	8,705
Sales revenues	334	693	-	-	1,476	1,472	810
Net Income for the year	252	490	1,002	(708)	847	267	395
Net change in cash and cash equivalents	3	(549)	40	(312)	652	-	237

(\*) 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.

## 11.6. Summarized information on joint ventures and associates

The Company invests in joint ventures and associates in Brazil and abroad, whose activities are related to petrochemical companies, gas distributors, biofuels, thermoelectric power plants, refineries and other activities. Condensed financial information is set out below:

	2016						2015			
	Joint ventures			Associates			Joint ventures			Associates
	In Brazil	PO&G (*)	Other companies abroad	In Brazil	In Brazil	PO&G (*)	Other companies abroad	In Brazil	Abroad	
Current assets	3,311	2,722	497	16,992	4,317	3,648	1,278	20,921	8,748	
Non-current assets	1,818	115	67	5,369	1,339	196	81	10,531	777	
Property, plant and equipment, net	2,826	10,767	60	30,452	4,711	10,896	1,905	37,482	7,087	
Other non-current assets	2,346	4	-	3,121	2,164	17	14	11,055	304	
	10,301	13,608	624	55,934	12,531	14,757	3,278	79,989	16,916	
Current liabilities	3,997	1,273	273	14,002	5,198	891	832	19,057	14,083	
Non-current liabilities	1,627	5,928	3	60,663	2,498	5,183	1,185	48,896	4,129	
Shareholders' equity	4,677	6,407	348	(15,609)	4,327	8,683	697	12,762	(1,296)	
Non-controlling interest	-	-	-	(3,122)	508	-	564	(726)	-	
	10,301	13,608	624	55,934	12,531	14,757	3,278	79,989	16,916	
Sales revenues	9,411	2,688	1,156	49,407	12,742	7,527	947	52,654	652	
Net Income (loss) for the year	647	219	237	(4,510)	517	816	155	3,452	(5,460)	
Ownership interest - %	20 a 83%	50%	34 a 50%	5 a 49%	20 a 83%	50%	34 a 50%	5 a 49%	11 a 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 oil and gas production in Africa.

## 12. Property, plant and equipment

### 12.1. By class of assets

	Consolidated				Parent Company
	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	21,341	260,297	140,627	158,725	580,990
Additions	657	4,396	60,263	1,745	67,061
Additions to / review of estimates of decommissioning costs	-	-	-	15,932	15,932
Capitalized borrowing costs	-	-	5,842	-	5,842
Write-offs	(27)	(192)	(6,184)	(1,455)	(7,858)
Transfers	4,006	28,814	(54,132)	27,668	6,356
Depreciation, amortization and depletion	(1,528)	(21,241)	-	(15,296)	(38,065)
Impairment recognition	(928)	(14,981)	(11,489)	(20,324)	(47,722)
Impairment reversal	1	42	21	90	154
Cumulative translation adjustment	299	31,404	11,913	3,525	47,141
Balance at December 31, 2015	23,821	288,539	146,861	170,610	629,831
Cost	33,561	438,533	146,861	262,480	881,435
Accumulated depreciation, amortization and depletion	(9,740)	(149,994)	-	(91,870)	(251,604)
Balance at December 31, 2015	23,821	288,539	146,861	170,610	629,831
Additions	361	3,223	41,337	720	45,641
Additions to / review of estimates of decommissioning costs	-	-	-	3,113	3,113
Capitalized borrowing costs	-	-	5,982	-	5,982
Write-offs	(210)	(465)	(4,689)	(153)	(5,517)
Transfers (***)	1,479	16,645	(55,069)	20,570	(16,375)
Depreciation, amortization and depletion	(1,479)	(26,102)	-	(20,422)	(48,003)
Impairment recognition	(1,036)	(12,652)	(1,510)	(6,357)	(21,555)
Impairment reversal	-	2,511	-	584	3,095
Cumulative translation adjustment	(180)	(15,128)	(7,210)	(1,818)	(24,336)
Balance at December 31, 2016	22,756	256,571	125,702	166,847	571,876
Cost	32,589	415,663	125,702	262,886	836,840
Accumulated depreciation, amortization and depletion	(9,833)	(159,092)	-	(96,039)	(264,964)
Balance at December 31, 2016	22,756	256,571	125,702	166,847	571,876
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, consolidated and Parent Company property, plant and equipment includes assets under finance leases of R\$ 407 and R\$ 6,004, respectively (R\$ 189 and R\$ 9,248 at December 31, 2015).

### 12.2. Estimated useful life – Consolidated

Estimated useful life	Buildings and improvements, equipment and other assets		
	Cost	Accumulated depreciation	Balance at 12.31.2016
5 years or less	13,246	(9,833)	3,413
6 - 10 years	51,465	(31,469)	19,996
11 - 15 years	6,716	(3,630)	3,086
16 - 20 years	129,391	(43,153)	86,238
21 - 25 years	66,209	(21,396)	44,813
25 - 30 years	47,781	(12,007)	35,774
30 years or more	78,831	(20,420)	58,411
Units of production method	53,467	(27,017)	26,450
	447,106	(168,925)	278,181
Buildings and improvements	31,443	(9,833)	21,610
Equipment and other assets	415,663	(159,092)	256,571

### **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 R\$ 74,808 related to the Assignment Agreement.

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

The agreement establishes that the review procedures of the agreement will commence immediately after the declaration of commerciality for each area and must be based on reports by independent experts engaged by Petrobras and by the 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 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**

During 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 an amount of R\$ 12 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 R\$ 1,032 as other expenses, net.

## 13. Intangible assets

### 13.1. By class of assets

					Consolidated	Parent Company
	Rights and Concessions	Software Acquired	Software Developed in-house	Goodwill	Total	Total
Balance at January 1, 2015	9,542	315	1,148	971	11,976	9,108
Addition	59	73	259	-	391	299
Capitalized borrowing costs	-	-	18	-	18	18
Write-offs	(589)	-	(7)	-	(596)	(169)
Transfers	273	21	36	-	330	273
Amortization	(75)	(109)	(325)	-	(509)	(396)
Impairment recognition	(98)	-	-	-	(98)	-
Cumulative translation adjustment	404	8	2	146	560	-
Balance at December 31, 2015	9,516	308	1,131	1,117	12,072	9,133
Cost	10,526	1,699	3,762	1,117	17,104	12,442
Accumulated amortization	(1,010)	(1,391)	(2,631)	-	(5,032)	(3,309)
Balance at December 31, 2015	9,516	308	1,131	1,117	12,072	9,133
Addition	39	53	204	-	296	208
Capitalized borrowing costs	-	-	14	-	14	14
Write-offs	(523)	-	(4)	-	(527)	(177)
Transfers	(44)	(15)	(1)	(332)	(392)	(7)
Amortization	(78)	(120)	(342)	-	(540)	(407)
Impairment recognition	(7)	-	-	-	(7)	-
Cumulative translation adjustment	(178)	(4)	(4)	(67)	(253)	-
Balance at December 31, 2016	8,725	222	998	718	10,663	8,764
Cost	9,367	1,587	3,941	718	15,613	12,459
Accumulated amortization	(642)	(1,365)	(2,943)	-	(4,950)	(3,695)
Balance at December 31, 2016	8,725	222	998	718	10,663	8,764
Estimated useful life in years	(*)	5	5	Indefinite		

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

### 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 R\$ 27 (R\$ 82 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 R\$ 15,000 was paid by the consortium. The Company paid R\$ 6,000 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 R\$ 578 (R\$ 580 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 R\$ 274 as of December 31, 2016 (R\$ 270 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.

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

Assets or CGUs, by nature	Carrying amount (**)	Recoverable amount (**)	Impairment (*) (***)	Consolidated	
				Business segment	Comments
<b>2016</b>					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	41,584	34,855	7,381	E&P - Brazil	item (a1)
Oil and gas production and drilling equipment in Brazil	2,980	208	2,772	E&P - Brazil	item (b1)
Second refining unit in RNEST	8,077	5,546	2,531	RTM - Brazil	item (c)
Suape Petrochemical Complex	3,569	1,558	2,011	RTM - Brazil	item (d1)
Comperj	1,315	-	1,315	RTM - Brazil	item (e1)
Fertilizer Plant - UFN III	1,699	1,202	497	Gas & Power - Brazil	item (f1)
Araucária (fertilizers plant)	638	185	453	Gas & Power - Brazil	item (g)
Transpetro's fleet of vessels	5,822	5,024	798	RTM - Brazil	item (h)
Quixadá Power plant	90	-	90	Biofuel, Brazil	
Others	2,009	1,390	619	Several Segments	
			18,467		
Assets classified as held for sale					Note 14.2
Suape Petrochemical Complex	2,689	1,255	1,434	RTM - Brazil	
Petrobras Chile Distribución	1,773	1,507	266	Distribution- Abroad	
Power Plants Celso Furtado and Rômulo Almeida	394	238	156	RTM - Brazil	
Others	315	341	(26)	Several Segments	
<b>Total</b>			<b>20,297</b>		
<b>2015</b>					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	82,982	47,402	33,722	E&P - Brazil	item (a2)
Comperj	6,193	912	5,281	RTM - Brazil	item (e2)
Oil and gas producing properties abroad	6,045	3,583	2,462	E&P - Abroad	item (i)
Oil and gas production and drilling equipment in Brazil	2,927	949	1,978	E&P - Brazil	item (b2)
Fertilizer Plant - UFN III	3,651	1,696	1,955	Gas & Power - Brazil	item (f2)
Suape Petrochemical Complex	4,463	3,681	782	RTM - Brazil	item (d2)
Nitrogen Fertilizer Plant - UFN-V	585	-	585	Gas & Power	
Biodiesel plants	524	343	181	Biofuel - Brazil	
Others	1,331	611	720	Several segments	
<b>Total</b>			<b>47,666</b>		

(\*) Impairment losses and reversals.

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

(\*\*\*) In 2015, does not include impairment on assets classified as held for sale in the amount R\$ 10.

#### 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 are shown below:

	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

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 R\$ 7,381 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 (R\$ 3,823), Ceará Mar Group (R\$ 693), Guaricema (R\$ 415), Bijupirá and Salema (R\$ 317), Dourado (R\$ 284), Maromba (R\$ 281), Trilha (R\$ 228), Papa-Terra (R\$ 234), Pampo (R\$ 216), Frade (R\$ 213), Uruguá group (R\$ 196), Badejo (R\$ 183), Bicudo (R\$ 160), Riachuelo (R\$ 146), Fazenda Bálsamo (R\$ 135) e Água Grande Group (R\$ 101). 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 R\$ 1,347, 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

Impairment losses of R\$ 33,722 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 (R\$ 8,723), Centro Sul group (R\$ 4,605), Uruguá group (R\$ 3,849), Espadarte (R\$ 2,315), Linguado (R\$ 1,911), CVIT – Espírito Santo group (R\$ 1,463), Piranema (R\$ 1,333), Lapa (R\$ 1,238), Bicudo (R\$ 937), Frade (R\$ 773), Badejo (R\$ 740), Pampo (R\$ 355) and Trilha (R\$ 327). These impairment losses are mainly due to the impact of the decline in international crude oil prices on the Company's price assumptions, the use of a higher discount rate, as well as the geological revision of Papa-Terra reservoir.

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

Impairment losses of R\$ 2,772 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 R\$ 1,925 as set out in note 14.4.



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

Impairment losses of R\$ 1,978 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.

## **c) Second refining unit in RNEST - 2016**

An impairment loss of R\$ 2,531 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.

## **d1) Suape Petrochemical Complex - 2016**

An impairment loss of R\$ 2,011 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**

An impairment loss of R\$ 782 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.

## **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 R\$ 1,315 of impairment losses in 2016.

## **e2) Comperj - 2015**

An impairment loss of R\$ 5,281 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.

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

An impairment loss of R\$ 497 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**

An impairment loss of R\$ 1,955 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 R\$ 453 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**

An impairment loss of R\$ 798 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 five 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.

#### **i) Producing properties abroad – 2015**

Impairment losses of R\$ 2,462 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 (R\$ 1,750) and Bolivia (R\$ 614), 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 R\$ 465 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 R\$ 1,935 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 R\$ 1,434 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 R\$ 266 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 R\$ 156 were accounted for due to the difference between the exit price and the respective carrying amounts. A portion of this impairment (R\$ 23) 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 R\$ 10 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) p.a.	Value in use	Carrying amount
Braskem S.A. (*)	RTM	11.6	12,660	3,368
Natural Gas Distributors	Gas & Power	6.0	1,433	1,076

(\*) 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 R\$ 8,966 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 R\$ 626 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 R\$ 359 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 R\$ 219 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 R\$ 100 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 R\$ 2,072 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 (R\$ 1,077); (ii) higher discount rates and capital expenditure decisions relating to the biofuels segment (R\$ 543); (iii) the deteriorated economic and financial conditions of the associate Sete Brasil (R\$ 328); and (iv) losses relating to the associate Arpoador Drilling B.V, an entity indirectly controlled by Sete Brasil (R\$ 54).

#### 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 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 R\$ 1,925 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 R\$ 2,353 within other expenses, net with respect to the remaining balance of advances to these suppliers in the context of the escrow accounts (R\$ 1,256) and debts assumption relating to Ecovix and Enseada (R\$ 1,097), 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 R\$ 505, as well as other investments related to the P-71, P-72 and P-73 amounting to R\$ 480.

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

#### **14.4.1. 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 R\$ 375 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 R\$ 764.

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 R\$ 480 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 R\$ 505 and, as a consequence, these assets were written-off.

#### **14.4.2. 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 R\$ 881 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 R\$ 333 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 account 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 for 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>Consolidated</b>	
	<b>12.31.2016</b>	<b>12.31.2015</b>
<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs <sup>(*)</sup></b>		
Property, plant and equipment		
Opening Balance	20,310	18,594
Additions to capitalized costs pending determination of proved reserves	3,543	7,310
Capitalized exploratory costs charged to expense	(3,603)	(2,874)
Transfers upon recognition of proved reserves	(3,304)	(3,423)
Cumulative translation adjustment	(218)	703
Closing Balance	16,728	20,310
Intangible Assets	7,288	7,996
<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs</b>	<b>24,016</b>	<b>28,306</b>

<sup>(\*)</sup> 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>Consolidated</b>	
	<b>Jan-Dec/2016</b>	<b>Jan-Dec/2015</b>
<b>Exploration costs recognized in the statement of income</b>		
Geological and geophysical expenses	1,292	1,360
Exploration expenditures written off (includes dry wells and signature bonuses)	4,364	4,921
Other exploration expenses	400	186
<b>Total expenses</b>	<b>6,056</b>	<b>6,467</b>
<b>Cash used in:</b>		
Operating activities	1,529	1,546
Investment activities	3,778	8,897
<b>Total cash used</b>	<b>5,307</b>	<b>10,443</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*	Consolidated	
	2016	2015
Exploratory well costs capitalized for a period of one year	2,628	5,417
Exploratory well costs capitalized for a period greater than one year	14,100	14,893
Ending balance	16,728	20,310
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	3,036	20
2014	3,669	23
2013	2,199	13
2012	2,338	12
2011 and previous years	2,858	20
Ending balance	14,100	88

(\*) 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 R\$ 14,100. Those costs relate to 57 projects comprising (i) R\$ 13,342 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) R\$ 758 relate to costs incurred to evaluate the reserves and their potential development.

## 16. Trade payables

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Third parties in Brazil	10,690	13,005	9,000	10,734
Third parties abroad	6,580	10,020	3,268	3,897
Related parties	1,511	1,863	12,116	13,541
Balance on current liabilities	18,781	24,888	24,384	28,172

## 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 auditors) 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:

					Consolidated	Parent Company		
	Export Credit Agencies	Banking Market	Capital Market	Others	Total	Total		
<b>Non-current</b>								
In Brazil								
Opening balance at January 1, 2015	-	77,795	3,456	74	81,325	58,453		
Cumulative translation adjustment (CTA)	-	482	-	-	482	-		
Additions (new funding obtained)	-	15,962	3,510	-	19,472	6,463		
Interest incurred during the period	-	951	1	-	952	506		
Foreign exchange/inflation indexation charges	-	9,662	257	7	9,926	6,175		
Transfer from long-term to short-term	-	(8,416)	(490)	(13)	(8,919)	(6,138)		
Balance as of December 31, 2015	-	96,436	6,734	68	103,238	65,459		
Abroad								
Opening balance at January 1, 2015	13,930	79,414	142,930	1,723	237,997	92,946		
Cumulative translation adjustment (CTA)	4,772	33,669	62,702	607	101,750	-		
Additions (new funding obtained)	501	18,285	6,283	-	25,069	42,530		
Interest incurred during the period	13	110	161	26	310	5,973		
Foreign exchange/inflation indexation charges	1,439	4,112	(3,350)	181	2,382	52,077		
Transfer from long-term to short-term	(2,517)	(14,671)	(18,098)	(147)	(35,433)	(13,545)		
Balance as of December 31, 2015	18,138	120,919	190,628	2,390	332,075	179,981		
<b>Total Balance as of December 31, 2015</b>	<b>18,138</b>	<b>217,355</b>	<b>197,362</b>	<b>2,458</b>	<b>435,313</b>	<b>245,440</b>		
<b>Non-current</b>								
In Brazil								
Opening balance at January 1, 2016	-	96,436	6,734	68	103,238	65,459		
Cumulative translation adjustment (CTA)	-	(342)	-	-	(342)	-		
Additions (new funding obtained)	-	1,543	-	-	1,543	134		
Interest incurred during the period	-	1,045	1	-	1,046	586		
Foreign exchange/inflation indexation charges	-	(5,277)	194	5	(5,078)	(3,274)		
Transfer from long-term to short-term	-	(24,394)	(471)	(8)	(24,873)	(13,313)		
Transfer to liabilities associated with assets classified as held for sale	-	(21)	-	-	(21)	-		
Balance as of December 31, 2016	-	68,990	6,458	65	75,513	49,592		
Abroad								
Opening balance at January 1, 2016	18,138	120,919	190,628	2,390	332,075	179,981		
Cumulative translation adjustment (CTA)	(2,210)	(17,565)	(30,304)	(303)	(50,382)	-		
Additions (new funding obtained)	-	24,956	33,450	-	58,406	60,794		
Interest incurred during the period	13	60	178	30	281	7,230		
Foreign exchange/inflation indexation charges	(617)	(4,117)	(1,931)	(80)	(6,745)	(33,300)		
Transfer from long-term to short-term	(3,373)	(14,472)	(36,659)	(390)	(54,894)	(57,876)		
Transfer to liabilities associated with assets classified as held for sale	-	-	(1,061)	-	(1,061)	-		
Balance as of December 31, 2016	11,951	109,781	154,301	1,647	277,680	156,829		
<b>Total Balance as of December 31, 2016</b>	<b>11,951</b>	<b>178,771</b>	<b>160,759</b>	<b>1,712</b>	<b>353,193</b>	<b>206,421</b>		
				<b>Consolidated</b>		<b>Parent Company</b>		
				<b>12.31.2016</b>	<b>12.31.2015</b>	<b>12.31.2016</b>	<b>12.31.2015</b>	
<b>Current</b>								
Short-term debt					1,167	5,946	23,121	20,779
Current portion of long-term debt					25,352	44,907	37,979	31,043
Accrued interest					5,277	6,481	958	1,091
<b>Total</b>					<b>31,796</b>	<b>57,334</b>	<b>62,058</b>	<b>52,913</b>



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

Maturity in								Consolidated	
	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 <sup>(*)</sup>	Fair value	
<b>Financing in Brazilian Reais (R\$):</b>	8,032	7,948	14,172	19,570	10,835	18,231	78,788	68,112	
Floating rate debt	6,064	6,470	12,733	18,196	9,477	12,270	65,210		
Fixed rate debt	1,968	1,478	1,439	1,374	1,358	5,961	13,578		
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>	21,666	23,889	48,882	32,356	47,235	97,200	271,228	286,276	
Floating rate debt	15,758	20,595	37,810	19,363	8,064	40,240	141,830		
Fixed rate debt	5,908	3,294	11,072	12,993	39,171	56,960	129,398		
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>	891	573	565	565	565	2,489	5,648	5,485	
Floating rate debt	77	71	63	63	63	52	389		
Fixed rate debt	814	502	502	502	502	2,437	5,259		
Average interest rate	6.2%	6.4%	6.4%	6.5%	6.6%	6.9%	6.6%		
<b>Financing in Pound Sterling (£):</b>	186	-	-	-	-	6,908	7,094	5,191	
Fixed rate debt	186	-	-	-	-	6,908	7,094		
Average interest rate	6.2%	-	-	-	-	6.3%	6.2%		
<b>Financing in Japanese Yen (¥):</b>	286	286	-	-	-	-	572	646	
Floating rate debt	286	286	-	-	-	-	572		
Average interest rate	0.5%	0.4%	-	-	-	-	0.5%		
<b>Financing in Euro (€):</b>	713	3,861	4,493	674	2,563	9,333	21,637	21,345	
Floating rate debt	3	-	-	521	-	-	524		
Fixed rate debt	710	3,861	4,493	153	2,563	9,333	21,113		
Average interest rate	3.7%	3.9%	4.2%	4.5%	4.6%	4.7%	4.3%		
<b>Financing in other currencies:</b>	22	-	-	-	-	-	22	22	
Fixed rate debt	22	-	-	-	-	-	22		
Average interest rate	14.0%	-	-	-	-	-	14.0%		
<b>Total as of September 30, 2016</b>	<b>31,796</b>	<b>36,557</b>	<b>68,112</b>	<b>53,165</b>	<b>61,198</b>	<b>134,161</b>	<b>384,989</b>	<b>387,077</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>57,333</b>	<b>44,505</b>	<b>62,827</b>	<b>88,231</b>	<b>60,670</b>	<b>179,081</b>	<b>492,647</b>	<b>426,282</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 fair value hierarchy as follows:

- Level 1- quoted prices in active markets for identical liabilities, when applicable, amounting to R\$ 151,582 as of December 31, 2016 (R\$ 167,631 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 account their currencies and also the Petrobras' credit risk, amounting to R\$ 235,495 as of December 31, 2016 (R\$ 258,651 as of December 31, 2015). Finance debts categorized into level 2 were previously determined by 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 – outstanding balance

Company	Financial institution	Date	Maturity	Amount		
				Available (Lines of Credit)	Used	Balance
<b>Abroad (Amounts in US\$ million)</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>Total</b>				<b>2,800</b>	<b>-</b>	<b>2,800</b>
<b>In Brazil</b>						
Petrobras	FINEP	4/16/2014	12/26/2017	255	240	15
PNBV	BNDES	9/3/2013	3/26/2018	9,878	2,295	7,583
Transpetro	BNDES	1/31/2007	Not defined	2,246	636	1,610
Transpetro	Banco do Brasil	7/9/2010	4/10/2038	159	70	89
Transpetro	Caixa Econômica Federal	11/23/2010	Not defined	329	-	329
<b>Total</b>				<b>12,867</b>	<b>3,241</b>	<b>9,626</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) are also collateralized, as set in note 19.5.

The loans obtained by structured entities are collateralized based on the projects' assets, as well as liens on receivables of the structured entities.

The Company's capital market financing relates primarily to unsecured global notes.

## 18. Leases

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

Estimated lease payments / receivable	Consolidated						Parent Company
	Receipts			Payments			Payments
	Future value	Annual interest	Present value	Future value	Annual interest	Present value	Present value
2017	699	(402)	297	140	(81)	59	1,091
2018 - 2021	2,560	(1,366)	1,194	553	(281)	272	3,461
2022 and thereafter	4,461	(1,149)	3,312	1,264	(800)	464	1,514
<b>As of December 31, 2016</b>	<b>7,720</b>	<b>(2,917)</b>	<b>4,803</b>	<b>1,957</b>	<b>(1,162)</b>	<b>795</b>	<b>6,066</b>
Current			297			59	1,091
Non-current			4,506			736	4,975
<b>As of December 31, 2016</b>			<b>4,803</b>			<b>795</b>	<b>6,066</b>
Current (*)			256			73	1,568
Non-current (*)			5,441			303	5,426
<b>As of December 31, 2015</b>			<b>5,697</b>			<b>376</b>	<b>6,994</b>

(\*) For comparative purposes, the present value of payments in the amount of R\$ 25 was reclassified from trade payables in current liabilities and the amount of R\$ 149 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.

	<u>Consolidated</u>	<u>Parent Company</u>
2017	37,136	59,930
2018	28,514	51,122
2019	25,619	47,385
2020	24,639	45,765
2021	23,150	44,084
2022 and thereafter	176,807	279,124
As of December 31, 2016	315,865	527,410
As of December 31, 2015	387,332	587,276

As of December 31, 2016, the balance of estimated future minimum lease payments under operating leases includes R\$ 161,884 in the Consolidated and R\$ 161,882 in the Parent Company (in 2015, R\$ 236,739 in the Consolidated and R\$ 211,634 in the Parent Company) with respect to assets under construction, for which the lease term has not commenced.

During 2016, the Company recognized expenditures of R\$ 34,438 in the Consolidated from operating lease installments and R\$ 53,228 in the Parent Company (during 2015, R\$ 32,485 in the consolidated and R\$ 49,620 in the Parent Company).

## 19. Related-party transactions

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

This policy provides for guidance to Petrobras and its workforce while entering into related-party transactions and dealing with potential conflicts of interest on these transactions, in order to ensure the goals of the Company and align them with transparency of processes and corporate governance best practices, such as: (i) Audit Committee prior assessment of transactions between the Company and its associates, the Brazilian Federal Government (including its agencies or similar bodies and controlled entities), as well as transactions with entities controlled by key management personnel or by their close family members, for the transactions that match the criteria established in Instruction CVM 480/09; 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. Commercial transactions by operation with companies of the Petrobras' group (parent company)

	12.31.2016			12.31.2015		
	Current	Non-current	Total	Current	Non-current	Total
<b>Assets</b>						
Trade and other receivables						
Trade and other receivables, mainly from sales	10,031	-	10,031	8,916	-	8,916
Dividends receivable	3,045	-	3,045	1,595	-	1,595
Intercompany loans	-	225	225	-	266	266
Capital increase (advance)	-	3,882	3,882	-	1,364	1,364
Amounts related to construction of natural gas pipeline	-	1,126	1,126	-	1,050	1,050
Finance leases	98	914	1,012	61	873	934
Other operations	558	425	983	637	414	1,051
Assets held for sale	702	-	702	-	-	-
<b>Total</b>	<b>14,434</b>	<b>6,572</b>	<b>21,006</b>	<b>11,209</b>	<b>3,967</b>	<b>15,176</b>
<b>Liabilities</b>						
Finance leases	(1,096)	(4,452)	(5,548)	(1,568)	(5,354)	(6,922)
Intercompany loans	-	(28,903)	(28,903)	-	(51,465)	(51,465)
Prepayment of exports	(28,115)	(101,011)	(129,126)	(18,346)	(109,607)	(127,953)
Accounts payable to suppliers	(12,116)	-	(12,116)	(13,541)	-	(13,541)
Purchases of crude oil, oil products and others	(6,373)	-	(6,373)	(7,251)	-	(7,251)
Affreightment of platforms	(5,282)	-	(5,282)	(5,778)	-	(5,778)
Advances from clients	(461)	-	(461)	(512)	-	(512)
Other operations	-	-	-	-	(99)	(99)
<b>Total</b>	<b>(41,327)</b>	<b>(134,366)</b>	<b>(175,693)</b>	<b>(33,455)</b>	<b>(166,525)</b>	<b>(199,980)</b>
<b>Profit or Loss</b>						
				<b>2016</b>	<b>2015</b>	
Revenues, mainly sales revenues				129,260	147,898	
Foreign exchange and inflation indexation charges				(7,595)	(11,624)	
Financial income (expenses), net				(11,970)	(11,580)	
<b>Total</b>				<b>109,695</b>	<b>124,694</b>	

## 19.2. Commercial transactions with companies of the Petrobras' group (parent company)

	Income (expense)		12.31.2016				12.31.2015			
	2016	2015	Current Non-current		Total Assets	Total Assets	Current Non-current		Total Liabilities	Total Liabilities
			Assets	Assets			Liabilities	Liabilities		
<b>Subsidiaries <sup>(*)</sup>(**)</b>										
BR	75,343	90,203	2,259	-	2,259	2,608	(211)	-	(211)	(282)
PIB BV	11,272	7,394	4,279	116	4,395	2,287	(28,846)	(129,914)	(158,760)	(180,718)
Gaspetro	6,341	10,150	752	97	849	1,074	(291)	-	(291)	(307)
PNBV	2,717	2,106	1,851	29	1,880	2,236	(5,891)	-	(5,891)	(7,632)
Transpetro	955	864	978	191	1,169	786	(1,093)	-	(1,093)	(1,125)
Logigás	(115)	246	242	1,126	1,368	1,078	(205)	-	(205)	(445)
Thermoelectrics	(209)	(192)	27	295	322	455	(172)	(931)	(1,103)	(1,127)
Fundo de Investimento Imobiliário	(260)	(153)	66	-	66	158	(258)	(1,465)	(1,723)	(1,830)
TAG	(554)	(1,573)	1,334	4,608	5,942	1,075	(1,938)	-	(1,938)	(1,990)
Other subsidiaries	2,282	5,082	2,166	106	2,272	2,788	(1,634)	-	(1,634)	(967)
<b>Total Subsidiaries</b>	<b>97,772</b>	<b>114,127</b>	<b>13,954</b>	<b>6,568</b>	<b>20,522</b>	<b>14,545</b>	<b>(40,539)</b>	<b>(132,310)</b>	<b>(172,849)</b>	<b>(196,423)</b>
<b>Structured Entities</b>										
PDET Off Shore	(114)	(564)	-	-	-	-	(334)	(554)	(888)	(1,161)
CDMPI	(250)	(939)	-	-	-	-	(374)	(1,502)	(1,876)	(2,172)
<b>Total Structured Entities</b>	<b>(364)</b>	<b>(1,503)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(708)</b>	<b>(2,056)</b>	<b>(2,764)</b>	<b>(3,333)</b>
<b>Associates</b>										
Companies from the petrochemical sector	12,251	12,041	412	-	412	559	(72)	-	(72)	(172)
Other associates	36	29	68	4	72	72	(8)	-	(8)	(52)
<b>Total Associates</b>	<b>12,287</b>	<b>12,070</b>	<b>480</b>	<b>4</b>	<b>484</b>	<b>631</b>	<b>(80)</b>	<b>-</b>	<b>(80)</b>	<b>(224)</b>
<b>Total</b>	<b>109,695</b>	<b>124,694</b>	<b>14,434</b>	<b>6,572</b>	<b>21,006</b>	<b>15,176</b>	<b>(41,327)</b>	<b>(134,366)</b>	<b>(175,693)</b>	<b>(199,980)</b>

(\*) Includes its subsidiaries and joint ventures.

(\*\*) A list with the companies is provided in note 11.

### 19.3. Annual rates for intercompany loans

	Parent Company			
	Assets		Liabilities	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Up to 5%	-	-	-	(5,623)
From 5.01% to 7%	77	81	(28,903)	(45,842)
From 7.01% to 9%	100	128	-	-
More than 9.01%	48	57	-	-
<b>Total</b>	<b>225</b>	<b>266</b>	<b>(28,903)</b>	<b>(51,465)</b>

### 19.4. Non standardized receivables investment fund

The Parent Company invests in the receivables investment fund FIDC-NP (FIDC-NP and FIDC-P, as of December 31, 2015), which comprises mainly receivables and non-performing receivables arising from operations performed by subsidiaries of the Petrobras Group. Investments in FIDC-NP and FIDC-P are recognized as other receivables.

The assignment of performing and non-performing receivables is recognized as current debt within current liabilities.

	Parent Company	
	12.31.2016	12.31.2015
Other receivables	11,301	7,812
Assignments of receivables	(23,121)	(20,779)
	<b>2016</b>	<b>2015</b>
Finance income FIDC P and NP	1,018	891
Finance expense FIDC P and NP	(2,680)	(2,129)
<b>Net finance income (expense)</b>	<b>(1,662)</b>	<b>(1,238)</b>

### 19.5. Guarantees

Petrobras guarantees certain financial operations carried out by its subsidiaries in Brazil and abroad.

Petrobras, based on contractual clauses that support the financial operations between the subsidiaries and third parties, offers guarantees, mainly fidejussory, to the payment of debt service in the event that a subsidiary defaults on a debt.

The outstanding balance of financial operations carried out by these subsidiaries and guaranteed by Petrobras is set out below:

Maturity date of the loans						12.31.2016	12.31.2015
	PGF <sup>(*)</sup>	PGT <sup>(**)</sup>	PNBV	TAG	Others	Total	Total
2016	-	-	-	-	-	-	29,089
2017	3,417	-	2,946	-	11	6,374	22,132
2018	6,510	8,148	4,673	-	1,604	20,935	45,479
2019	17,562	19,229	7,561	-	1,111	45,463	63,241
2020	15,323	17,371	1,636	-	6,940	41,270	48,680
2021	41,688	-	733	-	5,529	47,950	30,753
2022 and thereafter	75,300	33,713	8,308	4,678	3,879	125,878	148,579
<b>Total</b>	<b>159,800</b>	<b>78,461</b>	<b>25,857</b>	<b>4,678</b>	<b>19,074</b>	<b>287,870</b>	<b>387,953</b>

(\*) Petrobras Global Finance B.V., subsidiary of PIB BV.

(\*\*) Petrobras Global Trading B.V., subsidiary of PIB BV.

Petrobras entered into 2 finance agreements with China Development Bank (CDB), maturing in 2019 and 2026, which are collateralized based on future oil exports for specific buyer, 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. PGT, a wholly-owned subsidiary of Petrobras, guarantees these financing operations.

## 19.6. Investment fund of subsidiaries abroad

As of December 31, 2016, a subsidiary of PIB BV had R\$ 10,389 (R\$ 15,623 as of December 31, 2015) invested in an investment fund abroad that held debt securities of NTS, PGF and of consolidated structured entities, mainly with respect to the following projects: Gasene, CDMPI, Charter and PDET.

## 19.7. Transactions with joint ventures, associates, government entities and pension funds

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	
	Income (expense)	Assets	Liabilities	Income (expense)	Assets	Liabilities	Income (expense)	Assets
<b>Joint ventures and associates</b>								
State-controlled gas distributors	6,088	803	226	9,849	996	281		
Petrochemical companies	12,337	426	88	12,020	565	174		
Other associates and joint ventures	1,624	580	1,245	1,878	524	1,768		
<b>Subtotal</b>	<b>20,049</b>	<b>1,809</b>	<b>1,559</b>	<b>23,747</b>	<b>2,085</b>	<b>2,223</b>		
<b>Government entities</b>								
Government bonds	454	3,628	-	1,090	4,352	-		
Banks controlled by the Federal Government	(10,740)	13,408	64,727	(13,641)	10,181	95,034		
Receivables from the Electricity sector (note 8.4)	3,359	16,042	8	5,821	13,335	-		
Petroleum and alcohol account - receivables from Federal government	18	875	-	14	857	-		
Others	687	1,326	1,081	30	1,190	1,230		
<b>Subtotal</b>	<b>(6,222)</b>	<b>35,279</b>	<b>65,816</b>	<b>(6,686)</b>	<b>29,915</b>	<b>96,264</b>		
Pension plans	1	158	324	-	141	431		
<b>Total</b>	<b>13,828</b>	<b>37,246</b>	<b>67,699</b>	<b>17,061</b>	<b>32,141</b>	<b>98,918</b>		
Revenues, mainly sales revenues	22,758			28,331				
Foreign exchange and inflation indexation charges, net	(1,035)			(4,730)				
Finance income (expenses), net	(7,895)			(6,540)				
Current assets		9,979			8,806			
Non-current assets		27,267			23,335			
Current liabilities			13,157			12,683		
Non-current liabilities			54,542			86,235		
<b>Total</b>	<b>13,828</b>	<b>37,246</b>	<b>67,699</b>	<b>17,061</b>	<b>32,141</b>	<b>98,918</b>		

## 19.8. Petroleum and Alcohol accounts - Receivables from Federal Government

As of December 31, 2016, the balance of receivables related to the Petroleum and Alcohol accounts was R\$ 875 (R\$ 857 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 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.

## 19.9. 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:

	Amounts in reais	
	Dec/2016	Dec/2015
<b>Compensation of employees, excluding officers</b>		
Lowest compensation	3,078.15	2,812.74
Average compensation	17,707.71	16,582.21
Highest compensation	92,203.64	90,078.93
Compensation of highest paid Petrobras officer	116,761.20	106,748.22

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	11.8	1.2	13.0	12.7	1.4	14.1
Social security and other employee-related taxes	3.4	0.3	3.7	3.4	0.3	3.7
Post-employment benefits (pension plan)	1.0	-	1.0	0.8	-	0.8
Benefits due to termination of tenure	0.7	-	0.7	-	-	-
<b>Total compensation recognized in the statement of income</b>	<b>16.9</b>	<b>1.5</b>	<b>18.4</b>	<b>16.9</b>	<b>1.7</b>	<b>18.6</b>
Total compensation paid	16.9	1.5	18.4	16.9	1.7	18.6
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 R\$ 76.8 as compensation (R\$ 67.4 in 2015).

The Extraordinary General Meeting held on July 1, 2015 amended the following:

- Article 18 of the Company's Bylaws to allow board members to have alternates with mandates limited to a two-year period; article 29 to establish that five Advisory Committees will support the Board of Directors with their appraisals and recommendations regarding specific issues related to the Board; article 41 to permit that board members' alternates may participate in all board meetings and receive a fixed monthly stipend as defined by the Board and in accordance with compensation limits established in the General Meeting;
- The total Board members compensation established at the Annual General Meeting increased by R\$ 754 thousand, in order to cover the fees of the alternate Board members from July 2015 to March 2016.

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

In 2016, the alternates of Board members, who were also members of these committees, received the amount of R\$ 54 thousand as compensation in 2016 (R\$ 65 thousand including related charges).

## 20. Provision for decommissioning costs

Non-current liabilities	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Opening balance	35,728	21,958	34,641	20,630
Adjustment to provision	(1,785)	17,300	(2,029)	17,277
Transfers related to liabilities held for sale <sup>(*)</sup>	(60)	(488)	323	(488)
Payments made	(2,606)	(4,149)	(2,600)	(3,306)
Interest accrued	2,290	753	2,280	721
Others	(155)	354	-	(193)
<b>Closing balance</b>	<b>33,412</b>	<b>35,728</b>	<b>32,615</b>	<b>34,641</b>

(\*) Includes R\$ 493 relating to the termination of sales contract of Bijupirá and Salema fields, R\$ 170 relating to the intention to sell interest in Lapa, Sururu, Berbigão and Oeste de Atapu fields, and R\$ 383 transferred pursuant to the sale of the subsidiary PESA.

The estimates for abandonment and dismantling of oil and natural gas producing properties areas 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 revisions resulted in a R\$ 2.3 billion decrease in the provision for decommissioning costs, mainly due to: (i) a R\$ 3.2 billion decrease due to lower exchange rate with direct impact on costs in dollars, (ii) a R\$ 1.6 billion decrease due to a higher risk adjustment rate of discount (from 6.73% p.a. on December 31, 2015 to 7.42% p.a. on December 31, 2016). These effects were partially offset by a R\$ 2.5 billion increase attributable to a revision on abandonment estimates, mainly due to additional drilling wells and other equipment.

## 21. Taxes

### 21.1. Income taxes and other taxes

Income tax and social contribution	Consolidated				Parent Company	
	Current assets		Current liabilities		Current assets	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Taxes in Brazil	1,938	3,743	364	242	786	1,520
Taxes abroad	23	96	48	168	-	-
<b>Total</b>	<b>1,961</b>	<b>3,839</b>	<b>412</b>	<b>410</b>	<b>786</b>	<b>1,520</b>





## 21.2. Tax amnesty program – (Programa de Recuperação Fiscal - REFIS)

On July 16, 2015 Petrobras paid R\$ 1,580 (R\$ 1,183 in cash and R\$ 397 in tax credits) related to 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*) applicable 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, both published on August 3, 2015, clarified that taxpayers had an opportunity for relief in connection with additional existing federal tax debts, through the tax amnesty program created under Law 12,996/14 – *Programa de Recuperação Fiscal (REFIS)*. The Company has decided to adhere to the *REFIS* to pay for the tax liabilities set out as follows:

- Pay amounts due according to the tax deficiency notices issued by the Brazilian Federal Tax Authorities 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 R\$ 3,118. The Company modified its procedures with respect to the payment of the *IOF* applicable to transactions in 2013 and, therefore, it does not expect any additional tax deficiency notices.
- Pay the tax deficiency notices issued by the Brazilian Federal Tax Authorities related to the alleged failure to withhold 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 R\$ 2,840.
- Penalties for noncompliance with customs clearance procedures on crude oil and oil product imports from 2008 to 2013, in the amount of R\$ 46.
- Inflation indexation of REFIS in the amount of R\$ 33 in the period relating to the fourth quarter of 2015.

The Company will pay those federal tax liabilities in 30 monthly installments following an immediate payment of 20% of the total amount due (after the reductions provided by the tax amnesty program) and using tax credits (tax loss carryforwards) to pay for interest and penalties.

As a result, in the period from January to December, 2015, the Company recognized a total expense of R\$ 7,617 in 2015, of which R\$ 5,090 was recognized as other taxes expenses and R\$ 2,527 as finance expenses. In the same period, the Company paid a total amount of R\$ 6,527, of which R\$ 3,467 was paid in cash, R\$ 1,806 by using tax credits and R\$ 1,254 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 Brazil Federal District.

In 2016 the Company charged to income R\$ 155 (R\$ 1,229 in 2015), of which R\$ 126 (R\$ 1,046 in 2015) was recognized as other taxes and R\$ 29 (R\$ 183 in 2015) as finance expense within Statement of Income.

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

On October 30, 2015, Petrobras joined the PRORELIT, established by Law No. 13,202 / 15 (Measure Conversion Act No. 685/15) paying R\$ 67, R\$ 20 in cash and R\$ 47 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 R\$ 67, of which R\$ 28 was recognized in other taxes expenses and R\$ 39 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 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 tax and social contribution - non-current

### a) Changes in deferred income tax and social contribution are set out below:

	Consolidated									Parent Company	
	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	Total
	Oil and gas exploration costs	Others (*)									
Balance at January 1, 2015	(36,249)	(595)	10,155	(1,573)	1,397	15,191	1,302	5,371	(378)	(5,379)	(9,062)
Recognized in the statement of income for the year	(4,061)	5,894	(1,687)	186	1,712	6,789	74	(612)	616	8,911	8,047
Recognized in shareholders' equity	-	-	20,961	-	-	(336)	-	(54)	-	20,571	17,991
Cumulative translation adjustment	-	106	2	-	(14)	501	(4)	3	(276)	318	-
Use of tax credits - REFIS and PRORELIT	-	-	-	-	-	(1,853)	-	-	-	(1,853)	(1,853)
Others	-	(362)	296	21	(3)	73	7	(27)	11	16	33
Balance at December 31, 2015	(40,310)	5,043	29,727	(1,366)	3,092	20,365	1,379	4,681	(27)	22,584	15,156
Recognized in the statement of income for the period	3,792	(2,161)	(1,192)	108	663	(362)	19	1,731	682	3,280	1,010
Recognized in shareholders' equity	-	-	(17,089)	992	-	(10)	-	3,485	-	(12,622)	(11,305)
Cumulative translation adjustment	-	(77)	47	-	5	(190)	-	(13)	(43)	(271)	-
Others (**)	-	250	(47)	(28)	(84)	(119)	-	(77)	316	211	12
Balance at December 31, 2016	(36,518)	3,055	11,446	(294)	3,676	19,684	1,398	9,807	928	13,182	4,873
Deferred tax assets										23,490	15,156
Deferred tax liabilities										(906)	-
Balance at December 31, 2015										22,584	15,156
Deferred tax assets										14,038	4,873
Deferred tax liabilities										(856)	-
Balance at December 31, 2016										13,182	4,873

(\*) Relates, primarily, to disposal of interests in investees or mergers.

(\*\*) Includes R\$ 249 transferred to liabilities associated with assets held for sale due to the disposal of subsidiary PESA.

## 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:

	Deferred income tax and social contribution			
	Consolidated		Parent Company	
	Assets	Liabilities	Assets	Liabilities
2017	6,681	374	4,873	-
2018	1,062	30	-	-
2019	1,463	44	-	-
2020	1,772	47	-	-
2021	1,052	222	-	-
2022	779	1	-	-
2023 and thereafter	1,229	138	-	-
<b>Recognized deferred tax credits</b>	<b>14,037</b>	<b>856</b>	<b>4,873</b>	<b>-</b>
In Brazil	1,576	835	-	-
Abroad	8,252	-	-	-
<b>Unrecognized deferred tax credits</b>	<b>9,828</b>	<b>835</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>23,865</b>	<b>1,691</b>	<b>4,873</b>	<b>-</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 R\$ 8,252 (R\$ 9,513 as of December 31, 2015) arose mainly from oil and gas exploration and production and refining activities in the United States of R\$ 7,416 (R\$ 7,816 as of December 31, 2015), as well as Spanish companies in the amount of R\$ 834 (R\$ 1,697 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:

Year	Lapse of Statute of Limitations
2020	123
2021	435
2022	17
2023	158
2024	103
2025	19
2026	369
2027	424
2028	480
2029	529
2030 and thereafter	5,595
<b>Total</b>	<b>8,252</b>

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

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

	Consolidated		Parent Company	
	2016	2015	2016	2015
Loss before income taxes	(10,703)	(41,229)	(15,690)	(42,883)
Nominal income taxes computed based on Brazilian statutory corporate tax rates (34%)	3,639	14,018	5,335	14,580
Adjustments to arrive at the effective tax rate:				
Different jurisdictional tax rates for companies abroad	(391)	(1,388)	-	-
Brazilian income taxes on income of companies incorporated outside Brazil (*)	(1,089)	(2,528)	(1,089)	(2,528)
Tax incentives	171	43	18	-
Tax loss carryforwards (unrecognized tax losses)	(913)	(1,864)	-	-
Non-taxable income (non-deductible expenses), net (**)	(3,242)	(2,081)	(2,749)	(3,997)
Others	(517)	(142)	(649)	(8)
<b>Income taxes benefit (expense)</b>	<b>(2,342)</b>	<b>6,058</b>	<b>866</b>	<b>8,047</b>
Deferred income taxes	3,280	8,911	1,010	8,047
Current income taxes	(5,622)	(2,853)	(144)	-
<b>Total</b>	<b>(2,342)</b>	<b>6,058</b>	<b>866</b>	<b>8,047</b>
<b>Effective tax rate of income taxes</b>	<b>(21.9)%</b>	<b>14.7%</b>	<b>5.5%</b>	<b>18.8%</b>

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

(\*\*) Includes results in equity-accounted investments and 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)

The balance of employee benefits (post-employment) are set out below:

	Consolidated		Parent Company	
	2016	2015	2016	2015
<b>Liabilities</b>				
Petros pension plan	35,040	23,185	33,191	22,110
Petros 2 pension plan	955	277	778	231
AMS medical plan	36,549	26,369	33,467	24,641
Other plans	124	343	-	-
	<b>72,668</b>	<b>50,174</b>	<b>67,436</b>	<b>46,982</b>
Current	2,672	2,556	2,533	2,436
Non-current	69,996	47,618	64,903	44,546
	<b>72,668</b>	<b>50,174</b>	<b>67,436</b>	<b>46,982</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 R\$ 22.6 billion. The deficit exceeds in R\$ 16 billion the ceiling amount as established in the Resolution 22/2015 enacted by the Post-retirement Benefit Federal Council - CNPC, that outlines 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 R\$ 11,832 (R\$ 11,436 in the Parent Company). The TCF is a financial commitment agreement to cover obligations with 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 R\$ 6,449 which are been reviewed.

The employers' expected contributions to the plan for 2017 are R\$ 624 (R\$ 588 in the Parent Company) and interest payments on TCF R\$ 719 (R\$ 696 in the Parent Company).

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. 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 R\$ 871 in 2016 (R\$ 765 in the Parent Company).

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 R\$ 854 (R\$ 732 in the Parent Company).

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				Consolidated		
	2016			2015		
	Quoted prices in active markets	Unquoted prices	Total fair value	%	Total fair value	%
Fixed income	21,530	3,798	25,328	50	21,283	43
Corporate bonds	-	221	221		620	
Government bonds	21,530	-	21,530		17,033	
Other investments	-	3,577	3,577		3,630	
Variable income	16,129	369	16,498	33	17,484	36
Common and preferred shares	16,129	-	16,129		16,826	
Other investments	-	369	369		658	
Structured investments	-	2,519	2,519	5	3,819	8
Private equity funds	-	2,182	2,182		3,490	
Venture capital funds	-	56	56		37	
Real estate funds	-	281	281		292	
Real estate properties	-	4,052	4,052	8	4,203	9
	37,659	10,738	48,397	96	46,789	96
Loans to participants	-	2,264	2,264	4	2,074	4
			50,661	100	48,863	100

As of December 31, 2016, the investment portfolio included Petrobras' common and preferred shares in the amount of R\$ 36 and R\$ 146, respectively, and Petros' real estate properties leased by the Company in the amount of R\$ 1,489.

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.

## Notes to the financial statements

(Expressed in millions of reais, unless otherwise indicated)



### 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					2015				
	Pension Plan		Medical Plan	Other plans	Total	Pension Plan		Medical Plan	Other plans	Total
	Petros	Petros 2				Petros	Petros 2			
<b>Changes in the present value of obligations</b>										
Obligations at the beginning of the year	70,952	1,160	26,369	556	99,037	73,601	1,441	23,957	443	99,442
Interest expense:					-					
· Term of financial commitment (TFC)	1,506	-	-	-	1,506	1,428	-	-	-	1,428
· Actuarial	8,560	166	3,792	28	12,546	7,926	188	3,065	60	11,239
Current service cost	288	74	446	64	872	254	107	148	38	547
Employee contributions	321	-	-	1	322	341	-	-	1	342
Benefits paid, net of assisted contributions	(4,649)	(57)	(1,224)	(7)	(5,937)	(4,041)	(16)	(1,155)	(14)	(5,226)
Remeasurement: Experience (gains) / losses	(4,735)	(42)	(2,716)	5	(7,488)	(1,735)	13	(2,544)	(12)	(4,278)
Remeasurement: (gains) / losses - demographic assumptions	260	(20)	(138)	5	107	(152)	(162)	10	(2)	(306)
Remeasurement: (gains) / losses - financial assumptions	11,815	930	10,020	44	22,809	(6,670)	(411)	2,888	(33)	(4,226)
Others	-	-	-	(445)	(445)	-	-	-	75	75
<b>Obligations at the end of the year</b>	<b>84,318</b>	<b>2,211</b>	<b>36,549</b>	<b>251</b>	<b>123,329</b>	<b>70,952</b>	<b>1,160</b>	<b>26,369</b>	<b>556</b>	<b>99,037</b>
<b>Changes in the fair value of plan assets</b>										
Fair value of plan assets at the beginning of the year	47,767	883	-	213	48,863	52,685	679	-	160	53,524
Interest income	6,788	125	-	10	6,923	6,729	88	-	9	6,826
Contributions paid by the sponsor (Company)	672	-	1,224	32	1,928	644	-	1,155	18	1,817
Contributions paid by participants	321	-	-	1	322	341	-	-	1	342
Term of financial commitment (TFC) paid by the Company	706	-	-	-	706	550	-	-	-	550
Benefits paid, net of assisted contributions	(4,649)	(57)	(1,224)	(7)	(5,937)	(4,041)	(16)	(1,155)	(14)	(5,226)
Remeasurement: Return on plan assets lower than interest income	(2,327)	305	-	1	(2,021)	(9,141)	132	-	(3)	(9,012)
Others	-	-	-	(123)	(123)	-	-	-	42	42
<b>Fair value of plan assets at the end of the year</b>	<b>49,278</b>	<b>1,256</b>	<b>-</b>	<b>127</b>	<b>50,661</b>	<b>47,767</b>	<b>883</b>	<b>-</b>	<b>213</b>	<b>48,863</b>
<b>Amounts recognized in the Statement of Financial Position</b>										
Present value of obligations	84,318	2,211	36,549	251	123,329	70,952	1,160	26,369	556	99,037
(-) Fair value of plan assets	(49,278)	(1,256)	-	(127)	(50,661)	(47,767)	(883)	-	(213)	(48,863)
<b>Net actuarial liability as of December 31,</b>	<b>35,040</b>	<b>955</b>	<b>36,549</b>	<b>124</b>	<b>72,668</b>	<b>23,185</b>	<b>277</b>	<b>26,369</b>	<b>343</b>	<b>50,174</b>
<b>Changes in net actuarial liability</b>										
Balance as of January 1,	23,185	277	26,369	343	50,174	20,916	762	23,957	283	45,918
(+) Remeasurement effects recognized in other comprehensive income	9,667	563	7,166	53	17,449	584	(692)	354	(44)	202
(+) Costs incurred in the period	3,566	115	4,238	82	8,001	2,879	207	3,213	89	6,388
(-) Contributions paid	(672)	-	(1,224)	(32)	(1,928)	(644)	-	(1,155)	(18)	(1,817)
(-) Payments related to Term of financial commitment (TFC)	(706)	-	-	-	(706)	(550)	-	-	-	(550)
Others	-	-	-	(322)	(322)	-	-	-	33	33
<b>Balance as of December 31,</b>	<b>35,040</b>	<b>955</b>	<b>36,549</b>	<b>124</b>	<b>72,668</b>	<b>23,185</b>	<b>277</b>	<b>26,369</b>	<b>343</b>	<b>50,174</b>

## b) Defined benefit costs

					Consolidated
	Pension Plans		Medical Plan	Other Plans	Total
	Petros	Petros 2	AMS		
					2016
Service cost	288	74	446	64	872
Interest on net liabilities (assets)	3,278	41	3,792	18	7,129
<b>Net expenses for the year</b>	<b>3,566</b>	<b>115</b>	<b>4,238</b>	<b>82</b>	<b>8,001</b>
Related to active employees:					
Included in the cost of sales	888	61	995	5	1,949
Operating expenses in statement of income	446	38	539	72	1,095
Related to retirees	2,232	16	2,704	5	4,957
<b>Net expenses for the year</b>	<b>3,566</b>	<b>115</b>	<b>4,238</b>	<b>82</b>	<b>8,001</b>
					2015
Service cost	254	107	148	38	547
Interest on net liabilities (assets)	2,625	100	3,065	51	5,841
<b>Net expenses for the year</b>	<b>2,879</b>	<b>207</b>	<b>3,213</b>	<b>89</b>	<b>6,388</b>
Related to active employees:					
Included in the cost of sales	841	105	638	6	1,590
Operating expenses in statement of income	437	86	406	79	1,008
Related to retirees	1,601	16	2,169	4	3,790
<b>Net expenses for the year</b>	<b>2,879</b>	<b>207</b>	<b>3,213</b>	<b>89</b>	<b>6,388</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:

	Consolidated					
					Rate of changes of medical and hospital changes	
	Pension Benefits		Discount rate		Medical Benefits	
	+ 100 bps	- 100 bps	+ 100 bps	- 100 bps	+ 100 bps	- 100 bps
Pension Obligation	(8,159)	9,930	(4,348)	5,406	5,463	(4,485)
Current Service cost and interest cost	(14)	595	(246)	297	742	(599)

## d) Actuarial assumptions

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

(1) Petros Plan for Petrobras Group.

(2) Petros 2 Plan.

(3) AMS Plan.

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

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

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

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

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

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

	Consolidated				
	2016				
	Pension plan		Medical plan	Other plans	Total
	Petros	Petros 2	AMS		
Up to 1 year	5,865	75	1,334	4	7,278
1 to 2 years	5,153	76	1,401	3	6,633
2 to 3 years	4,956	77	1,465	3	6,501
3 to 4 years	4,788	77	1,517	3	6,385
Over 4 years	63,556	1,906	30,832	238	96,532
<b>Total</b>	<b>84,318</b>	<b>2,211</b>	<b>36,549</b>	<b>251</b>	<b>123,329</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 in 2016, in the amount of R\$ 16, 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 cancelations;
- 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 cancelations;
- 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 cancelations;
- 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 cancelations; 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:

	<u>Consolidated</u>
Balance as of December 31, 2015	777
New enrolments PIDV Petrobras 2016	4,117
Revision of provisions	(35)
Separations in the period	(2,215)
<b>Balance as of December 31, 2016</b>	<b>2,644</b>
Current	2,644
Non-current	-

## 23. Shareholders' equity

### 23.1. Share capital

As of December 31, 2016, subscribed and fully paid share capital was R\$ 205,432, 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 Company recorded a loss in 2016 and 2015, therefore, 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, are R\$ 104 (R\$ 54 for 2016, R\$ 25 for 2015 and R\$ 25 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 R\$ 14,812 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 R\$ 15,585. 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 R\$ 3,693 to income statement within other expenses, net, relating to the cumulative translation adjustments resulted from the operation, since the acquisition of these investments to their disposals;
- actuarial losses on defined benefit plans in the amount of R\$ 17,449, after taxes; and
- foreign exchange rate variation gains of R\$ 40,327, 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 R\$ 25,121, 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

	Consolidated and Parent Company					
	2016			2015		
	Common	Preferred	Total	Common	Preferred	Total
Basic and diluted numerator						
Loss attributable to shareholders of Petrobras	(8,458)	(6,366)	(14,824)	(19,875)	(14,961)	(34,836)
Basic and diluted denominator						
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
Basic and diluted losses per common and preferred share (R\$ per share)	(1.14)	(1.14)	(1.14)	(2.67)	(2.67)	(2.67)

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

	Consolidated		Parent company	
	2016	2015	2016	2015
Gross sales	357,366	401,320	296,101	328,747
Sales taxes <sup>(*)</sup>	(74,777)	(79,682)	(73,034)	(77,724)
<b>Sales revenues (**)</b>	<b>282,589</b>	<b>321,638</b>	<b>223,067</b>	<b>251,023</b>
Diesel	88,750	100,804	74,471	87,559
Automotive gasoline	56,540	53,903	43,540	42,344
Jet fuel	8,931	11,003	9,288	11,718
Liquefied petroleum gas	10,669	9,585	8,966	8,042
Naphtha	8,500	8,487	8,500	8,487
Fuel oil (including bunker fuel)	4,068	7,414	3,634	5,951
Other oil products	11,676	11,409	10,074	10,332
Subtotal oil products	189,134	202,605	158,473	174,433
Natural gas	13,801	19,405	13,204	18,815
Ethanol, nitrogen products and renewables	13,024	12,872	10,881	9,681
Electricity, services and others	9,611	15,916	11,119	19,249
Domestic market	225,570	250,798	193,677	222,178
Exports	28,910	32,179	29,390	28,845
Sales abroad <sup>(***)</sup>	28,109	38,661	-	-
Foreign market	57,019	70,840	29,390	28,845
<b>Sales revenues <sup>(**)</sup></b>	<b>282,589</b>	<b>321,638</b>	<b>223,067</b>	<b>251,023</b>

<sup>(\*)</sup> Includes, mainly, CIDE, PIS, COFINS and ICMS (VAT).

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

<sup>(\*\*\*)</sup> 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 R\$ 30,156 (R\$ 32,624 in 2015) and R\$ 26,843 (R\$ 27,137 in 2015). These sales revenues mainly impacted the Refining, Transportation and Marketing (RT&M) business segment.

## 25. Other expenses, net

	Consolidated		Parent Company	
	2016	2015	2016	2015
Unscheduled stoppages and pre-operating expenses	(6,560)	(4,156)	(6,460)	(4,113)
Gains / (losses) related to legal, administrative and arbitration proceedings	(4,817)	(5,583)	(2,725)	(4,708)
Pension and medical benefits (retirees)	(4,956)	(3,790)	(4,722)	(3,619)
Voluntary Separation Incentive Plan - PIDV	(4,082)	(417)	(3,647)	(326)
Reclassification of cumulative translation adjustments - CTA	(3,693)	-	-	-
Allowance for impairment of other receivables	(2,225)	(1,206)	(148)	(1,175)
Institutional relations and cultural projects	(879)	(1,401)	(775)	(1,165)
Operating expenses with thermoelectric power plants	(337)	(386)	(332)	(428)
Provision for debt assumed from suppliers with subcontractors	(333)	-	-	-
Health, safety and environment	(281)	(314)	(276)	(306)
Amounts recovered relating to Lava Jato Operation	432	230	430	230
Government grants	587	62	122	50
Ship/Take or Pay Agreements	949	777	956	625
Gains / (losses) on disposal/write-offs of assets (*)	951	(2,893)	1,399	(3,075)
Expenses / Reimbursements from E&P partnership operations	1,988	1,863	1,988	1,863
Gains / (losses) on decommissioning of returned/abandoned areas	4,864	(550)	4,886	(550)
Others	1,467	(874)	(403)	(850)
<b>Total</b>	<b>(16,925)</b>	<b>(18,638)</b>	<b>(9,707)</b>	<b>(17,547)</b>

(\*) Includes returned areas and cancelled projects.



## 26. Costs and Expenses by nature

	Consolidated		Parent Company	
	2016	2015	2016	2015
Raw material and products for resale	(65,864)	(94,453)	(42,210)	(67,401)
Materials, third-party services, freight, rent and other related costs	(52,308)	(70,405)	(58,332)	(66,338)
Depreciation, depletion and amortization	(48,543)	(38,574)	(37,150)	(28,039)
Employee compensation	(34,477)	(29,732)	(28,539)	(23,618)
Impairment (losses) / reversals	(20,297)	(47,676)	(11,119)	(33,468)
Production taxes	(16,688)	(19,812)	(15,888)	(18,734)
Unscheduled stoppages and pre-operating expenses	(6,560)	(4,156)	(6,460)	(4,113)
(Losses) / Gains on legal, administrative and arbitration proceedings	(4,817)	(5,583)	(2,725)	(4,708)
Reclassification of cumulative translation adjustment - CTA	(3,693)	-	-	-
Exploration expenditures written-off (includes dry wells and signature bonuses)	(4,364)	(4,921)	(3,940)	(3,784)
Allowance for impairment of trade receivables	(3,843)	(3,641)	(1,072)	(669)
Other taxes	(2,456)	(9,238)	(1,305)	(7,730)
Changes in inventories	(1,458)	(1,460)	(515)	(507)
Gains / (losses) on disposal/write-offs of assets	951	(2,893)	1,399	(3,075)
Institutional relations and cultural projects	(879)	(1,401)	(775)	(1,165)
Health, safety and environment	(281)	(314)	(276)	(306)
Amounts recovered relating to Lava Jato Operation	432	230	430	230
	(333)	-	-	-
<b>Total</b>	<b>(265,478)</b>	<b>(334,029)</b>	<b>(208,477)</b>	<b>(263,425)</b>

### In the Statement of income

Cost of sales	(192,611)	(223,062)	(153,725)	(174,717)
Selling expenses	(13,825)	(15,893)	(17,023)	(15,130)
General and administrative expenses	(11,482)	(11,031)	(8,242)	(7,561)
Exploration costs	(6,056)	(6,467)	(5,533)	(5,261)
Research and development expenses	(1,826)	(2,024)	(1,823)	(2,011)
Other taxes	(2,456)	(9,238)	(1,305)	(7,730)
Impairment	(20,297)	(47,676)	(11,119)	(33,468)
Other expenses, net	(16,925)	(18,638)	(9,707)	(17,547)
<b>Total</b>	<b>(265,478)</b>	<b>(334,029)</b>	<b>(208,477)</b>	<b>(263,425)</b>

## 27. Net finance income (expense)

	Consolidated		Parent Company	
	2016	2015	2016	2015
Debt interest and charges	(26,955)	(22,935)	(20,523)	(19,903)
Foreign exchange gains (losses) and indexation charges on net debt (*)	(8,971)	(12,775)	(10,550)	(11,268)
Income from investments and marketable securities (Government Bonds)	1,894	2,315	664	1,207
Financial result on net debt	(34,032)	(33,395)	(30,409)	(29,964)
Capitalized borrowing costs	5,996	5,860	4,484	4,785
Gains (losses) on derivatives	(375)	986	(66)	(74)
Interest income from marketable securities (**)	21	77	1,046	906
Unwinding of discount on the provision for decommissioning costs	(2,296)	(757)	(2,285)	(724)
Other finance expenses and income, net (***)	979	(2,153)	68	(1,768)
Other foreign exchange gains (losses) and indexation charges	2,522	1,341	1,458	652
<b>Net finance income (expenses)</b>	<b>(27,185)</b>	<b>(28,041)</b>	<b>(25,704)</b>	<b>(26,187)</b>
Income	3,638	4,867	2,418	3,303
Expenses	(24,176)	(21,545)	(18,967)	(18,951)
Foreign exchange gains (losses) and indexation charges	(6,647)	(11,363)	(9,155)	(10,539)
<b>Total</b>	<b>(27,185)</b>	<b>(28,041)</b>	<b>(25,704)</b>	<b>(26,187)</b>

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

(\*\*) Includes investments in the Receivables Investment Fund (FIDC-NP), in the Parent Company.

(\*\*\*) In 2015, includes R\$ 2,749 (R\$ 2,694 in the parent company) of finance expense related to the tax amnesty program (REFIS and State Tax) and PRORELIT, as set out on note 21.

17:00

## 28. Supplemental information on statement of cash flows

	Consolidated		Parent Company	
	2016	2015	2016	2015
Amounts paid/received during the period				
Withholding income tax paid on behalf of third-parties	3,297	3,355	2,828	2,696
Capital expenditures and financing activities not involving cash				
Purchase of property, plant and equipment on credit	417	591		-
Finance Leases	296	-	355	374
Provision/(reversals) for decommissioning costs	3,113	15,932	2,868	16,511
Use of deferred tax and judicial deposit for the payment of contingency	464	3,634	390	3,583

## 29. Segment information

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

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

### Consolidated assets by Business Area - 12.31.2016

	Exploration and Production	Refining, Transportatio n & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Current assets	18,262	40,609	11,707	1,319	9,906	81,262	(17,158)	145,907
Non-current assets	438,332	130,750	51,808	380	10,398	28,795	(1,425)	659,038
Long-term receivables	24,870	10,793	6,539	12	3,314	22,285	(1,262)	66,551
Investments	4,722	3,597	1,520	43	47	19	-	9,948
Property, plant and equipment	401,057	115,745	42,675	325	6,308	5,929	(163)	571,876
Operating assets	295,655	101,520	38,659	315	5,389	4,798	(163)	446,174
Under construction	105,402	14,225	4,016	10	919	1,131	-	125,702
Intangible assets	7,683	615	1,074	-	729	562	-	10,663
<b>Total Assets</b>	<b>456,594</b>	<b>171,359</b>	<b>63,515</b>	<b>1,699</b>	<b>20,304</b>	<b>110,057</b>	<b>(18,583)</b>	<b>804,945</b>

### Consolidated assets by Business Area - 12.31.2015

	Exploration and Production	Refining, Transportatio n & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Current assets	14,215	35,247	9,424	176	8,979	112,715	(12,149)	168,607
Non-current assets	469,181	142,384	66,599	1,709	11,609	41,350	(1,304)	731,528
Long-term receivables	25,250	9,309	6,277	12	3,355	32,792	(1,142)	75,853
Investments	7,054	3,431	1,781	1,339	134	33	-	13,772
Property, plant and equipment	428,447	128,982	57,300	358	7,296	7,610	(162)	629,831
Operating assets	310,761	112,470	47,611	317	6,175	5,798	(162)	482,970
Under construction	117,686	16,512	9,689	41	1,121	1,812	-	146,861
Intangible assets	8,430	662	1,241	-	824	915	-	12,072
<b>Total Assets</b>	<b>483,396</b>	<b>177,631</b>	<b>76,023</b>	<b>1,885</b>	<b>20,588</b>	<b>154,065</b>	<b>(13,453)</b>	<b>900,135</b>

**Consolidated Statement of Income by Business Area - 2016**

	Exploration and Production	Refining, Transportatio n & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	116,033	217,181	32,809	839	97,101	-	(181,374)	282,589
Intersegments	110,946	59,522	8,638	807	1,461	-	(181,374)	-
Third parties	5,087	157,659	24,171	32	95,640	-	-	282,589
Cost of sales	(86,186)	(167,686)	(23,829)	(919)	(89,563)	-	175,572	(192,611)
Gross profit (loss)	29,847	49,495	8,980	(80)	7,538	-	(5,802)	89,978
Income (Expenses)	(23,086)	(18,376)	(4,894)	(212)	(7,246)	(19,357)	304	(72,867)
Selling	(510)	(6,430)	(2,651)	(6)	(4,590)	29	333	(13,825)
General and administrative	(1,216)	(1,535)	(716)	(83)	(937)	(6,994)	(1)	(11,482)
Exploration costs	(6,056)	-	-	-	-	-	-	(6,056)
Research and technological development	(696)	(199)	(62)	(2)	(1)	(866)	-	(1,826)
Other taxes	(295)	(342)	(762)	(10)	(103)	(944)	-	(2,456)
Impairment of assets	(10,700)	(8,090)	(1,217)	(24)	(266)	-	-	(20,297)
Other expenses, net	(3,613)	(1,780)	514	(87)	(1,349)	(10,582)	(28)	(16,925)
Net income (loss) before financial results, profit sharing and income taxes	6,761	31,119	4,086	(292)	292	(19,357)	(5,498)	17,111
Financial income (expenses), net	-	-	-	-	-	(27,185)	-	(27,185)
Share of earnings in equity-accounted investments	97	(176)	282	(862)	30	-	-	(629)
Net Income (loss) before income taxes	6,858	30,943	4,368	(1,154)	322	(46,542)	(5,498)	(10,703)
Income tax and social contribution	(2,299)	(10,581)	(1,389)	99	(99)	10,058	1,869	(2,342)
Net income (loss)	4,559	20,362	2,979	(1,055)	223	(36,484)	(3,629)	(13,045)
Net income (loss) attributable to:								
Shareholders of Petrobras	4,762	20,594	2,557	(1,055)	220	(38,273)	(3,629)	(14,824)
Non-controlling interests	(203)	(232)	422	-	3	1,789	-	1,779
Net income (loss)	4,559	20,362	2,979	(1,055)	223	(36,484)	(3,629)	(13,045)

**Consolidated Statement of Income per Business Area - 2015**

	Exploration and Production	Refining, Transportatio n & Marketing	Gas & Power	Biofuels	Distribution	Corporate	Eliminations	Total
Sales revenues	117,098	245,613	43,185	769	110,030	-	(195,057)	321,638
Intersegments	112,071	73,635	6,827	716	1,808	-	(195,057)	-
Third parties	5,027	171,978	36,358	53	108,222	-	-	321,638
Cost of sales	(82,908)	(199,596)	(34,490)	(846)	(101,623)	-	196,401	(223,062)
Gross profit	34,190	46,017	8,695	(77)	8,407	-	1,344	98,576
Expenses	(52,128)	(20,579)	(7,878)	(346)	(9,656)	(21,076)	696	(110,967)
Selling	(741)	(6,648)	(1,975)	(6)	(7,288)	60	705	(15,893)
General and administrative	(1,387)	(1,464)	(777)	(96)	(916)	(6,390)	(1)	(11,031)
Exploration costs	(6,467)	-	-	-	-	-	-	(6,467)
Research and technological development	(499)	(386)	(169)	(30)	(4)	(936)	-	(2,024)
Other taxes	(552)	(2,488)	(1,295)	(6)	(244)	(4,653)	-	(9,238)
Impairment of assets	(38,292)	(6,399)	(2,507)	(181)	(297)	-	-	(47,676)
Other expenses, net	(4,190)	(3,194)	(1,155)	(27)	(907)	(9,157)	(8)	(18,638)
Net income (loss) before financial results, profit sharing and income taxes	(17,938)	25,438	817	(423)	(1,249)	(21,076)	2,040	(12,391)
Financial income (expenses), net	-	-	-	-	-	(28,041)	-	(28,041)
Share of earnings in equity-accounted investments	(1,145)	1,192	403	(687)	31	(591)	-	(797)
Net Income (loss) before income taxes	(19,083)	26,630	1,220	(1,110)	(1,218)	(49,708)	2,040	(41,229)
Income tax and social contribution	6,099	(8,649)	(277)	144	425	9,010	(694)	6,058
Net income (loss)	(12,984)	17,981	943	(966)	(793)	(40,698)	1,346	(35,171)
Net income (loss) attributable to:								
Shareholders of Petrobras	(12,963)	18,034	423	(966)	(798)	(39,912)	1,346	(34,836)
Non-controlling interests	(21)	(53)	520	-	5	(786)	-	(335)
Net income (loss)	(12,984)	17,981	943	(966)	(793)	(40,698)	1,346	(35,171)

## 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:

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
<b>Non-current liabilities</b>				
Labor claims	3,995	3,323	3,594	2,998
Tax claims	4,981	3,087	3,241	2,323
Civil claims	1,873	2,069	1,377	1,768
Environmental claims	194	282	179	193
Other claims	9	15	-	-
<b>Total</b>	<b>11,052</b>	<b>8,776</b>	<b>8,391</b>	<b>7,282</b>

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
Opening Balance	8,776	4,091	7,282	3,338
Additions	3,462	5,294	1,630	4,368
Use of provision	(2,213)	(989)	(1,615)	(764)
Accruals and charges	1,211	346	1,094	340
Others	(184)	34	-	-
<b>Closing Balance</b>	<b>11,052</b>	<b>8,776</b>	<b>8,391</b>	<b>7,282</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:

	Consolidated		Parent Company	
	12.31.2016	12.31.2015	12.31.2016	12.31.2015
<b>Non-current assets</b>				
Tax	5,875	2,693	5,013	3,352
Civil	3,588	2,670	3,483	2,540
Labor	3,277	4,076	2,989	2,417
Environmental	275	305	250	281
Others	17	14	-	-
<b>Total</b>	<b>13,032</b>	<b>9,758</b>	<b>11,735</b>	<b>8,590</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:

	<u>Consolidated</u>
<b>Nature</b>	
Tax	155,882
Labor	23,547
Civil	29,491
Environmental	7,079
Others	4
<b>Total</b>	<b>216,003</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.	50,446
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.	20,549
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.	11,000
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.	10,088
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.	7,675
6) Incidence of social security contributions over contingent bonuses paid to employees. Current status: Awaiting the hearing of an appeal at the administrative level.	3,431
7) Collection of Contribution of Intervention in the Economic Domain (CIDE) on transactions with fuel retailers and service stations protected by judicial injunctions determining that fuel sales were made without gross-up of such tax. Current status: This claim involves lawsuits in judicial stages.	2,137
<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.	5,551
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.	2,718
<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.	4,412
<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.	4,189
<b>Plaintiff: Municipal governments of the cities of Anchieta, Aracruz, Guarapari, Itapemirim, Maratáizes, 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.	3,642
<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.	2,739
<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.	2,696
<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.	2,459
<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.	1,846
<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.	1,598
<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.	1,321
<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.	1,143
<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.	1,111
<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.	1,018
22) Other tax matters	14,113
<b>Total for tax matters</b>	<b>155,882</b>

<b>Description of labor matters</b>	<b>Estimate</b>
<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.	14,286
<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.	1,203
<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.	1,016
4) Other labor matters	7,042
<b>Total for labor matters</b>	<b>23,547</b>

<b>Description of civil matters</b>	<b>Estimate</b>
<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.	6,493
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.	5,437
<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.	5,358
<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.	1,875
<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.	1,304
6) Other civil matters	9,024
<b>Total for civil matters</b>	<b>29,491</b>

Description of environmental matters	Estimate
<b>Plaintiff: Ministério Público Federal, Ministério Público Estadual do Paraná, AMAR - Associação de Defesa do Meio Ambiente de Araucária, IAP - Instituto Ambiental do Paraná and IBAMA - Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis.</b>	
1) Legal proceeding related to specific performance obligations, indemnification and compensation for damages related to an environmental accident that occurred in the State of Paraná on July 16, 2000. Current status: The court partially ruled in favor of the plaintiff, however both parties (the plaintiff and the Company) filed an appeal.	2,786
<b>Plaintiff: Instituto Brasileiro de Meio Ambiente - IBAMA and Ministério Público Federal</b>	
2) Administrative proceedings arising from environmental fines related to exploration and production operations (Upstream) contested because of disagreement over the interpretation and application of standards by IBAMA, as well as a public civil action filed by the Ministério Público Federal for alleged environmental damage due to the accidental sinking of P-36 Platform. Current status: A number of defense trials and the administrative appeal regarding the fines are pending, and others are under judicial discussion. With respect to the civil action, the Company appealed the ruling that was unfavorable in the lower court and monitors the use of the procedure that will be judged by the Regional Federal Court.	1,439
3) Other environmental matters	2,854
<b>Total for environmental matters</b>	<b>7,079</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. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-10111 (JSR), Janus Overseas Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-10086 (JSR), PIMCO Funds: PIMCO Total Return Fund, et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-08192 (JSR) and Al Shams Investments Ltd., et al. v. Petróleo Brasileiro S.A. – Petrobras, et al., No. 15-cv-6243 (JSR). The terms of the settlements are confidential.

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

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

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

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 R\$ 3,193 (R\$ 2,960 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 Petrolíferos 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 R\$ 7,965 of which R\$ 3,231 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 R\$ 2,598 and bank guarantees of R\$ 633.

## 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	12.31.2016	12.31.2015	
<b>Derivatives not designated for hedge accounting</b>					
Future contracts - total (*)	(1,866)	(5,694)	(25)	149	
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	-	38	
Call/Crude oil and oil products	-	-	-	-	2017
Put/Crude oil and oil products	120	123	-	38	2017
Forward contracts - total			1	24	
Long position/Foreign currency forwards (BRL/USD) (**)	US\$ 0	US\$ 217	-	23	-
Short position/Foreign currency forwards (BRL/USD) (**)	US\$ 15	US\$ 50	1	1	2017
<b>Derivatives designated for hedge accounting</b>					
Swap - total			(34)	(130)	-
Foreign currency / Cross-currency Swap (**)	US\$ 0	US\$ 298	-	(62)	2016
Interest - Libor / Fixed rate (**)	US\$ 371	US\$ 396	(34)	(68)	2019
<b>Total recognized in the Statement of Financial Position</b>			<b>(58)</b>	<b>81</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	2016	2015	12.31.2016	12.31.2015
Commodity derivatives	(169)	927	-	-	180	36
Foreign currency derivatives	(181)	90	21	30	-	-
Interest rate derivatives	(24)	(31)	9	5	-	-
	(374)	986	30	35	180	36
Cash flow hedge on exports (***)	(9,935)	(7,088)	50,262	(61,651)	-	-
<b>Total</b>	<b>(10,309)</b>	<b>(6,102)</b>	<b>50,292</b>	<b>(61,616)</b>	<b>180</b>	<b>36</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 as follows:

Financial Instruments	Risk	Consolidated		
		Probable Scenario <sup>(*)</sup>	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	-	(221)	(442)
Forward contracts	Foreign currency - depreciation BRL x USD	-	12	25
Options	Crude oil and oil products - price changes	-	-	-
		-	(209)	(417)
<b>Derivatives designated for hedge accounting</b>				
Swap		10	(3)	(7)
Debt	Interest - LIBOR increase	(10)	3	7
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.

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 R\$ 1,116 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
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
<b>Changes in the reference value (principal and interest)</b>				<b>US\$ million</b>	<b>R\$</b>
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	Consolidated 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	(26,669)	9,067	(17,602)
Recognized in shareholders' equity	(68,739)	23,371	(45,368)
Reclassified to the statement of income - occurred exports	6,889	(2,342)	4,547
Reclassified to the statement of income - exports no longer expected or not occurred	199	(68)	131
<b>Balance at December 31, 2015</b>	<b>(88,320)</b>	<b>30,028</b>	<b>(58,292)</b>
Recognized in shareholders' equity	40,327	(13,711)	26,616
Reclassified to the statement of income - occurred exports	8,819	(2,998)	5,821
Reclassified to the statement of income - exports no longer expected or not occurred	1,116	(380)	736
<b>Balance at December 31, 2016</b>	<b>(38,058)</b>	<b>12,939</b>	<b>(25,119)</b>

Additional hedging relationships may be revoked or additional reclassification adjustments from equity to the statement of income may occur as a result of changes in 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 R\$ 100 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	Consolidated Total
Expected realization	(10,490)	(10,388)	(7,021)	(5,117)	(4,329)	(4,950)	(2,266)	6,503	(38,058)

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

The Company had cross currency swap to fix in U.S. dollars 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	Consolidated		
			Probable Scenario (*)	Stressed Scenario (Δ of 25%)	Stressed Scenario (Δ of 50%)
Assets	13,523		87	3,381	6,762
Liabilities	(212,413)	Dollar/Real	(1,362)	(53,103)	(106,207)
Cash flow hedge on exports	201,292		1,291	50,323	100,646
	2,402		16	601	1,201
Liabilities	(599)	Yen/Dollar	(9)	(150)	(300)
	(599)		(9)	(150)	(300)
Assets	14		-	4	7
Liabilities	(163)	Euro/Real	1	(41)	(82)
	(149)		1	(37)	(75)
Assets	22,097	Euro/Dollar	(316)	5,524	11,049
Liabilities	(43,550)		623	(10,888)	(21,775)
	(21,453)		307	(5,364)	(10,726)
Assets	7	Pound/Real	-	2	4
Liabilities	(63)		1	(16)	(32)
	(56)		1	(14)	(28)
Assets	8,662	Pound/Dollar	(201)	2,166	4,331
Liabilities	(14,743)		341	(3,686)	(7,372)
	(6,081)		140	(1,520)	(3,041)
<b>Total</b>	<b>(25,936)</b>		<b>456</b>	<b>(6,484)</b>	<b>(12,969)</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.

	<b>Consolidated</b>	
	<b>12.31.2016</b>	<b>12.31.2015</b>
Total debt (current and non-current)	385,784	493,023
Cash and cash equivalents	69,108	97,845
Government securities and time deposits (maturity of more than three months)	2,556	3,042
Net debt	314,120	392,136
Net debt/(net debt+shareholders' equity)	55%	60%
Adjusted EBITDA	88,693	76,752
Net debt/Adjusted EBITDA ratio	3.54	5.11

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:

	Consolidated			
	Cash and cash equivalents		Marketable securities	
	2016	2015	2016	2015
AAA	17,004	-	-	-
AA	24	2,214	-	-
A	37,064	73,986	-	-
BBB	138	14,063	-	260
BB	9,107	653	-	-
B	32	29	-	-
AAA.br	1,217	6,590	2,848	3,043
AA.br	4,463	42	1	-
Other ratings	59	268	-	86
	69,108	97,845	2,849	3,389

### 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 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	Consolidated							
	2017	2018	2019	2020	2021	2022 and thereafter	12.31.2016	12.31.2015
Principal	28,711	36,929	68,765	53,735	61,606	140,481	390,227	497,289
Interest	23,353	21,749	19,123	14,739	10,456	100,932	190,352	230,531
Total	52,064	58,678	87,888	68,474	72,062	241,413	580,579	727,820

### 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 deductibles up to the equivalent to US\$ 180 million (US\$ 25 million 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 independent auditors.

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

Assets	Types of coverage	Amount insured	
		Consolidated	Parent company
	Fire, operational risks and engineering risks	522,758	367,171
Facilities, equipment inventory and products inventory			
Tankers and auxiliary vessels	Hulls	13,233	1,562
Fixed platforms, floating production systems and offshore drilling units	Oil risks	107,502	20,143
<b>Total</b>		<b>643,493</b>	<b>388,876</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.

Assets	Fair value measured based on			Total fair value recorded
	Level I	Level II	Level III	
Marketable securities	2,557	-	-	2,557
Foreign currency derivatives	-	1	-	1
<b>Balance at December 31, 2016</b>	<b>2,557</b>	<b>1</b>	<b>-</b>	<b>2,558</b>
<b>Balance at December 31, 2015</b>	<b>3,255</b>	<b>24</b>	<b>-</b>	<b>3,279</b>
<b>Liabilities</b>				
Foreign currency derivatives	-	-	-	-
Commodity derivatives	(25)	-	-	(25)
Interest derivatives	-	(34)	-	(34)
<b>Balance at December 31, 2016</b>	<b>(25)</b>	<b>(34)</b>	<b>-</b>	<b>(59)</b>
<b>Balance at December 31, 2015</b>	<b>-</b>	<b>(130)</b>	<b>-</b>	<b>(130)</b>

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 million and € 632 million (US\$ 676 million) 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 the 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. 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.

## Social Balance (unaudited)

				Consolidated		
				2015		
<b>1 - Calculation basis</b>				<b>2016</b>		
Consolidated sales revenues (SR)				282,589		
Consolidated net income (loss) before profit sharing and taxes (OI)				(10,703)		
Consolidated gross payroll (GP) (i)				33,309		
				<b>2015</b>		
				321,638		
				(41,229)		
				30,637		
				<b>2016</b>		
				282,589		
				(10,703)		
				33,309		
				321,638		
				(41,229)		
				30,637		
				<b>2015</b>		
				321,638		
				(41,229)		
				30,637		
				<b>2016</b>		
				282,589		
				(10,703)		
				33,309		
				321,638		
				(41,229)		
				30,637		
				<b>2015</b>		
				321,638		
				(41,229)		
				30,637		
				<b>2016</b>		
				282,589		
				(10,703)		
				33,309		
				321,638		
				(41,229)		
				30,637		
				<b>2015</b>		
				321,638		
				(41,229)		
				30,637		
				<b>2016</b>		
				282,589		
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## Social Balance (continuation)

	<b>Consolidated</b>					
	<b>2016</b>			<b>2015</b>		
<b>5 - Indicators for the staff</b>						
N° of employees at the end of the period	68,829			78,470		
N° of hired people during the period (II)	2,108			804		
N° of contracted employees (outsourcing) (III)	117,555			158,076		
N° of student trainees (IV)	765			1,438		
N° of employees older than 45 (V)	27,123			31,268		
N° of women that work in the Company (V)	12,030			13,695		
% of leadership positions held by women (V)	14.5%			15.3%		
N° of Afro-descendant employees in the Company (VI)	18,193			20,098		
% of leadership positions held by Afro-descendants (VII)	20.8%			25.3%		
N° of employees with disabilities(VIII)	441			444		
<b>6 - Significant information with respect to the exercise of corporate citizenship</b>	<b>2016</b>			<b>Goals 2017</b>		
Ratio between the Company's highest and lowest compensation (IX)	30.0			-		
Total number of work accidents (X)	1,847			1,786		
The social and environmental projects developed by the Company were defined by:	(X) directors ( ) directors and managers		( ) all employees	(X) directors ( ) directors and managers		( ) all employees
The health and safety standards in the work environment were defined by:	(X) directors and managers	( ) all the employees	( ) everyone + Cipa	(X) directors and managers	( ) all the employees	( ) everyone + Cipa
With respect to union freedom, the right to collective bargaining and internal representation of the employees, the Company:	( ) is not involved	( ) follows ILO standards	(X) encourages and follows ILO	( ) will not be involved	( ) will follow ILO standards	(X) will encourage and follow ILO
The pension benefits include:	( ) directors ( ) directors and managers		(X) all employees	( ) directors ( ) directors and managers		(X) all employees
Profit-sharing includes:	( ) directors ( ) directors and managers		(X) all employees	( ) directors ( ) directors and managers		(X) all employees
In the selection of suppliers, the same ethical standards and standards of social and environmental responsibility adopted by the Company:	( ) are not considered	( ) are suggested	(X) are required	( ) will not be considered	( ) will be suggested	(X) will be required
With respect to the participation of employees in voluntary work programs, the Company:	( ) is not involved	(X) organizes and encourages		( ) will not be involved	( ) will give support	(X) will organize and encourage
Total number of complaints and criticisms from consumers: (XI)	in the Company 11,598	in Procon 34	in court 57	in the Company 8,211	in Procon 0	in court 20
% of claims and criticisms attended or resolved:	in the Company 99.5%	in Procon 23.5%	in court 7%	in the Company 97.7%	in Procon 0%	in court 15%
Total value added to distribute (in thousands of R\$):	In 2016: 193,445			In 2015: 169,931		
Distribution of added value:	55% government 0% shareholders	18% employees 34% third parties	-7% 0% shareholders retained	65% government 39% third parties	17% employees -21%	retained

## 7 - Other information

- I. In 2016, the alert limit for wastage was 245,000 tons, and the Company achieved approximately 132,000 tons.
- II. Information of the Petrobras Group, which includes hiring through public selection processes in Brazil, and direct hiring from the Parent Company and its subsidiaries abroad.
- III. Reflects only the service providers who work at Petrobras facilities.
- IV. Information relating to interns of the Parent Company, Petrobras Distribuidora, Transpetro, Termobahia and TBG. Other subsidiaries do not have internship programs.
- V. Information relating to employees of the Parent Company, Petrobras Distribuidora, Transpetro, Liquigás, Araucária, Breitener Energética, Breitener Tambaqui, Breitener Jaraqui, Citepe, Gas Brasileiro, Suape, Stratura, TBG, Termobahia and Petrobras Biocombustível.
- VI. Information relating to employees of the Parent Company, Petrobras Distribuidora, Transpetro, Liquigás, Araucária, Breitener Energética, Breitener Tambaqui, Breitener Jaraqui, Citepe, Gas Brasileiro, Suape, Stratura, TBG, Termobahia and Petrobras Biocombustível, who declared to be black.
- VII. Of the total leadership positions in the Parent Company held by employees who informed their color/race, 20.8% are held by people who declared to be black.
- VIII. Data obtained through the health records of the Company, from the self-declaration of the employee and medical analysis during the occupational exams.
- IX. Information from the Parent company.
- X. It refers to the number of injured people. There is no specific target for the total number of work accidents. The number presented for 2017 was estimated based on the alert limit established for the TOR and HHER (hours-men of risk exposure) indexes projected for the year.
- XI. The information on the Company includes the number of complaints and criticisms received by the Parent Company, Petrobras Distribuidora and Liquigás. The forecast for 2017 includes the Parent Company and Liquigás.
- (i) Consisting of salaries, benefits, FGTS, Social Security and other benefits to employees.



## Supplementary information on Oil and Gas Exploration and Production

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.

### **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 obligation assets:

	Consolidated Entities						Equity Method Investees	
	Brazil	South America	North America	Africa	Others	Abroad Total		
<b>December 31, 2016</b>						<b>Total</b>		
Unproved oil and gas properties	22,741	376	899	-	-	1,275	24,016	-
Proved oil and gas properties	284,439	288	13,896	-	-	14,184	298,623	9,162
Support equipments	272,926	1,541	228	-	13	1,782	274,708	20
Gross capitalized costs	580,106	2,205	15,023	-	13	17,241	597,347	9,182
Depreciation, depletion and amortization	(181,213)	(1,134)	(6,247)	-	(13)	(7,394)	(188,607)	(3,796)
Net capitalized costs	398,893	1,071	8,776	-	-	9,847	408,740	5,386
<b>December 31, 2015</b>								
Unproved oil and gas properties	26,239	520	1,547	-	-	2,067	28,306	-
Proved oil and gas properties	276,544	7,872	16,037	-	-	23,909	300,453	11,318
Support equipments	276,972	4,164	256	-	16	4,436	281,408	345
Gross capitalized costs	579,755	12,556	17,840	-	16	30,412	610,167	11,663
Depreciation, depletion and amortization	(159,173)	(7,955)	(6,146)	-	(16)	(14,117)	(173,290)	(5,006)
Net capitalized costs	420,582	4,601	11,694	-	-	16,295	436,877	6,657
<b>December 31, 2014</b>								
Unproved oil and gas properties	24,698	192	1,788	-	-	1,980	26,678	24
Proved oil and gas properties	256,376	5,332	11,281	-	-	16,613	272,989	12,065
Support equipments	211,159	3,136	206	-	9	3,351	214,510	69
Gross capitalized costs	492,233	8,660	13,275	-	9	21,944	514,177	12,158
Depreciation, depletion and amortization	(124,020)	(4,656)	(3,383)	-	(9)	(8,048)	(132,068)	(4,831)
Net capitalized costs	368,213	4,004	9,892	-	-	13,896	382,109	7,327

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

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

						Consolidated Entities		Equity Method Investees
	Brazil	South America	North America	Africa	Others	Abroad Total	Total	
<b>December 31, 2016</b>								
Acquisition costs:								
Proved	-	347	-	-	-	347	347	-
Unproved	-	-	-	-	-	-	-	-
Exploration costs	5,127	155	21	-	4	180	5,307	16
Development costs	42,342	622	523	-	-	1,145	43,487	1,374
<b>Total</b>	<b>47,469</b>	<b>1,124</b>	<b>544</b>	<b>-</b>	<b>4</b>	<b>1,672</b>	<b>49,141</b>	<b>1,390</b>
<b>December 31, 2015</b>								
Acquisition costs:								
Proved	-	-	-	-	-	-	-	-
Unproved	-	-	-	-	-	-	-	-
Exploration costs	9,989	179	275	-	-	454	10,443	34
Development costs	47,906	1,486	1,310	-	-	2,796	50,702	1,420
<b>Total</b>	<b>57,895</b>	<b>1,665</b>	<b>1,585</b>	<b>-</b>	<b>-</b>	<b>3,250</b>	<b>61,145</b>	<b>1,454</b>
<b>December 31, 2014</b>								
Acquisition costs:								
Proved	-	209	-	-	-	209	209	-
Unproved	120	-	-	-	-	-	120	-
Exploration costs	12,833	288	317	36	-	641	13,474	-
Development costs	42,726	1,285	983	-	-	2,268	44,994	1,501
<b>Total</b>	<b>55,679</b>	<b>1,782</b>	<b>1,300</b>	<b>36</b>	<b>-</b>	<b>3,118</b>	<b>58,797</b>	<b>1,501</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.

	Consolidated Entities						Equity Method Investees	
	Brazil	South America	North America	Africa	Others	Abroad Total		
<b>December 31, 2016</b>								
Net operation revenues:								
Sales to third parties	2,363	776	1,948	-	-	2,724	5,087	1,165
Intersegment	109,101	1,845	-	-	-	1,845	110,946	96
	111,464	2,621	1,948	-	-	4,569	116,033	1,261
Production costs	(48,162)	(1,119)	(464)	-	-	(1,583)	(49,745)	(171)
Exploration expenses	(5,533)	(115)	(404)	-	(4)	(523)	(6,056)	(13)
Depreciation, depletion and amortization	(34,958)	(349)	(1,150)	-	-	(1,499)	(36,457)	(520)
Impairment of oil and gas properties	(10,134)	(418)	(148)	-	-	(566)	(10,700)	-
Other operating expenses	(5,425)	(347)	(634)	-	77	(904)	(6,329)	(84)
Results before income tax expenses	7,252	273	(852)	-	73	(506)	6,746	473
Income tax expenses	(2,466)	(162)	(1)	-	45	(118)	(2,584)	(330)
Results of operations (excluding corporate overhead and interest costs)	4,786	111	(853)	-	118	(624)	4,162	143
<b>December 31, 2015</b>								
Net operation revenues:								
Sales to third parties	2,076	1,002	1,949	-	-	2,951	5,027	1,853
Intersegment	108,846	3,225	-	-	-	3,225	112,071	62
	110,922	4,227	1,949	-	-	6,176	117,098	1,915
Production costs	(53,863)	(1,853)	(629)	-	-	(2,482)	(56,345)	(698)
Exploration expenses	(5,262)	(66)	(1,139)	-	-	(1,205)	(6,467)	(110)
Depreciation, depletion and amortization	(24,735)	(1,005)	(823)	-	-	(1,828)	(26,563)	(624)
Impairment of oil and gas properties	(35,739)	(796)	(1,757)	-	-	(2,553)	(38,292)	(1,077)
Other operating expenses	(6,581)	182	(352)	-	(618)	(788)	(7,369)	(166)
Results before income tax expenses	(15,258)	689	(2,751)	-	(618)	(2,680)	(17,938)	(760)
Income tax expenses	5,188	(261)	5	-	53	(203)	4,985	(286)
Results of operations (excluding corporate overhead and interest costs)	(10,070)	428	(2,746)	-	(565)	(2,883)	(12,953)	(1,046)
<b>December 31, 2014</b>								
Net operation revenues:								
Sales to third parties	1,190	1,975	2,144	-	-	4,119	5,309	1,578
Intersegment	152,515	2,903	-	-	-	2,903	155,418	3,279
	153,705	4,878	2,144	-	-	7,022	160,727	4,857
Production costs	(64,366)	(2,459)	(489)	-	-	(2,948)	(67,314)	(1,398)
Exploration expenses	(6,720)	(69)	(308)	(38)	-	(415)	(7,135)	(675)
Depreciation, depletion and amortization	(18,091)	(852)	(1,208)	-	-	(2,060)	(20,151)	(421)
Impairment of oil and gas properties	(5,665)	(230)	(4,183)	(16)	-	(4,429)	(10,094)	(180)
Other operating expenses	(6,722)	2,610	(276)	6	279	2,619	(4,103)	(20)
Results before income tax expenses	52,141	3,878	(4,320)	(48)	279	(211)	51,930	2,163
Income tax expenses	(17,728)	(1,206)	(10)	-	41	(1,175)	(18,903)	(1,576)
Results of operations (excluding corporate overhead and interest costs)	34,413	2,672	(4,330)	(48)	320	(1,386)	33,027	587

#### 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 geengineers 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.

A summary of the annual changes in the proved reserves of oil is as follows (in millions of barrels):

**Proved developed and undeveloped reserves - Consolidated Entities**

	Crude oil in Brazil	Abroad			Synthetic oil in Brazil	Total
		South America	North America	Africa		
Reserves at December 31, 2013	10,658.4	166.0	123.1	-	289.2	10,956.4
Revisions of previous estimates	629.3	(3.2)	5.3	-	2.1	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	(704.6)	(18.3)	(10.0)	-	(28.3)	(734.0)
<b>Reserves at December 31, 2014</b>	<b>10,850.9</b>	<b>66.5</b>	<b>119.9</b>	<b>-</b>	<b>186.5</b>	<b>11,045.1</b>
Revisions of previous estimates	(1,968.9)	(3.5)	(18.1)	-	(21.6)	(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	(743.1)	(11.7)	(11.2)	-	(22.8)	(767.0)
<b>Reserves at December 31, 2015</b>	<b>8,544.1</b>	<b>52.3</b>	<b>90.6</b>	<b>-</b>	<b>142.9</b>	<b>8,693.9</b>
Revisions of previous estimates	179.5	0.1	17.9	-	18.0	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	(748.5)	(5.7)	(12.1)	-	(17.8)	(767.2)
<b>Reserves at December 31, 2016</b>	<b>8,063.0</b>	<b>0.8</b>	<b>96.4</b>	<b>-</b>	<b>97.3</b>	<b>8,167.1</b>

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

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

**Proved developed and undeveloped reserves - Equity Method Investees**

	Crude Oil abroad	Abroad			Brazil's Synthetic Oil	Total
		South America	North America	Total of crude oil abroad		
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	-	(1.7)	-	(9.6)	(11.3)	(11.3)
<b>Reserves at December 31, 2014</b>	<b>-</b>	<b>18.0</b>	<b>-</b>	<b>54.1</b>	<b>72.1</b>	<b>72.1</b>
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	-	(1.2)	-	(9.7)	(10.9)	(10.9)
<b>Reserves at December 31, 2015</b>	<b>-</b>	<b>14.6</b>	<b>-</b>	<b>65.8</b>	<b>80.4</b>	<b>80.4</b>
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	-	(0.5)	-	(8.7)	(9.2)	(9.2)
<b>Reserves at December 31, 2016</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>69.0</b>	<b>69.0</b>	<b>69.0</b>

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

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

**Proved developed and undeveloped reserves - Consolidated Entities**

	Natural Gas in Brazil	Abroad			Brazil's Synthetic Gas	Total
		South America	North America	Total Natural Gas abroad		
Reserves at December 31, 2013	11,291.7	1,058.5	132.9	0.0	1,191.4	12,494.8
Revisions of previous estimates	468.0	25.5	46.1	-	71.6	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	(805.4)	(101.5)	(4.9)	-	(106.4)	(913.2)
<b>Reserves at December 31, 2014</b>	<b>11,170.3</b>	<b>730.8</b>	<b>180.0</b>	<b>0.0</b>	<b>910.8</b>	<b>12,091.5</b>
Revisions of previous estimates	(1,178.3)	16.8	(17.0)	-	(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	(820.8)	(79.2)	(24.5)	-	(103.7)	(925.9)
<b>Reserves at December 31, 2015</b>	<b>9,587.7</b>	<b>680.5</b>	<b>138.5</b>	<b>-</b>	<b>819.1</b>	<b>10,416.1</b>
Revisions of previous estimates	(476.2)	22.9	(19.3)	-	3.6	(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	(809.7)	(50.9)	(32.1)	-	(82.9)	(894.0)
<b>Reserves at December 31, 2016</b>	<b>8,394.0</b>	<b>113.9</b>	<b>87.2</b>	<b>-</b>	<b>201.1</b>	<b>8,604.3</b>

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

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

**Proved developed and undeveloped reserves - Equity Method Investees**

	Natural Gas in Brazil	Abroad			Total Gas abroad	Total	Total
		South America	North America	Africa			
Reserves at December 31, 2013	-	41.3	-	20.6	61.9	-	61.9
Revisions of previous estimates	-	(13.1)	-	(1.2)	(14.4)	-	(14.4)
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production	-	(0.6)	-	-	(0.6)	-	(0.6)
<b>Reserves at December 31, 2014</b>	<b>-</b>	<b>27.6</b>	<b>-</b>	<b>19.3</b>	<b>46.9</b>	<b>-</b>	<b>46.9</b>
Revisions of previous estimates	-	(10.4)	-	(2.7)	(13.1)	-	(13.1)
Extensions and discoveries	-	-	-	-	-	-	-
Improved Recovery	-	-	-	-	-	-	-
Sales of reserves	-	-	-	-	-	-	-
Purchases of reserves	-	-	-	-	-	-	-
Production	-	(0.3)	-	-	(0.3)	-	(0.3)
<b>Reserves at December 31, 2015</b>	<b>-</b>	<b>16.9</b>	<b>-</b>	<b>16.6</b>	<b>33.5</b>	<b>-</b>	<b>33.5</b>
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	-	(0.1)	-	-	(0.1)	-	(0.1)
<b>Reserves at December 31, 2016</b>	<b>-</b>	<b>(0.0)</b>	<b>-</b>	<b>12.5</b>	<b>12.5</b>	<b>-</b>	<b>12.5</b>

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

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 and non-consolidated affiliate entities for 2016, 2015 and 2014:

**Proved developed and undeveloped reserves - Consolidated**

	Oil equivalent in Brazil	Abroad			Total oil equivalent abroad	Total synthetic oil equivalent in Brazil	Total for all products
		South America	North America	Africa			
<b>Reserves at December 31, 2014</b>	<b>12,540.4</b>	<b>342.5</b>	<b>145.4</b>	<b>-</b>	<b>487.9</b>	<b>10.7</b>	<b>13,039.0</b>
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)
<b>Reserves at December 31, 2014</b>	<b>12,712.6</b>	<b>188.3</b>	<b>150.1</b>	<b>-</b>	<b>338.3</b>	<b>9.6</b>	<b>13,060.7</b>
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)
<b>Reserves at December 31, 2015</b>	<b>10,142.1</b>	<b>165.7</b>	<b>113.7</b>	<b>-</b>	<b>279.4</b>	<b>8.5</b>	<b>10,430.0</b>
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)
<b>Reserves at December 31, 2016</b>	<b>9,462.0</b>	<b>19.8</b>	<b>111.0</b>	<b>-</b>	<b>130.8</b>	<b>8.3</b>	<b>9,601.1</b>

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

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 the numbers are due to rounding off.

**Proved developed and undeveloped reserves - Consolidated and Equity Method Investees**

	Abroad				Total oil equivalent abroad	Total synthetic oil equivalent in Brazil	Total for all products
	Oil equivalent in Brazil	South America	North America	Africa			
Reserves at December 31, 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 the numbers are due to rounding off.

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

The tables below present the volumes of proved developed and undeveloped reserves, net:

	2016				2015				2014			
	Crude Oil		Synthetic Gas		Crude Oil		Synthetic Gas		Crude Oil		Synthetic Gas	
	(millions of barrels)	(billions of cubic feet)	(billions of cubic feet)	(billions of cubic feet)	(millions of barrels)	(billions of cubic feet)	(billions of cubic feet)	(billions of cubic feet)	(millions of barrels)	(billions of cubic feet)	(billions of cubic feet)	(billions of 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 the numbers are due to rounding off.

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.

Information relating to the standardized measure of discounted future net flows, presented originally in U.S. dollars in Form 20-F of the SEC, were converted to reais for these financial statements. Therefore, in order to maintain consistency with the criteria used in measuring the estimates of future cash flows, as described above, the exchange rate used for converting each period follows the average prices calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period. Exchange differences arising from translation are shown as cumulative translation adjustments in the following tables.

Discounted future net cash flows:

	Consolidated Entities					Equity
	Abroad				Total	Method
	Brazil	South America	North America	Total		Investees
<b>At December 31, 2016</b>						
Future cash inflows	1,260,888	2,116	13,437	15,553	1,276,441	10,407
Future production costs	(738,852)	(843)	(7,597)	(8,440)	(747,292)	(3,839)
Future development costs	(149,444)	(425)	(1,875)	(2,300)	(151,744)	(2,481)
Future income tax expenses	(163,121)	(229)	(141)	(370)	(163,491)	(808)
Undiscounted future net cash flows	209,471	619	3,824	4,443	213,914	3,279
10% midyear annual discount for timing of estimated cash flows *	(88,016)	(275)	(897)	(1,172)	(89,188)	(1,221)
Standardized measure of discounted future net cash flows	121,455	344	2,927	3,271	124,726	2,058
<b>At December 31, 2015</b>						
Future cash inflows	1,524,183	21,563	15,560	37,123	1,561,306	12,995
Future production costs	(844,332)	(10,434)	(8,847)	(19,281)	(863,613)	(4,629)
Future development costs	(215,751)	(3,481)	(3,272)	(6,753)	(222,504)	(4,050)
Future income tax expenses	(202,433)	(1,736)	(76)	(1,812)	(204,245)	(1,151)
Undiscounted future net cash flows	261,667	5,912	3,365	9,277	270,944	3,165
10% midyear annual discount for timing of estimated cash flows *	(120,677)	(1,939)	(488)	(2,427)	(123,104)	(1,480)
Standardized measure of discounted future net cash flows	140,990	3,973	2,877	6,850	147,840	1,685
<b>At December 31, 2014</b>						
Future cash inflows	2,529,273	16,770	26,530	43,300	2,572,573	14,704
Future production costs	(1,098,425)	(8,762)	(8,630)	(17,392)	(1,115,817)	(4,456)
Future development costs	(164,084)	(2,798)	(5,504)	(8,302)	(172,386)	(3,775)
Future income tax expenses	(441,802)	(1,447)	(955)	(2,402)	(444,204)	(2,152)
Undiscounted future net cash flows	824,962	3,763	11,441	15,204	840,166	4,321
10% midyear annual discount for timing of estimated cash flows *	(418,349)	(1,230)	(3,703)	(4,933)	(423,282)	(1,296)
Standardized measure of discounted future net cash flows	406,613	2,533	7,738	10,271	416,884	3,025

(\*) Semiannual capitalization

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

	Consolidated Entities					Equity Method
	South America					Investees
	Brazil				Total	
Balance at January 1, 2016	140,990	3,973	2,877	6,850	147,840	1,685
Sales and transfers of oil and gas, net of production cost	(63,242)	(1,238)	(1,524)	(2,762)	(66,004)	(733)
Development costs incurred	42,342	622	523	1,145	43,487	1,374
Net change due to purchases and sales of minerals in place	-	(3,860)	-	(3,860)	(3,860)	(189)
Net change due to extensions, discoveries and improved, less related costs	4,353	-	1,709	1,709	6,062	236
Revisions of previous quantity estimates	4,225	-	785	785	5,010	854
Net change in prices, transfer prices and in production costs	(95,372)	-	(2,681)	(2,681)	(98,053)	(1,682)
Changes in estimated future development costs	32,372	-	814	814	33,186	(65)
Accretion of discount	14,099	571	290	861	14,960	184
Net change in income taxes	31,044	-	(4)	(4)	31,040	217
Others - unspecified	-	(2)	(66)	(68)	(68)	59
Cumulative translation adjustment	10,644	278	204	482	11,126	118
Balance at December 31, 2016	121,455	344	2,927	3,271	124,726	2,058

	Consolidated Entities					Equity Method
	Abroad					Investees
	Brazil	South America	North America	Total	Total	
Balance at January 1, 2015	406,613	2,532	7,739	10,271	416,884	3,025
Sales and transfers of oil and gas, net of production cost	(57,037)	(1,845)	(1,329)	(3,174)	(60,211)	(818)
Development costs incurred	47,906	1,486	1,310	2,796	50,702	1,420
Net change due to purchases and sales of minerals in place	(113)	(191)	-	(191)	(304)	-
Net change due to extensions, discoveries and improved, less related costs	21,499	1,068	-	1,068	22,567	1,606
Revisions of previous quantity estimates	(97,550)	6	(2,161)	(2,155)	(99,705)	441
Net change in prices, transfer prices and in production costs	(610,081)	499	(9,258)	(8,759)	(618,840)	(5,728)
Changes in estimated future development costs	(22,904)	(1,221)	1,775	554	(22,350)	(399)
Accretion of discount	40,661	517	1,035	1,552	42,213	429
Net change in income taxes	226,167	220	305	525	226,692	1,110
Others - unspecified	-	(133)	303	170	170	599
Cumulative translation adjustment	185,829	1,035	3,158	4,193	190,022	-
Balance at December 31, 2015	140,990	3,973	2,877	6,850	147,840	1,685

	Consolidated Entities					Equity Method
	Abroad					Investees
	Brazil	South America	North America	Total	Total	
Balance at January 1, 2014	406,422	5,935	7,186	13,121	419,543	3,672
Sales and transfers of oil and gas, net of production cost	(89,330)	(1,525)	(1,638)	(3,163)	(92,493)	(2,228)
Development costs incurred	42,726	1,285	983	2,268	44,994	1,501
Net change due to purchases and sales of minerals in place	-	(2,555)	249	(2,306)	(2,306)	-
Net change due to extensions, discoveries and improved, less related costs	16,847	427	-	427	17,274	-
Revisions of previous quantity estimates	39,241	(64)	498	434	39,675	(71)
Net change in prices, transfer prices and in production costs	(78,114)	(599)	(884)	(1,483)	(79,597)	(1,347)
Changes in estimated future development costs	(27,679)	(846)	90	(756)	(28,435)	(273)
Accretion of discount	40,642	308	803	1,111	41,753	412
Net change in income taxes	17,720	(266)	(220)	(486)	17,234	202
Others - unspecified	-	(71)	57	(14)	(14)	-
Cumulative translation adjustment	38,138	503	615	1,118	39,256	1,157
Balance at December 31, 2014	406,613	2,532	7,739	10,271	416,884	3,025

Bolivian proved reserves are not included due to restrictions in accordance with Bolivian Constitution.

**BOARD OF DIRECTORS**

LUIZ NELSON GUEDES DE CARVALHO

**CHAIRMAN**

PEDRO PULLEN PARENTE

**MEMBER**

JERÔNIMO ANTUNES

**MEMBER**

SEGEN FARID ESTEFEN

**CONSELHEIRO**

GUILHERME AFFONSO FERREIRA

**MEMBER**

DURVAL JOSÉ SOLEDADE SANTOS

**MEMBER**

BETANIA RODRIGUES COUTINHO

**CONSELHEIRO**

FRANCISCO PETROS OLIVEIRA LIMA PAPATHANASIADIS

**MEMBER**

MARCELO MESQUITA DE SIQUEIRA FILHO

**MEMBER**

**EXECUTIVE COMMITTEE (OFFICERS)**

PEDRO PULLEN PARENTE

**Chief Executive Officer (CEO) - President**

HUGO REPSOLD JÚNIOR

**CHIEF HUMAN RESOURCES, HSE AND SERVICES  
EXECUTIVE OFFICER**

JOÃO ADALBERTO ELEK JÚNIOR

**CHIEF GOVERNANCE AND COMPLIANCE  
EXECUTIVE OFFICER**

NELSON LUIZ COSTA SILVA

**CHIEF STRATEGY, ORGANIZATION AND MANAGEMENT SYSTEM  
EXECUTIVE OFFICER**

ROBERTO MORO

**CHIEF TECHNOLOGY AND PRODUCTION DEVELOPMENT  
EXECUTIVE OFFICER**

IVAN DE SOUZA MONTEIRO

**CHIEF FINANCIAL AND INVESTOR RELATIONS  
EXECUTIVE OFFICER**

JORGE CELESTINO RAMOS

**CHIEF REFINING AND NATURAL GAS  
EXECUTIVE OFFICER**

SOLANGE DA SILVA GUEDES

**CHIEF EXPLORATION AND PRODUCTION  
EXECUTIVE OFFICER**

PAULO JOSE ALVES

**Chief Accounting Officer (CAO)  
CRC-RJ-060.073/O-0**

**Petróleo Brasileiro S.A. – Petrobras**  
**REPORT OF THE PETROBRAS STATUTORY AUDIT COMMITTEE –**  
**FISCAL YEAR 2016**

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**Summary Annual Report of the Statutory Audit Committee – Fiscal Year 2016**

The Board of Directors of  
Petróleo Brasileiro S.A. – Petrobras

**1. Introduction**

The Statutory Audit Committee ("CAE" or "Committee") is a permanent body directly under the Board of Directors of Petróleo Brasileiro S.A. – Petrobras ("Company"), governed by CVM Instruction No. 308, dated of May 14, 1999, as amended by CVM Instruction No. 509, dated of November 16, 2011, and other applicable regulations, including the Sarbanes-Oxley Act ("SOx") and rules issued by the Securities and Exchange Commission ("SEC") and the New York Stock Exchange ("NYSE"), with its own Internal Rules ("Rules").

The purpose of the Statutory Audit Committee is to advise the Board of Directors in the exercise of their duties, working primarily on (i) the quality, transparency, and integrity of individual and consolidated financial statements (hereinafter the "financial statements"); (ii) the effectiveness of internal control processes for the production of financial reports; and (iii) the performance, independence, and quality of the work by Independent Auditors and Internal Auditors.

In fulfilling its responsibilities, the CAE is not responsible for planning or conducting audits or any assertion on the completeness and accuracy of the Company's financial statements, or are presented in accordance with the accounting practices adopted in Brazil issued by the Committee on Accounting Standards (Comitê de Pronunciamentos Contábeis) – CPC and with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). This is the responsibility of Management and the independent auditors. In fulfilling its responsibilities as described in its Internal Rules, the CAE members are not performing the duties of auditors or accountants.

**2. Duties and Responsibilities**

**2.1 Company Management**

Company Management is responsible for: (i) defining and implementing processes and procedures whose purpose is to collect data in the preparation of the financial statements, in compliance with corporate law, the accounting practices adopted in Brazil plus the practices issued by the IASB, the relevant regulatory acts of the Securities and Exchange Commission of Brazil ("CVM") and, because it is listed on the New York Stock Exchange, the standards issued by the SEC and the SOx; (ii) preparing and ensuring the integrity of financial statements, managing risks, maintaining an effective system of internal controls, and enforcing compliance of activities to meet legal and regulatory standards, and (iii) internal control processes, policies, and procedures that ensure the safeguard of assets, the timely recognition of liabilities, and the elimination or reduction to acceptable levels of risk factors

## **. 2.2 Compliance and Internal Controls**

The current Executive Office of Governance and Compliance ("DGC") started activities in 2015, and its mission is to ensure compliance with processes and mitigate risks, among which the risk of fraud and corruption, enforcing compliance to laws, norms, standards, and internal and external and rules.

The Executive Department for Compliance, which is part of DGC, is tasked with planning, steering, coordinating, and assessing control and compliance activities, including the investigation and reduction of fraud and corruption risks, reporting to Senior Management on compliance actions and results throughout the Petrobras System.

Since creation in late 2014 of the Executive Office of Governance, Risk and Compliance ("DGRC" – currently Executive Office of Governance and Compliance, "DGC"), numerous actions have been implemented in Petrobras in order to ensure process compliance and risk reduction, in addition to enforce compliance with laws, norms, standards, and regulations, both internal and external to the Company. In this sense, over 2016, the following stand out as important measures of improvement in governance and controls: transformation of the Petrobras Audit Committee into a Statutory Audit Committee ("CAE") pursuant to CVM regulation; approval of the Appointment Policy for Members of the Audit Committee, Board of Directors and Executive Board of Petrobras; and approval of the revision for the Policy on Related Party Transactions.

## **2.3 Internal Audit**

Internal Audit, which is directly subordinated to the Board of Directors, is technically supervised by the Statutory Audit Committee, and is responsible for carrying out periodic works focused on major risks, broadly and independently evaluating the actions to manage those risks and the adequacy of governance and internal controls, covering the areas and activities that present the most sensitive risks to Petrobras' operations and strategy.

## **2.4 Risk Management and Monitoring**

After the amendment to the Petrobras Bylaws in 2016, the Executive Department of Corporate Risk became subordinate to the Executive Office for Strategy, Organization and Management System, and it is responsible for strengthening the integrated outlook of the business risks within the Petrobras System by identifying, assessing, monitoring and managing relevant risks, together with the different areas and companies in the Petrobras System.

## **2.5 Ombudsman and Whistleblowing Channel**

In 2015, after completing a recruitment process among market professionals, the Board of Directors, selected the new Ombudsman General of Petrobras and approved the restructuring of the Company's Ombudsman Office, including the implementation of an independent Whistleblowing Channel. Complaints, including anonymous complaints, are received through a system supplied by contractor company "Contato Seguro."

## **2.6 Independent Audit**

PricewaterhouseCoopers – PwC is responsible for the independent audit of the annual financial statements published and for the review of quarterly information (ITRs) filed with CVM, issuing reports that reflect the result of its findings and present its independent opinion on the reliability of financial statements in relation to the accounting practices adopted in Brazil issued by the Committee on Accounting Standards (Comitê de Pronunciamentos Contábeis) – CPC and with the International Financial Reporting Standards (IFRS) , issued by the International Accounting Standards Board (IASB), in addition to compliance to CVM rules, the provisions in Brazilian corporate law, and American regulations applicable to Petrobras.



## **2.7 Transactions with Related Parties**

The Statutory Audit Committee is in charge of assessing and monitoring together with Management and Internal Audit, the appropriateness of transactions with related parties carried out by the Company, as well as reviewing at least once a year, the summary of transactions with related parties by Petrobras involving the latter's Executive Officers, Board members, as well as the spouse or direct or collateral relatives up to the third degree, and, by affinity, up to the second degree, of said administrators, plus companies that employ any of its Executive Officers or Board members, in addition to any other related party relationship that is relevant, as defined by CVM and the SEC.

Upon the Board of Directors' approval on 12/15/2016 of the revision of Petrobras' Policy on Related Party Transactions, the CAE Internal Rules were changed so the Committee, in addition to assessing and monitoring transactions with related parties, pre-screens those transactions that meet the materiality criteria set out in CVM Instruction 480/09, pursuant to the revision of the Policy on Related Party Transactions.

## **3. History of Committee Composition**

On 1/1/2016, the Audit Committee was composed of the following Board members: Walter Mendes de Oliveira Filho (Committee Chair), Jerônimo Antunes, Luiz Augusto Fraga Navarro de Britto Filho and Roberto da Cunha Castello Branco.

On 2/24/2016, Board member Roberto da Cunha Castello Branco left the Audit Committee, but remained as member of the Petrobras Board of Directors and as Chair of this Board's Finance Committee.

On 2/26/2016, the Board of Directors approved the revision of the Audit Committee Internal Rules, turning it into a Statutory Audit Committee ("CAE") pursuant to CVM regulation.

On 3/4/2016, the Petrobras Board of Directors approved the appointment of Board member Francisco Petros Oladimeji Papathanasiadis as new CAE member, replacing Board member Luiz Augusto Navarro de Britto Filho, who left the CAE as he took office as Chief Minister of the Comptroller General's Office - CGU. Board member Francisco Petros had been elected as substitute to Board member Walter Mendes de Oliveira Filho by the common share minority shareholders during the Extraordinary General Meeting held by the Company on 7/1/2015.

On 5/2/2016, the Petrobras Board of Directors approved the appointment of Board members Walter Mendes de Oliveira Filho, Durval José Soledade Santos and Jerônimo Antunes as Statutory Audit Committee members for the 2016/2018 period, nominating Walter Mendes de Oliveira Filho as Committee Chair.

At a meeting held on 8/12/2016, in light of Board member Walter Mendes de Oliveira Filho's resignation from his posts as Board of Directors member and CAE Chair on 8/11/2016, the Board of Directors approved (i) to nominate Board member Jerônimo Antunes as Statutory Audit Committee Chair remainder of the 2016/2018 period, and (ii) to appoint Board member Marcelo Mesquita de Siqueira Filho as CAE member for the remainder of the 2016/2018 period. Board member Marcelo Mesquita had been appointed as Board member by the Board of Directors itself on 8/11/2016, in light of Board member Walter Mendes' resignation. Later, Board member Marcelo Mesquita was elected Board member by the common share minority shareholders at the Company's Extraordinary General Meeting held on 11/30/2016.

Therefore, the CAE is currently composed of the following Board of Directors members: Jerônimo Antunes (Chair), Durval José Soledade Santos and Marcelo Mesquita de Siqueira Filho, whereas Board member Jerônimo Antunes is the CAE's financial and corporate accounting expert, as provided for in Brazilian and American law.

It should be noted that all current CAE members meet the independence criteria set forth in Law No. 13,303/16, article 22, paragraph 1, and CVM Instruction n° 308/99, article 31-C, paragraph 2, as amended by CVM Instruction No. 509/11, as well as the independence criteria required by American law as applicable to Petrobras.

#### **4. Summary of Activities in 2016**

In the period from January 1, 2016 to March 21, 2017, the Petrobras Statutory Audit Committee held 44 meetings covering 216 items, involving Executive Officers, Executive Managers, Ombudsman, Internal Auditors and Independent Auditors, thus segregated:

##### **4.1 Auditoria Independente**

Fourteen meetings were held, discussing 17 items that addressed, among other topics, (i) the planning and execution of audit work on the quarterly and annual financial statements for the 2016 fiscal year, (ii) learn the nature, time and extent of the main audit procedures of selected and the materiality adopted, (iii) the audit risk analysis conducted, (iv) the significant deficiencies identified in the risk assessment of internal controls, (v) the points of attention identified and (vi) the conclusions of their audit tests. Information confirming the independence of auditors and the absence of conflicts of interest in work other than the auditing of the financial statements was also gathered.

Additionally, the so-called Main Audit Topics were discussed with the independent auditors, to be reported from this fiscal period on in the new Independent Auditor's Report, namely: (i) "Operation Car Wash" and its consequences to the Company; (ii) Class action and related processes; (iii) Fixed asset impairment; (iv) Lawsuits and contingencies; (v) Employee benefits; (vi) Accounts receivable – Electrical sector; (vii) Cancellations and advances to suppliers – Shipyards and (viii) Cash flow hedge accounting – Estimate of future exports.

##### **4.2 Accounting and Tax**

Twenty-seven items were assessed over 21 meetings, whose object were the quarterly and annual financial statements for the 2016 fiscal period, addressing the main accounting practices adopted, accounting estimates made, plus the presentations of financial standing, financial results, cash flows and added value, and the explanatory notes to the financial statements. These items also involved the following areas in addition to Independent Audit: Legal, Internal Controls, and Internal Audit.

##### **4.3 Internal Audit**

Twenty items under Internal Audit's responsibility were addressed in 14 meetings, during which the Statutory Audit Committee was informed of the points of attention and recommendations arising from the work of Internal Audit, and followed up on the corrective actions adopted by Management. These items addressed the quarterly and annual reports of Internal Audit work (RAINT), the Internal Audit Activity Plan (PAINT), in addition to the evolution of testing of SOx controls at Petrobras and its main subsidiaries.

It should be noted that, since September/2016, the Executive Manager of Internal Audit participates as a permanent guest of all Committee meetings.

##### **4.4 Conformidade e Sistemas de Controles Internos**

Thirty-eight items were presented in 20 meetings, whereas the following topics were subject to monitoring and recommendations, among others: (i) action plan regarding the points of attention and remediation of significant deficiencies reported in the 2016 Reference Form - 2016 fiscal year - filed with CVM (corresponding to the "Material Weaknesses" reported in the 2016 20-F Form - 2015 fiscal year - filed with the SEC), with rigorous monitoring by CAE on a monthly and/or weekly basis; (ii) internal control system; (iii) SOx/CVM risks; and (iv) Integrity Due Diligence Process.

#### **4.5 Ouvidoria-Geral e Canal de Denúncias**

Specifically, in relation to the Ombudsman and Whistleblowing Channel, 12 items were addressed in 10 meetings, in which very high and high risk complaints and quarterly reports covering all activities, complaints, and actions taken were presented in detail, as well as the revision of the Petrobras Ombudsman Policy and Guidelines.

#### **4.6 Gestão e Monitoramento de Riscos**

Nine Risk Management and Monitoring items were discussed over 9 meetings, with involvement of other company areas such as: Investor Relations, Governance, Internal Controls, and Accounting and Tax. These items addressed the following subjects, among others: (i) governance for tax risks; (ii) fraud and corruption risk management matrix; (iii) inventory of SOx/CVM risks; (iv) review and update process for the risk factors included in the Reference Form and the 20-F Form; (V) map of strategic risks, labor risks and risk appetite.

#### **4.7 Transações com Partes Relacionadas**

Six meetings were held, wherein 6 items were assessed on transactions with related parties, including the revision of the Policy on Related Parties.

#### **4.8 Outras Atividades**

The Statutory Audit Committee met with the main executives of the Company and its main subsidiaries, in order to learn of the key business strategies and monitor the operating and systemic improvements to strengthen the processing and security of transactions, totaling 94 items on such other topics.

Among other CAE activities, we mention the joint meetings with the Finance Committee on the Financial Statements, and with the Audit Committee, where accounting issues were addressed such as impairment and hedge accounting; and joint meetings with the Safety, Environment and Health Committee, which addressed topics related to HSE indicators; reports on HSE internal audits; and reports of serious accidents and fatalities in the Company.

### **5. Audit Committee Communications**

#### **5.1 Board of Directors**

The Statutory Audit Committee reports monthly to the Board of Directors meetings, the issues discussed in its meetings, its positions and requests made to the different areas of the Company, as well as monitoring results of the activities by Internal Auditors, Independent Auditors, the Executive Department of Compliance and the Ombudsman.

In addition, CAE issues specific recommendations to the Board of Directors on items submitted for resolution by this collegiate, as part of its statutory duties.

#### **5.2 Senior Management - Executive Board and Executive Managers**

In all meetings held by the Statutory Audit Committee, the Executive Offices involved in the topics to be discussed are invited and indicate the participation of the Executive Managers for the areas in charge of the items to be addressed.

In addition, the Executive Offices and Departments submit items to the CAE, as relevant to the duties of this Committee, referring to issues to be submitted for assessment and final decision by the Board of Directors, so that the Committee can examine them and issue its recommendation to the Board.

## **6. Recommendations to the Executive Board**

Among other recommendations, the Statutory Audit Committee recommended to the Executive Board to include in its regular meetings the monitoring of progress in measures to eliminate significant deficiencies (“Material Weaknesses”) in internal controls identified in the fiscal year ending on 12/31/2015, as well as monitoring any new obstacles identified, including efforts to advance the deadlines for completion of their treatment; and to arrange for the necessary resources to implement the following Action Plans and policies highlighted below:

- Remediation Plan of said significant deficiencies (“Material Weaknesses”);
- Harmonization of corporate policies between the holding and wholly-owned subsidiaries and controlled companies, regarding policies, Ombudsman performance and assessment standards, Internal Audit, HSE, Human Resources, Compliance, Legal, and Information Technology;
- Completion and Implementation of the Work Plan for Review of Judicial and Administrative Litigation Classification Methodology, to be executed jointly by the Legal, Accounting and Tax, Internal Audit, and Corporate Risks departments.

The Statutory Audit Committee believes that the issues highlighted in "Recommendations" above – whose Action Plans are either completed or in progress – were surrounded by satisfactory mitigating procedures to minimize any internal control risks that could impact the financial statements as of 12/31/2016.

## **7. Conclusions and recommendation to the Board of Directors**

The Statutory Audit Committee members, in the exercise of their duties and legal responsibilities, has completed the examination and analysis of the Financial Statements, together with the Independent Auditor’s Report and the Annual Management Report for the fiscal year ending on December 31, 2016 (“2016 Annual Financial Statements”).

Considering the information provided by Petrobras Management and by PricewaterhouseCoopers Independent Auditors, the members of the Statutory Audit Committee believe that all relevant facts of which they were informed by the work completed are properly disclosed in the Management Report and in the audited Financial Statements as of 12/31/2016, and recommend its approval by the Board of Directors.

Rio de Janeiro, March 21, 2017.

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Jerônimo Antunes  
Chair, Statutory Audit Committee  
Financial and corporate accounting expert

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Marcelo Mesquita de Siqueira Filho  
Member, Statutory Audit Committee

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Durval José Soledade Santos  
Member, Statutory Audit Committee

**Petróleo Brasileiro S.A. – Petrobras**  
**REPORT OF THE FISCAL COUNCIL – FISCAL YEAR 2016**

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The Fiscal Council of Petróleo Brasileiro S.A. - PETROBRAS, in the exercise of its legal and statutory functions, at a meeting held on this date, examined the following documents issued by Petrobras:

I - 2016 Management Report; and

II- The Statement of financial position and other financial statements for the year ended December 31, 2016.

2. Based on the examinations carried out, considering the accounting practices adopted by the Company, the information provided by Management, as well as the Unqualified Opinion of PricewaterhouseCoopers Auditores Independentes, dated on 03/21/17, the Fiscal Council, with dissenting votes of the members Reginaldo Ferreira Alexandre and Walter Luis Bernardes Albertoni, believes that the documents presented are able of being appraised at the Shareholders' General Meeting of Petrobras

Rio de Janeiro, Brazil  
March 21, 2017

Marisete Fátima Dadald Pereira  
Chair

Luiz Augusto Fraga Navarro de Britto Filho  
Member

Reginaldo Ferreira Alexandre  
Member

Walter Luís Bernardes Albertoni  
Member

Antonio Roberto da Silva  
Technical Advisor  
CRC/RJ- 0550 19/0-5



MINISTÉRIO DE  
MINAS E ENERGIA

