

SUSTAINABILITY REPORT 2016

ENGIE BRASIL ENERGIA S.A

CONTENTS

Highlights

Principal Indicators

Message from the Management

1 CORPORATE PROFILE

ENGIE Brasil Energia

The controlling company

Corporate structure

Generator complex

2 BUSINESS MODEL

Strategy

Energy commercialization

Responsible expansion of the generator complex

Competitive advantages

Intangible assets

Human and intellectual capital

Image

Research, development and innovation

Value creation

3 CORPORATE GOVERNANCE

Management Structure

Board of Directors

Fiscal Council

Management Board

Committees

Codes and policies

Ethics and integrity

Internal controls

Management of risks and opportunities

Evaluation and control

Scenarios and perspectives

4 MANAGEMENT OF QUALITY

Operating performance

5 ECONOMIC-FINANCIAL MANAGEMENT

Macroeconomic scenario

Electric sector context

ENGIE Brasil Energia's economic-financial performance

6 ENVIRONMENTAL MANAGEMENT

Biodiversity

Water

Fuels

Waste

Emissions

Investments

7 SOCIAL AND RELATIONSHIP MANAGEMENT

Employees

Clients

Suppliers

Communities

ABOUT THE REPORT

Report profile

Stakeholder engagement

Definition of material aspects

Relevance matrix

Summary of GRI Content

Assurance letter

Corporate information

Social balance sheet

Emissions inventory

Highlights

NEW MISSION: Provide innovative and sustainable solutions in energy and services to people, companies and territories.

NEW VISION: Transform people's relationship with energy aiming at a sustainable world.

AWARDS AND RECOGNITION

Fritz Müller Award (the state of Santa Catarina Environmental Protection Agency - FATMA)
- Project winner: Environmental Educators Training Program - Itá Consortium

Environmental Brazil Award (the Rio de Janeiro American Chamber of Commerce – AmCham Rio)
- Winning projects: Sustainability and Cultural Center Cidade Azul Photovoltaic Plant

Época 360 Award - Época Magazine
- Best company in the Energy sector

Ethics in Business Award
- Winning project: Headwaters Conservation Program

Institutional Investor Magazine Ranking – Latin America Executive Team 2016
- Best annual meeting with electric energy analysts, best program and best investor relations professional (sell side) and best CFO (sell side).

- Executive Board Succession: **Eduardo Gori Sattamini** takes over as Chief Executive Officer of the Company.
- **73%** favorability rate in the employee satisfaction survey.
- **83** new free market agreements signed.
- Incorporation of **ENGIE Geração Solar Distribuída**, one of the segment leaders in Brazil.
- Certification of **Estreito Hydroelectric Power Plant** and recertification of a further 13 plants in accordance with NBR ISO 9001 (management of quality), NBR ISO 14001 (management of the environment) and OSHAS 18001 (management of occupational health and security) standards.
- Unveiling of the **Concórdia Cultural and Sustainability Center** (SC) in the region of the Itá Hydroelectric Power Plant.

Component company of BM&FBovespa's Corporate Sustainability Stock Index (ISE)- 2017 Portfolio
- For the 12th consecutive year since the inception of the ISE, the Company is a component part of the Index, which includes companies recognized for their policies and practices with respect to economic efficiency, environmental equilibrium, social justice and corporate governance.

Transparency Trophy of the National Association of Executives in Finance, Administration and Accounting (Anefac) in the Companies of the Energy Sector category.

Principal indicators[1] [GRI G4-9]

Indicators	Unit of measurement	2016	2015	2014	Change 2016/2015	Change 2016/2014
Operational						
Operating plants	nº	29	28	27	1	2
Total installed operating capacity	MW	8,720	8,765	8,748	-0.5%	-0.3%
Total proprietary installed operating capacity	MW	6,999,3	7,044	7,027	-0.6%	-0.4%
Proprietary installed capacity from renewable sources	MW	5,952	5,925	5,908	0.5%	0.7%
Percentage of proprietary installed capacity from renewable sources	%	85.0	84.1	84.1	0.9 p.p	0.9 p.p
Generator complex uptime, discounting scheduled stoppages	%	97.2	97.4	96.5	-0.2 p.p	0.7 p.p
Generator complex uptime, including scheduled stoppages	%	86.8	86.9	86.8	-0.1 p.p	-
Energy sales	GWh	34,789	36,012	37,072	-3.4%	-6.2%
	Average MW	3,971	4,111	4,232	-3.4%	-6.2%

Indicators	Unit of measurement	2016	2015	2014	Change 2016/2015	Change 2016/2014
Contracted energy by client types						
Distributors	%	44	47	48	-3 p.p	-4 p.p
Trading companies	%	7	3	6	4 p.p	1 p.p
Free clients	%	49	50	46	-1 p.p	3 p.p
Economic-financial indicators [G4-EC1]						
Total assets	R$ million	14,419.7	15,289.4	13,609.6	-5.7%	6.0%
Shareholders' Equity	R$ million	6,614.4	6,642.1	5,654.9	-0.4%	17.0%
Net revenue from sales	R$ million	6,442.4	6,512.0	6,472.5	-1.1%	-0.5%
Gross income	R$ million	2,740.9	2,708.9	2,497.7	1.2%	9.7%
Pre-financial result/ tax income (EBIT)[1]	R$ million	2,421.6	2,503.8	2,302.9	-3.3%	5.2%
Operating income	R$ million	2,066.7	2,033.2	1,956.6	1.6%	5.6%
Net income	R$ million	1,548.3	1,501.3	1,383.1	3.1%	11.9%
Ebitda[2]	R$ million	3,175.6	3,114.6	2,895.1	2.0%	9.7%
Total debt (loans, financing and debentures)	R$ million	3,088.7	3,758.4	3,988.5	-17.8%	-22.6%

Indicators	Unit of measurement	2016	2015	2014	Change 2016/2015	Change 2016/2014
Cash and cash equivalents and restricted deposits	R$ million	1,995.5	2,543.6	1,750.7	-21.5%	14.0%
Net debt	R$ million	1,093.2	1,214.8	2,237.8	-10.0%	-51.1%
ROCE[3]	%	21.9	23.1	22.3	-1.2 p.p.	-0.4 p.p.
Gross debt/Ebitda	R$ million	1.0	1.2	1.4	-0.2 p.p.	-0.4 p.p.
Net debt/Ebitda	R$ million	0.3	0.4	0.8	-0.1 p.p.	-0.5 p.p.
Participation of third party capital in relation to total assets	%	54.1	56.6	58.4	-2.5 p.p.	-4.3 p.p.
Operating margin	%	32.1	31.2	30.2	0.9 p.p.	1.9 p.p.
Net margin	%	24.0	23.1	21.4	0.9 p.p.	2.6 p.p.
Shares						
Net earnings per share	R$	2.3720	2.3000	2.1189	3.1%	11.9%
Average price per share – ON[4]	R$	35.99	33.39	32.97	7.8%	9.2%
Dividends per share	R$	2.2786	1.2789	1.1876	78.2%	91.9%

Indicators	Unit of measurement	2016	2015	2014	Change 2016/2015	Change 2016/2014
Environmental						
Percentage of licensed plants in operation in relation to the total number under the Company's responsibility	%	100%	100,0	100,0	-	-
Donation and planting of seedlings (total number of plants donated)	nº	340,269	262,218	301,435	29.8%	12.9%
Plant visitors	nº	92,194	100,464	91,490	- 8.2%	0.8%
Energy intensity (energy consumed by ENGIE Brasil Energia per GJ generated)	GJ	0.39	0.48	0.48	-18.8%	-18.8%
Water consumption	million de m³	704.3	844.3	845.0	-16.6%	-16.7%
CO_2 emissions per energy generated – Operational Control	tCO_2/MWh	0.1917	0.2115	0.2308	-9.4%	-16.9%
CO_2 emissions per energy generated – Corporate Participation	tCO_2/MWh	0.1436	0.1592	0.1715	-9.8%	-16.3%

Indicators	Unit of measurement	2016	2015	2014	Change 2016/2015	Change 2016/2014
Human Resources						
Number of employees at ENGIE Brasil Energia (as at December 31)	nº	1,044	1,135	1,134	-8.0%	-7.9%
Investment in training and professional development	R$ million	4.9	5.2	5.0	-5.8%	-2.0%
Total number of hours of training	hours	43,238	79,494	75,386	-45.6%	-42.6%
Number of occupational accidents and accidents with employees commuting to and from work	nº	5	8	13	-37.5%	-38.4%
Accident frequency rate (TF), excluding outsourced personnel[5]	%	0.490	0.000	1.450	↑	↓
Accident severity rate (TG), excluding outsourced personnel[6]	%	0.002	0.000	0.062	↑	↓
Accident frequency rate (TF), including outsourced personnel[5]	%	1.520	0.540	2.870	↑	↓
Accident severity rate (TG), including outsourced personnel[6]	%	0.001	0.000	0.023	↑	↓
Investments in social responsibility programs						
Non-incentivized investments[7]	R$ thousand	5,044	3,304	4,143	52.7%	21.7%
Incentivized investments (Infancy and Adolescence Fund, Culture Incentive Law, Law for Sport, Health and others)	R$ thousand	21,526	12,016	13,773	79.1%	56.3%

1 Indicator of the G4 version of the Global Reporting Initiative (GRI). **2** The financial statements of ENGIE Brasil Energia were audited by KPMG Auditores Independentes. **3** Ebit = operating income + financial result. **4** Ebitda = net income + income tax and social contribution + financial expenses, net + depreciation and amortization + provision impairments. **5** ROCE (return on employed capital) = results from the service/non-current assets. **6** Simple average of the closing prices, adjusted for dividends. **7** TF: number of workplace related accidents for every million hours of exposure to hazards. **8** TG: number of days lost due to workplace-related accidents for every one thousand hours of exposure to hazards. **9** Excluding socially responsible investments in Estreito.



Message from the Management [GRI G4-1]

"To transform people's relationship with energy aiming at a sustainable world". With this vision as its yardstick, ENGIE Brasil Energia reached the end of 2016 commemorating a series of achievements despite a constantly challenging scenario. In a year marked in Brazil, by political instability and economic recession, the Company continued to pursue the process of strategic integration proposed by its controlling company – ENGIE.

As part of this process, in 2016, the Company adopted a new name and consequently a new logo. A bold and symbolic initiative representing adjustment to the structural changes that the sector is undergoing throughout the world. Changes, which have an impact on both energy generation as well as consumption, characterizing the so-called energy transition, shaping the sector's future based around three key axes: decarbonization, decentralization and digitization.

Aware of the opportunities stemming from these transformations, ENGIE Brasil Energia's has successfully met the challenge of maintaining and improving centralized energy generation and commercialization activities – which it has successfully executed since the beginning of its operations in Brazil –, while at the same time adapting its structure and organizational culture. The key objective of this adaptation is to reach and develop new markets with greater proximity to clients and consumers through the synergies existing between products and services.

Reformulated in 2016, the Company's mission statement transmits precisely what we are aiming for: "Provide innovative and sustainable solutions in energy to people, companies and territories". It was with this vision and in alignment with the new moment in business strategy that in July the succession process for ENGIE Brasil Energia's Chief Executive Officer's position was completed entirely according to plan. It was in this context that we obtained some important results, which signal the Company's capacity to connect with the future as well as reiterating our corporate resilience built up over the years.

On the economic-financial front, we were able to report a 3.1% increase in net income to R$ 1,548.3 million in 2016, which following adjustments, will be distributed in full to the Company's shareholders, subject to ratification by the Annual General Shareholders' Meeting. Despite the continuing downturn in the Brazilian economy overall during the year, EBITDA margin widened by 1.5 p.p. from 47.8% in 2015 to 49.3% in 2016. This performance is due in large part to the combined effect of the Company's strategy of long-term

contracting - which sustained sales revenue in the face of a critical economic scenario - with low net debt during the year. Other factors contributing to the result were a reduction in fuel consumption for power generation - a reflection of reduced thermoelectricity dispatch; the drop in the volume of energy purchases for resale; and recognition of impaired thermal generation-related assets. It is worth pointing out that the GSF – Generation Scaling Factor – continued to affect ENGIE Brasil Energia's results. Among other factors, this is due to the startup of commercial capacity at new plants under the Energy Reallocation Mechanism (MRE) - but where energy delivery capacity is still inadequate, - the reduction in load and of thermoelectricity generation for replenishing the reservoirs and finally, to the supply of the Northeast submarket in the light of restrictions on energy exchange with other submarkets.

In order to respond more efficiently to current and future challenges, we upgraded our organizational structure, remodeling areas and teams. An example of this was the Strategy and Regulation Officer, encompassing activities focused on synergetic improvements between our corporate objectives and the development of innovative solutions in energy. Under this new structure, initiatives involving Research and Development and Information Technology and Digitization of our products and processes become increasingly more relevant.

In 2016, we saw a practical example of innovation in practice with the unveiling of the Generation Operations Center (GOC) in Florianópolis (SC), a structure which allows us to control the Company's plants on an automated and remote basis. Initially, we began operating three plants located in the Center-West region out of this new center in Santa Catarina: the Ponte de Pedra Hydroelectric Power Plant (HPP) and the José Gelázio da Rocha and Rondonópolis small hydroelectric plants (SHP). The outlook for the next few years is that other plants will be controlled eventually via GOC, thus reinforcing the automation of internal processes with a view to innovation and reduction in costs.

On another front and aligned with the strategy of decentralization, ENGIE Brasil Energia made its debut in the market for distributed generation by acquiring 50% of the equity of GD Brasil Energia Solar S.A. From this acquisition, ENGIE Geração Solar Distribuída S.A. was created, now one of the leaders in the segment in Brazil. Through the new subsidiary, an agreement was signed in November with the Santa Catarina energy distributor for the installation of photovoltaic systems in a thousand households in the state. Project feasibility is ensured under a program, which involves the distributor subsidizing part of the consumer's investment. This action represents one more important step towards the Company taking

WE OBTAINED IMPORTANT RESULTS, WHICH SIGNAL THE COMPANY'S CAPACITY TO CONNECT WITH THE FUTURE AS WELL AS REITERATING OUR CORPORATE RESILIENCE BUILT UP OVER THE YEARS.

a position in the vanguard of developments in the segment for distributed photovoltaic generation.

In the process of seeking greater proximity to the clients, we explored further the opportunities in the free market, increasing the number of agreements, dispersed among companies of different sizes and sectors. As a result, we added 83 new clients to the portfolio, representing an increase of 36.4% compared with 2015, and among them Rio de Janeiro's Light Vehicle on Tracks (VLT), a modern and sustainable urban mobility project to which we supply renewable energy.

Another landmark event for the ENGIE Group in Brazil was the inauguration of the Jirau HPP on the Madeira River in the state of Rondônia. The largest hydroelectric project ever developed by ENGIE in the world, this operation has a total installed capacity of 3,750 MW and will produce enough energy for the consumption of approximately 10 million households. ENGIE Brasil Participações, the parent company of ENGIE Brasil Energia, holds a 40% stake in the operation. The process involving the eventual transfer of this stake to the Company is expected to begin in 2017 with the Special Independent Committee for Transactions with Related Parties playing a key role in the operation.

A further key achievement with respect to renewable energy was the startup in commercial operations of the Santa Mônica and Cacimbas wind farms, the latter on a partial basis, and both located in Trairi, state of Ceará. The outlook is that before the end of the first quarter of 2017, the other two wind farms comprising the Complex will go into production with 97.2 MW of installed capacity.

Investment in complementary sources underscores ENGIE Brasil Energia's commitment to the energy transition, key to sustainable development - especially with respect to climate change and consequently, decarbonization. Our controlling company's decision not to construct further coal-fired plants is in line with global awareness as to the need to produce more energy but at the same time, to reduce carbon emissions. This is a question of survival for the planet and for future generations.

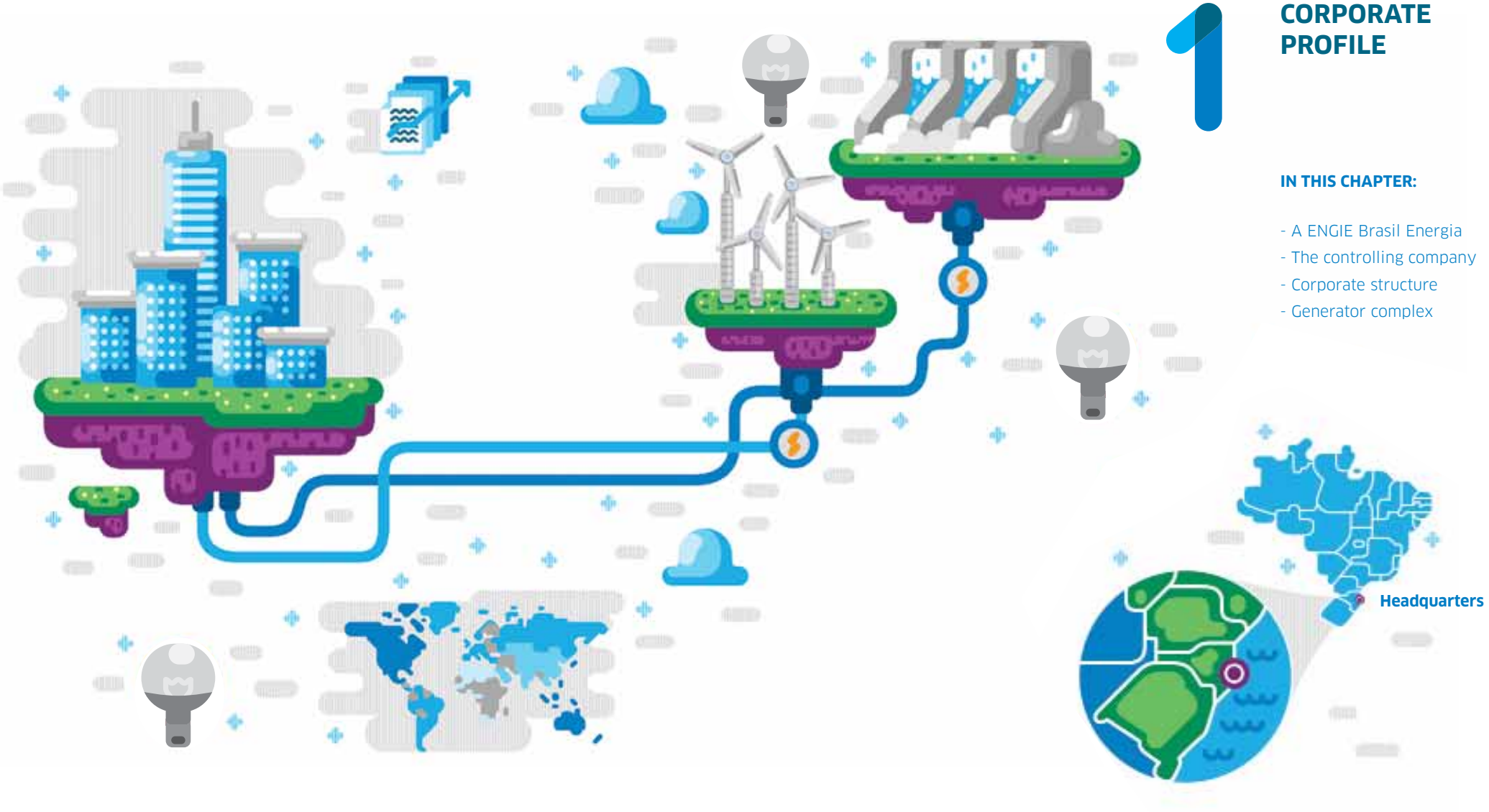
ENGIE Brasil Energia's commitment to sustainable development is reflected in our socio-environmental practices. Driven by the results achieved so far, we have continued to pursue a strategy of installing Sustainability and Cultural Centers in regions where the Company has its operations. In 2016, we opened a center in Concórdia (SC), the fifth such project with the objective of offering cultural and educational activities to the local communities. Again, in 2016, we signed a partnership with the Museu do Amanhã in Rio de Janeiro, a symbol of urban renewal of the downtown port area of the city in a context of innovation and sustainability.

In an emerging future, the Company will seek to establish a balance between current challenges and those of tomorrow, between global demands and local realities and between economic growth and sustainability. We continue alert to the transformations taking place in the world and the opportunities associated to this revolution of which we are a part. ENGIE Brasil Energia stands ready to make an increasingly important contribution to the relationship between people and the environment in which our society is inserted.

Maurício Stolle Bähr
Chairman of the Board of Directors

Eduardo Antonio Gori Sattamini
Chief Executive Officer





1 CORPORATE PROFILE

IN THIS CHAPTER:

- A ENGIE Brasil Energia
- The controlling company
- Corporate structure
- Generator complex

ENGIE Brasil Energia

With registered offices in the city of Florianópolis (SC), ENGIE Brasil Energia operates in the generation as well as the commercialization of electric energy. In the generation segment, it installs and operates plants fired from conventional energy sources such as hydroelectric, thermoelectric and complementary units – small hydroelectric plants and wind, biomass and photovoltaic plants. In 2016, the Company also made its debut in the distributed generation segment. In the commercialization area, ENGIE Brasil Energia buys and sells conventional and incentivized energy, its clients being located throughout the country. [GRI G4-3; G4-4; G4-5]

At the end of 2016, ENGIE Brasil Energia's capital stock stood at R$ 2,829.1 million with a total of 652,742,192 common shares trading regularly on the BM&FBovespa - Securities, Commodities and Futures Exchange. The Company also trades Level 1 American Depositary Receipts (ADRs) in the American over-the-counter market under the EGIEY symbol with a ratio of one ADR for each common share.

The Controlling Company

Present in Brazil since 1998, the year in which it acquired Gerasul, ENGIE Brasil Energia is controlled by ENGIE, a company with operations in some 70 countries across five continents and a world leader in independent energy production. Electricity, natural gas and services are the principal operational pillars supporting ENGIE, which through ENGIE Brasil Participações Ltda., holds 68,71% of the Company. **[GRI G4-6, GRI G4-7, GRI G4-8]**



CORPORATE VALUES

Professionalism
Sense of Partnership
Team Work
Creation of Value
Respect for the Environment
Ethics

8,720.0 MW

is the installed capacity operated by ENGIE Brasil Energia

ELECTRICITY, NATURAL GAS AND SERVICES ARE THE PRINCIPAL OPERATIONAL PILLARS SUPPORTING ENGIE, WHICH HOLDS 68.75% OF THE COMPANY.

ENGIE worldwide (as at 12.31.2015)

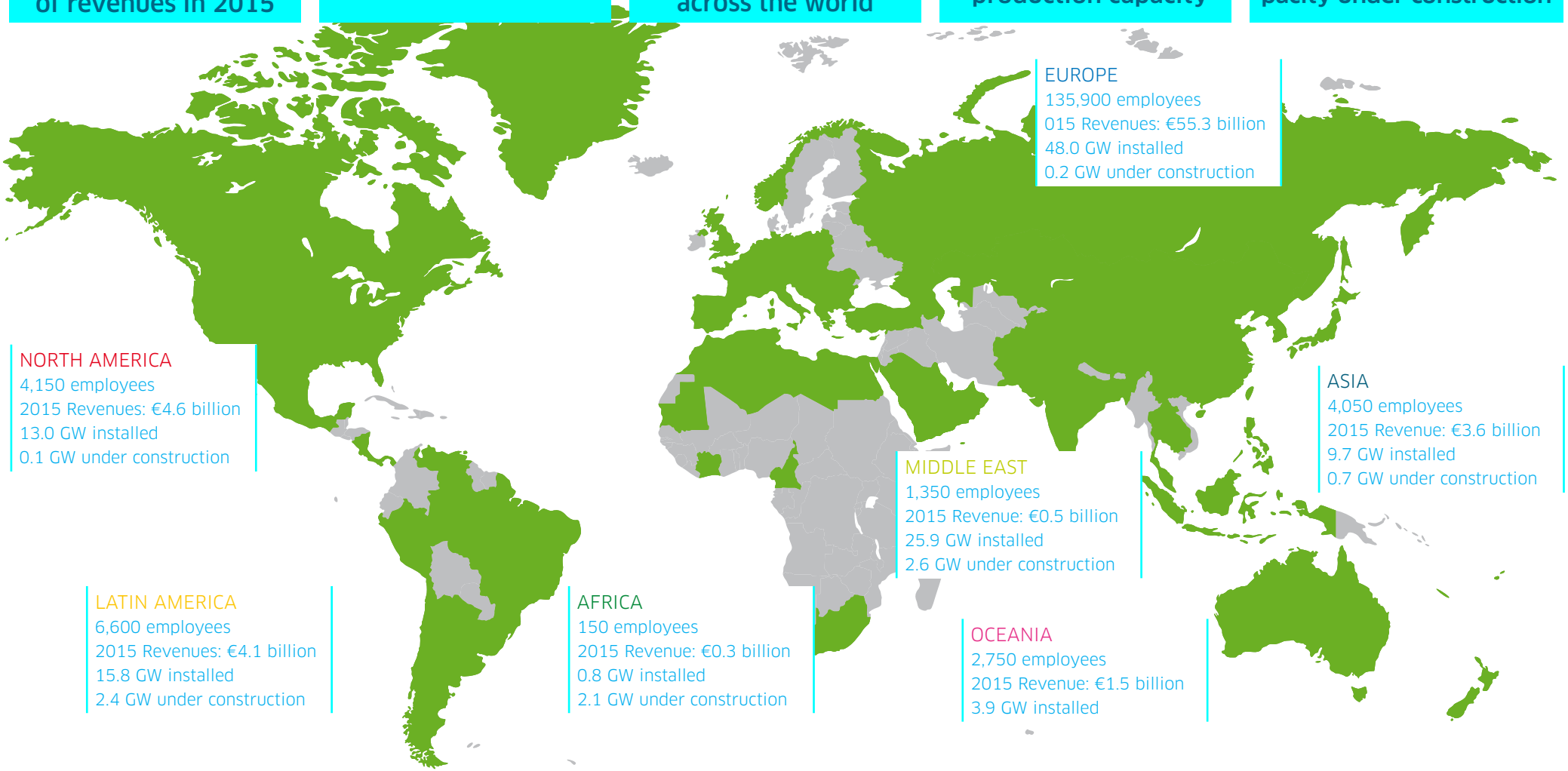
€69.9 billion
of revenues in 2015

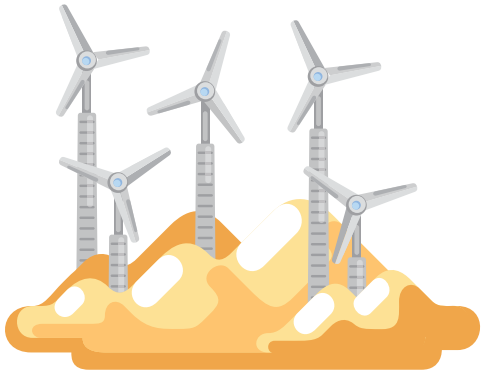
Activities in
70 countries

154,950 employees
across the world

117.1 GW
of installed power-production capacity

8.1 GW
of power production capacity under construction



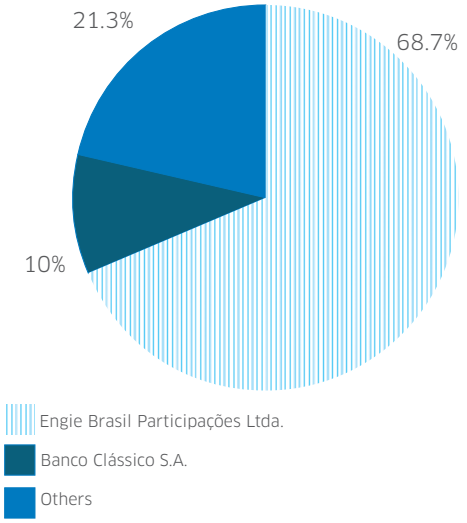


IN 2016 THE COMPANY CREATED ENGIE GERAÇÃO DISTRIBUÍDA, A SUBSIDIARY WITH A FOCUS ON DECENTRALIZED SOLAR GENERATION

85%

of the generating matrix of ENGIE Brasil Energia is composed of renewable sources

Shareholding structure (as at 12.31.2016)



ENGIE's activities are focused on sustainable development as a means of meeting the challenges of the energy transition to a low carbon economy: access to renewable energy, mitigation of and adaptation to climate change, security of supply and the rational use of natural resources. To this end, the Company seeks to offer innovative solutions to people, cities and companies.

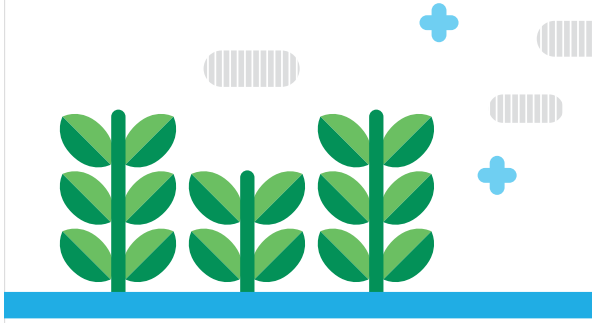
Having the generation of long-term value in both consolidated and emerging markets as an underlying principle, ENGIE has established two key strategic objectives on a global basis:

To become a bellwether in energy services in emerging market countries through:

- leveraging its strong positions in independent energy production;
- development of its footprint in the gas value chain; and
- globalization of its position of leadership in energy services.

To lead the energy transition in Europe with the following aspirations:

- to become the partner in energy for its clients, incentivizing energy efficiency;
- to be an element in the process of energy decarbonization through renewable sources; and
- to develop new businesses and digitization.



Corporate structure

As lhe following infographic shows, ENGIE Brasil Energia controls subsidiaries and maintains stakes in concession consortia of plants in its generating complex. On making its debut in the distributed solar generation market in 2016, the Company created ENGIE Geração Distribuída, a subsidiary with a focus on decentralized solar generation in residences and companies.

Corporate structure*
(as at 12.31.2016)



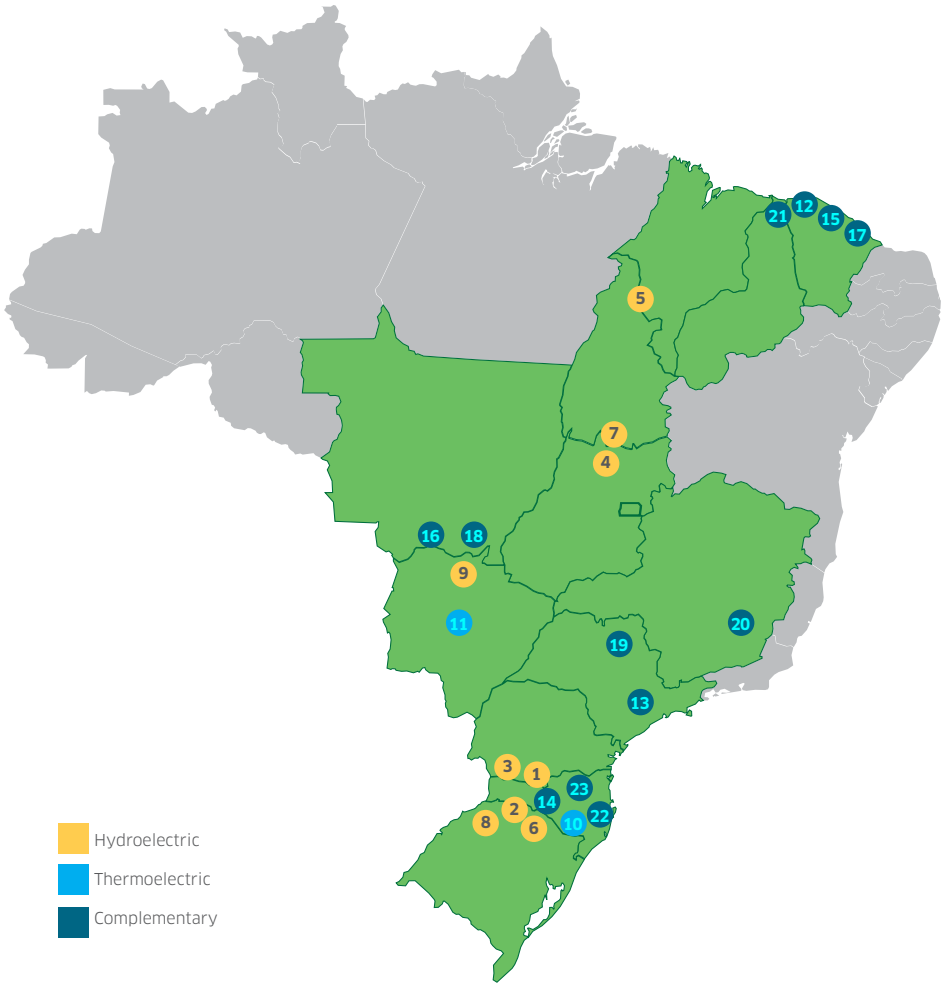
* Simplified structure.

Generator complex

On December 31, 2016, ENGIE Brasil Energia was operating a generator complex with an installed capacity of 8,720.0 MW comprising 29 plants: nine hydroelectric plants, four thermoelectric conventional thermoelectric plants and 16 complementary energy-sourced units: three Small Hydroelectric Plants (SHPs), nine wind-powered, three biomass and one photovoltaic. The Company has full control of 25 of these plants and for the remainder it is a participant in the consortia, which hold the concession rights. Thus, total proprietary installed capacity was 6,999.3 MW in a matrix formed preponderantly of renewable sources (85.0%).
[GRI G4-EU1]

With presence in all Brazilian regions, ENGIE Brasil Energia operates hydroelectric, thermoelectric and complementary plants.

Geographical distribution of the generator complex
(as at 12.31.2016)



Composition of the generator complex (as at 12.31.2016)

	Hidroelectric Power Plants	Total Installed Capacity (MW)	Total physical guarantee (MWm)	Ownership	Own Installed Capacity (MW)	Own physical guarantee (MWm)	Concession expiration/ authorization
1	Salto Santiago	1,420.0	735.2	100%	1,420.0	735.2	27,09,2028
2	Itá	1,450.0	720.0	69.0%	1,126.9	544.2	16,10,2030
3	Salto Osório	1,078.0	522.0	100%	1,078.0	522.0	27,09,2028
4	Cana Brava	450.0	273.5	100%	450.0	273.5	26,08,2033
5	Estreito	1,087.0	641.1	40.1%	435.6	256.9	26,11,2037
6	Machadinho	1,140.0	529.0	19.3%	403.9	147.2	14,07,2032
7	São Salvador	243.2	151.1	100%	243.2	151.1	22,04,2037
8	Passo Fundo	226.0	119.0	100%	226.0	119.0	27,09,2028
9	Ponte de Pedra	176.1	133.5	100%	176.1	133.5	30,09,2034
	TOTAL	**7,270.3**	**3,824.4**		**5,559.7**	**2,882.6**	

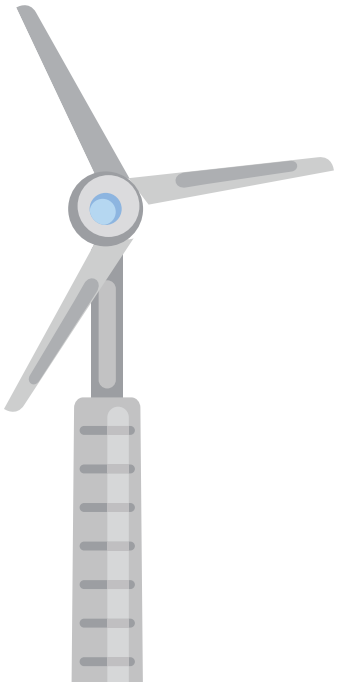
	Thermoelectric Power Plants	Total Installed Capacity (MW)	Total physical guarantee (MWm)	Ownership	Own Installed Capacity (MW)	Own physical guarantee (MWm)	Concession expiration/ authorization
10[1]	Jorge Lacerda Complex	857.0	649.9	100%	857.0	649.9	27,09,2028
11	William Arjona	190.0	136.1	100%	190.0	136.1	28,04,2029
	TOTAL	**1,047.0**	**786.0**		**1,047.0**	**786.0**	
	Complementary Power Plants	**Total Installed Capacity (MW)**	**Total physical guarantee (MWm)**	**Ownership**	**Own Installed Capacity (MW)**	**Own physical guarantee (MWm)**	**Concession expiration/ authorization**
12[2]	Trairi Complex (Wind)	115.4	63.9	100%	115.4	63.9	28,09,2041
13	Ferrari (Biomass)	80.5	35.6	100%	80.5	35.6	26,07,2042
14	Lages (Biomass)	28.0	25.0	100%	28.0	25.0	28,10,2032

	Complementary Power Plants	Total Installed Capacity (MW)	Total physical guarantee (MWm)	Ownership	Own Installed Capacity (MW)	Own physical guarantee (MWm)	Concession expiration/ authorization
15[3]	Santa Mônica Complex (Wind)	27,0	14,4	100%	27,0	14,4	04.02.2045
16	Rondonópolis (SHP)	26,6	10,1	100%	26,6	10,1	18.12.2032
17	Beberibe (Wind)	25,6	7,8	100%	25,6	7,8	03.08.2033
18	José G. da Rocha (SHP)	23,7	9,2	100%	23,7	9,2	18.12.2032
19	Ibituiúva (Biomass)	33,0	20,0	69,3%	22,9	13,9	05.04.2030
20	Areia Branca (SHP)	19,8	10,4	100%	19,8	10,4	02.05.2030
21	Pedra do Sal (Wind)	18,0	5,7	100%	18,0	5,7	01.10.2032
22	Cidade Azul R&D (Solar)	3,0	not applicable	100%	3,0	not applicable	not applicable
23	Tubarão R&D (Wind)	2,1	not applicable	100%	2,1	not applicable	not applicable
	TOTAL	**402,7**	**202,1**		**392,6**	**196,0**	
	GENERAL TOTAL	**8.720,0**	**4.812,5**		**6.999,3**	**3.864,6**	

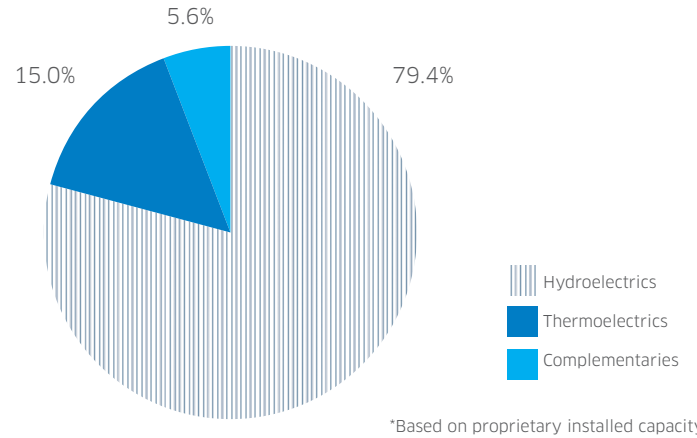
1 Complex is made up of three plants

2 Complex is made up of four wind farms

3 Considering the startup in commercial operations of the Santa Mônica and Cacimbas wind farms, the latter on a partial basis. A further two wind farms in the Complex (Estrela and Ouro Verde), in addition to some wind turbines at Cacimbas, were still under construction on 12.31.2016



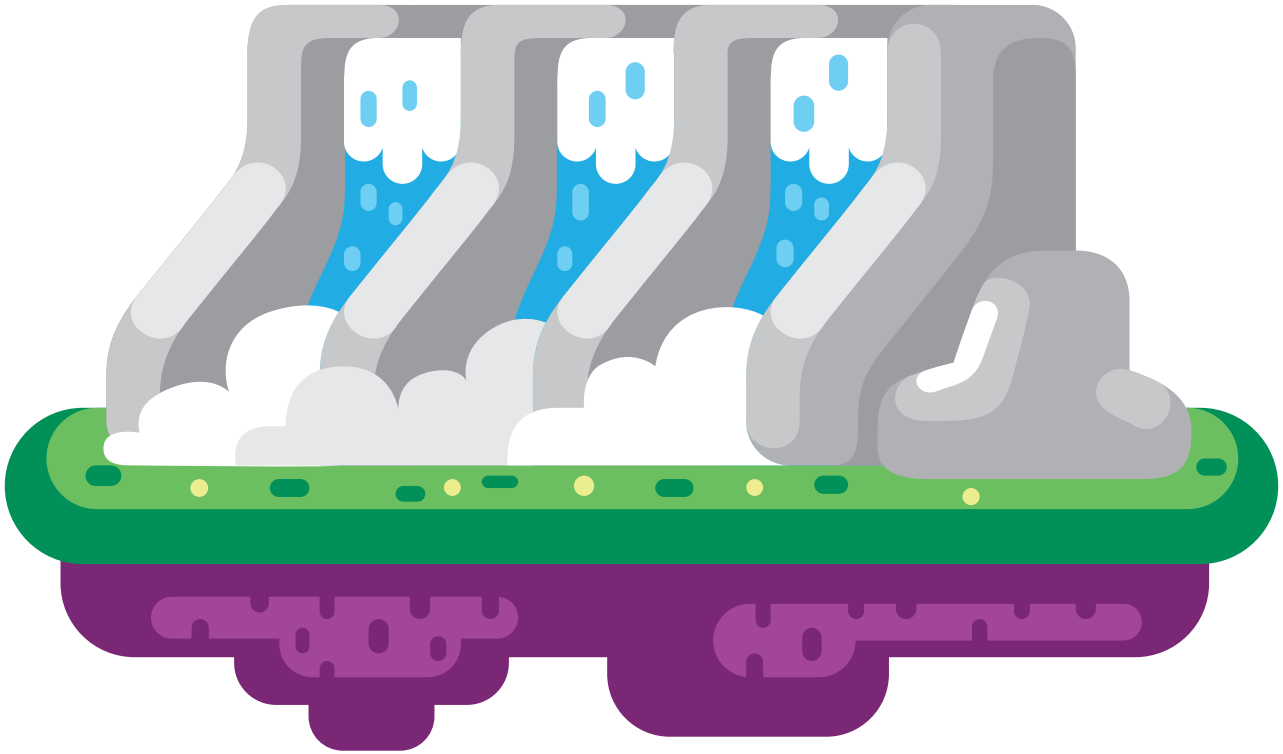
ENGIE Brasil Energia - Energy matrix (as at 12.31.2016)*



*Based on proprietary installed capacity.

The Company began its planned decommissioning of Charqueadas Thermoelectric Plant (TPP) in the state of Rio Grande do Sul. After more than 50 years of operations and with an installed capacity of 72 MW, the plant was deemed obsolete. The investments required for its eventual modernization as well as being economically unfeasible, would not have been compatible with the Company's business model given the emphasis placed on decarbonization. Consequently, the Plant ceased operations on November 25, 2016 and the effective deactivation of its installations is scheduled for 2017. **[GRI G4-13]**

IN 2016, THE COMPANY BEGAN THE DECOMMISSIONING OF CHARQUEADAS THERMOELECTRIC PLANT IN THE STATE OF RIO GRANDE DO SUL.



On December 23, 2016, ENGIE Brasil Energia's Board of Directors approved the sale of the Beberibe wind farms (25.6 MW) in the state of Ceará and Pedra do Sal (18 MW) in the state of Piauí as well as the Areia Branca SHP (19.8 MW) in the state of Minas Gerais, to Companhia Energética de Petrolina. The operation is an integral part of the Company's strategy of prioritizing expansion in assets offering a greater degree of synergy one with the other. The sale will be finalized during the course of 2017 and is subject to the fulfillment of certain conditions precedent in the sale agreement as well as the prior approval of the Brazilian Anti-Trust Authority (CADE), the National Development Bank (BNDES) and the National Electric Energy Agency (Aneel). **[GRI G4-13]**

2 BUSINESS MODEL



IN THIS CHAPTER:

- Strategy
- Competitive advantages
- Intangible assets
- Value creation

ENGIE Brasil Energia's business model focuses on sustainability, its intention being to respond dynamically to the challenges and opportunities in the energy sector on both global and domestic levels. Starting from an understanding that the current transformations which the sector is undergoing are natural and necessary to the evolution of society, the Company shares the same objective as that proposed by ENGIE, its parent company, to all its business units: to be in the vanguard of the energy transition worldwide.

Consequently, ENGIE Brasil Energia's business model is aligned with the tendencies of decarbonization, decentralization and digitization, which are characterizing the future of the sector. This transition requires a broadening of the vision of the business in order to ensure the creation of value over the medium and long terms. Thus, the key operational areas of ENGIE Brasil Energia continue to be centralized generation, prioritizing renewable sources, and the commercialization of energy although at the same time, seeking increasingly to offer integrated and innovative solutions. In 2016, an important step in this direction was the Company's debut into the distributed solar energy generation segment through the ENGIE Geração Solar Distribuída subsidiary. **[GRI G4-8; G4-EC2]**

The key operational areas of ENGIE Brasil Energia continue to be centralized generation, prioritizing renewable sources, and the commercialization of energy although at the same time, seeking increasingly to offer integrated and innovative solutions.

83 new agreements to the free consumer portfolio, an increase of **36.4%** in comparison with 2015.



Strategy

ENGIE Brasil Energia's businesses are based on two key strategies related to energy commercialization and the responsible expansion of the generating complex.

Energy commercialization

ENGIE Brasil Energia commercializes energy through the Regulated Contracting Environment (ACR) and the Free Contracting Environment (ACL). In the regulated market, sales take place through the intermediary of auctions, participation assuming that the price ceiling proposed by the National Electric Energy Agency (Aneel) is economically adequate for the viable operation of projects under development by the Company.

In the free consumer market through its trading company, ENGIE Brasil Energia seeks to gradually sell available energy at attractive prices, at the same time minimizing the risk of exposure to short-term prices (spot or Price for the Settlement of Differences – PLD). In addition, the Company endeavors to enhance client loyalty as well as diversifying the portfolio, whether by individual sector or between industrial sectors. This counterbalances eventual negative market effects in given sectors or adverse situations with specific clients, thus reducing the risks of revenue shortfalls.

In 2016, the Company intensified its commercialization initiatives with small and medium clients – in a consumption band equal or higher than 0.5 MW –, particularly those in the retailing segment. As a result, the Company successfully added 83 new agreements to the free consumer portfolio, a year-on-year increase of 36.4%.

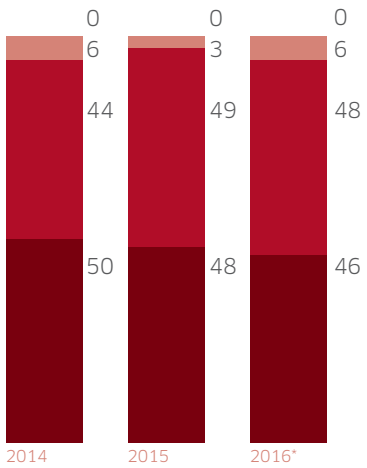
Commercialization activities are executed as and when opportunities arise, more especially when the markets show a greater buying propensity. However, due to the increase in the spot price and its greater volatility – in recent years a reflection of the hydrological crisis –, ENGIE Brasil Energia may choose to leave a larger volume of its commercial capacity uncontracted in the short-term market.

Whenever necessary or opportune, operations for the acquisition of energy for resale are also undertaken.

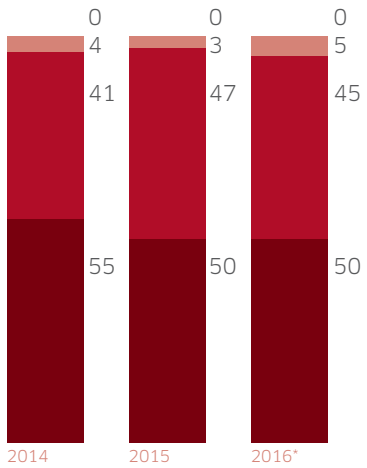
In 2016, free consumers accounted for 47.9% of physical sales and 45.1% of net revenue from sales, decreases of 0.9 p.p. and 2.2 p.p., respectively compared with 2015.

The 2016 increase in the share of trading companies in physical sales and net revenue from sales compared with the preceding year reflected the sales of conventional energy concomitantly with the purchase of incentivized energy from trading companies, the later being destined for resale to free consumers.

Breakdown of clients by physical sales (%)



Breakdown of clients by contracted sales comprising Net revenue from Sales (%)





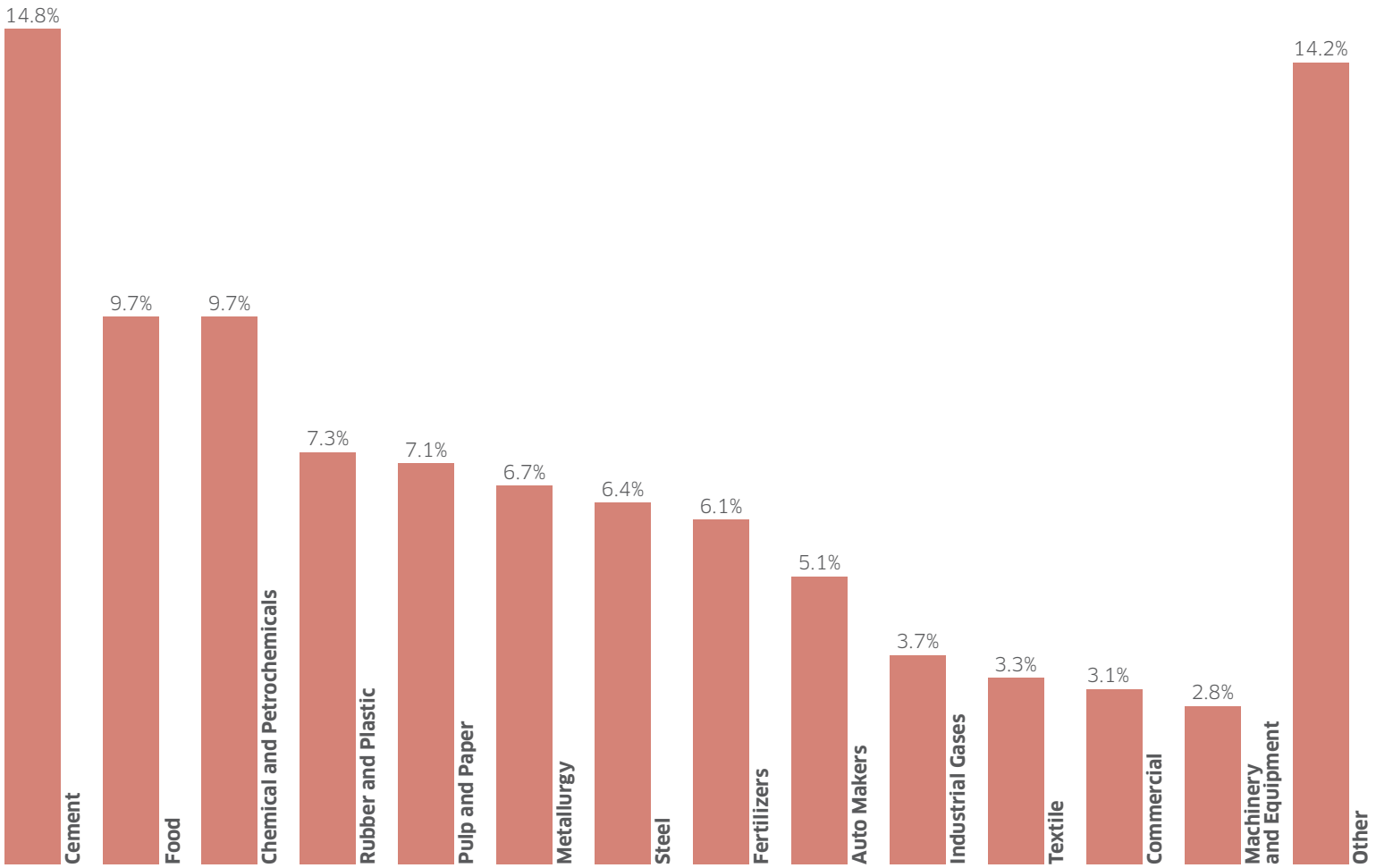
Energy Balance (average MW)





** In 2016, exports accounted for 0.2% of the physical sales and 0.3% of Net Revenue from Sales*

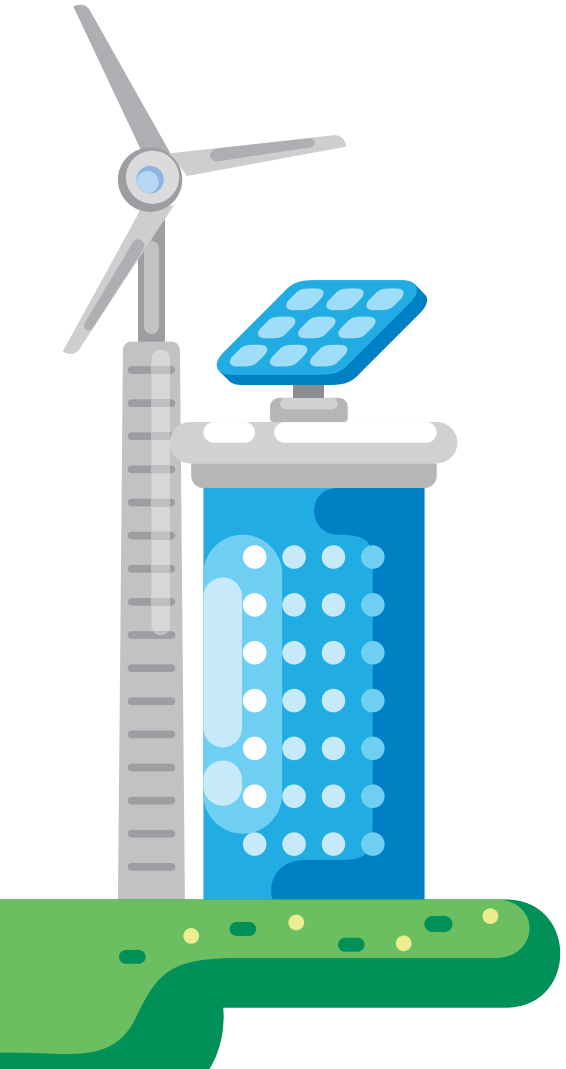
Diversification of the client portfolio
(as at 12.31.2016)



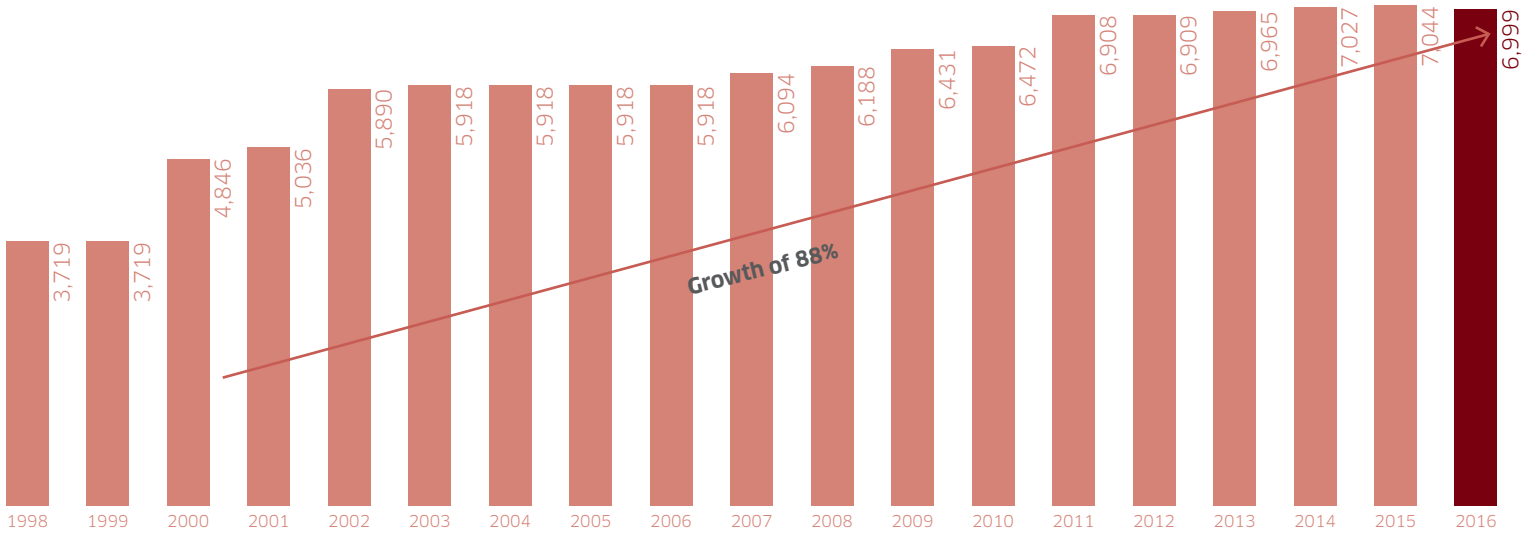
Responsible expansion of the generator complex

Since the outset of its operations in Brazil in 1998, ENGIE Brasil Energia has expanded the installed capacity of its generator complex by 88%, an increase from 3,719 MW to 6,999 MW over 18 years. In 2016, the Company reported a slight drop (0.63%) in installed capacity in relation to the preceding year, a reflection of the decommissioning of Charqueadas TPP (72 MW).

Conversely, 27 MW was added to the Company's generator complex in the period. Of this total, 18.9 MW represent capacity from the first of the four wind farms making up the Santa Mônica Complex in Trairi in the state of Ceará and unveiled in September 2016. The remaining 8.1 MW is output from the Cacimbas I Wind Plant, which went into partial operations – with three of its seven wind turbines.



Evolution in own installed capacity in operation (in MW)



The Company has been diversifying its energy matrix and the regional markets in which it operates, prioritizing renewable energy sources. Thus, it remains alert to opportunities for expansion in different regions of the country, conditional on such opportunities being compatible with the requisites of sustainability in economic, social and environmental dimensions.

As the Company expands the portfolio of energy available for commercialization, growth in the generating complex contributes to the longevity of the business and the increase in revenues. This expansion also creates value for Brazilian society as a whole by providing greater security to the national electricity grid and contributing to local sustainable development by creating employment and incomes, among other positive impacts in the regions where the Company's operations are installed.

In line with the strategic plan, the expansion in the Company's installed capacity is expected to continue over the next few years as work on construction of new plants is concluded. The following table shows the operations with work in progress.

- **Santa Mônica Wind Complex**: located in the municipal district of Trairi (CE), it comprises four plants, which when fully operational, will add a total of 97.2 MW to the Company's generator complex. The Santa Mônica and Cacimbas wind farms began commercial operations in 2016 and the outlook is that the entire Complex will be operational before. the end of the first half of 2017.

- **Jirau Hydroelectric Power Plant**: operating from a site on the Madeira River, it has its head offices in Porto Velho (RO) and was unveiled on December 16, 2016. With 50 turbines in operation, the project has a total installed capacity of 3,750 MW. ENGIE Brasil Participações, the controlling company of ENGIE Brasil Energia, holds a 40% stake in the project. It is mooted that the transfer of this stake to the Company will be examined in 2017, an event which will have the involvement of the Special Independent Committee for Related Party Transactions.

- **Pampa Sul Thermoelectric Power Plant**: located in the municipal district of Candiota (RS), the plant will be fired from mineral coal extracted from a seam in the region. At the end of 2016, the project was 47% complete with the year notable for significant progress on the installation of the transmission line towers, work on 44 of the 53 units planned having been concluded. A company for erecting the metallic structure was also engaged during the period.

Growth in the generating complex contributes to the longevity of the business and the increase in revenues. This expansion also creates value for Brazilian society as a whole

Projects with work in progress (as at 12.31.2016) [GRI G4-EU10]

Project	Total installed capacity (MW)	Total physical guarantee (MWm)	Ownership	Own installed capacity (MW)	Own physical guarantee (MWm)	Expiration of concession/ authorization
Santa Monica Complex (Wind)[1]	70.2	33.0	100%	70.2	33.0	01.25.2045
Jirau (Hydro)[2]	3750.0	2184.6	40%	1500.0	882.0	08.13.2043
Pampa Sul (Thermical)	340.0	323.5	100%	340.0	323.5	03.30.2050
Campo Largo Complex - Phase I (Wind)	326.7	157.8	100%	326.7	157.8	08.03.2050
Assu V (Solar)	36.7	9.2	100%	36.7	9.2	-
TOTAL	**4,523.6**	**2,708.1**		**2,273.6**	**1,405.5**	

1 The Complex was already partially operational as at 12.31.2016 while the remainder (70.2 MW) continues under construction.

2 The Company's controlling company, ENGIE Brasil Participações Ltda holds a 40% stake in Jirau HPP. The outlook is for the transfer of this stake to ENGIE Brasil Energia will take place in 2017.

The investment in distributed solar generation will enable ENGIE Brasil Energia to capture opportunities in a market with major growth potential in Brazil, responding to the challenges of a dynamic energy matrix and a segment close to the final consumer.

- **Campo Largo Complex - (Phase I)**: made up of a series of wind generation projects located in the state of Bahia with the harnessing of potential capacity of 326.7 MW. In September 2016, the decree declaring the external access area to the Campo Largo Wind Complex site one of public utility for the purposes of expropriation was sanctioned and work on services in the accommodation area was begun. In November, the state of Bahia environmental protection agency, Instituto do Meio Ambiente e Recursos Hídricos (Inema), issued the Installation License for the final wind farm in the Complex. Partial commercial operations are scheduled to begin in 2018.

- **Assú V Photovoltaic Plant**: with an installed capacity of 36.7 MW, this plant is a component of the Assú Photovoltaic Complex to be installed in Assú (RN). The project is at the environmental licensing stage. Work is to begin in 2017 with startup in operations programmed for December of the same year.

- **ENGIE Geração Solar Distribuída**: in 2016, the Company debuted the distributed generation market by acquiring a 50% stake in the capital of GD Brasil Energia Solar S/A. This investment will enable ENGIE Brasil Energia to capture opportunities in a market with major growth potential in Brazil, responding to the challenges of a dynamic energy matrix and a segment close to the final consumer. In November 2016, an agreement was signed with the Santa Catarina energy distributor for the installation of photovoltaic systems in a thousand residences in the state. Feasibility of the project is assured through a program whereby the distributor subsidizes 60% of the final consumer's total investment.

In addition to these operations, ENGIE Brasil Energia has other projects at an advanced stage of development as shown in the following table.

Projects under development (as at 12.31.2016) **[GRI G4-EU10]**

Projects under development	Total capacity (MW)	Type	Ownership	Location
Santo Agostinho Complex	600.0	Wind	100%	Lajes and Pedro Avelino (RN)
Norte Catarinense	600.0	Thermical	100%	Garuva (SC)
Campo Largo Complex - Phase II	330.0	Wind	100%	Umburunas and Sento Sé (BA)
Alvorada	90.0	Sun	100%	Bom Jesus da Lapa (BA)
Assú Complex - Units, I, II, III and IV	146.8	Sun	100%	Assú (RN)
TOTAL	**1,766.8**			



600 MW

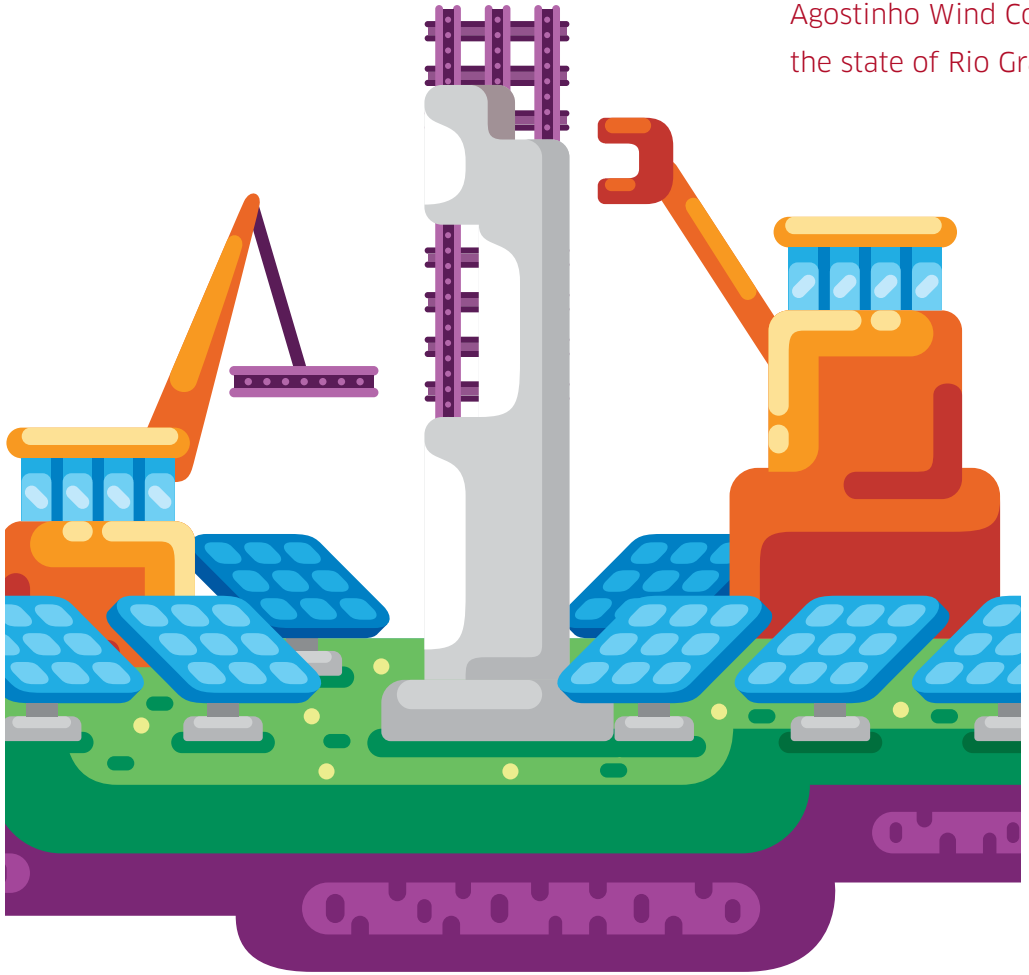
is the potential output of Santo Agostinho Wind Complex, located in the state of Rio Grande do Norte

- **Santo Agostinho Wind Complex**: located in the municipal districts of Lajes and Pedro Avelino in the state of Rio Grande do Norte, this project has a potential output of 600 MW. In June 2016, the state environmental protection agency, Instituto de Desenvolvimento Sustentável e Meio Ambiente (Idema), issued a Preliminary License. The entire project's documentation necessary to take part in the energy auctions has been prepared.

- **Norte Catarinense TPP**: located at a site in the municipal district of Garuva (SC), this is a natural gas combined cycle plant with an installed capacity of about 600 MW. In 2016, a Preliminary License was issued allowing the project to bid in future new energy auctions.

- **Campo Largo Wind Complex - (Phase II)**: will add a further approximately 330 MW of installed capacity to the Campo Largo Wind Complex. Just as in the case of the Santo Agostinho Wind Complex, this operation has already prepared full documentation necessary to take part in energy auctions.

- **Alvorada Photovoltaic Complex**: located in the state of Bahia, this operation will be made up of four projects with a total



estimated installed capacity of up to 90 MWp. The projects are currently at the solar radiation measurement phase. In all cases, the relevant Preliminary License was issued in August 2016, which permits bidding at the new energy auctions as from 2017.

- **Assú Photovoltaic Complex**: ENGIE Brasil Energia acquired a further two projects under the umbrella of the Assú Photovoltaic Complex. This will now be made up of five projects – with a total estimated capacity standing at 183 MWp – to be developed at the Assú (RN) site. All Assú I, II, III and IV Photovoltaic Plants are at the solar radiation measurement stage. They have all received a Preliminary License, which qualifies them to take part in new energy auctions.

The Company is also examining the potential for parallel photovoltaic solar energy generation in the areas, as well as the establishment of partnerships, where it is installing its wind farms as well as establishing partnerships for accelerating the harnessing of this source of energy.

Competitive advantages

In tandem with the strategy for the business, ENGIE Brasil Energia creates value based on the aspects, policies and practices, which differentiate it from other market entities. Among the Company's principal competitive advantages, of particular importance are:

- **Operations in a strategic sector**: the energy sector is considered strategic to the development of Brazil given that energy constitutes a basic input for production and a large part of society's everyday activities.

- **Sector Leadership**: the Company ranks among the leaders of independent energy production in Brazil. Its parent company is the largest independent producer in the world, thus reinforcing ENGIE Brasil Energia's own potential for capturing business opportunities.

- **Clear commercial strategy**: ENGIE Brasil Energia maintains high levels of long-term contracting, thus reducing exposure to short-term market oscillations. In addition, its sales portfolio is a balanced mix of free consumers, different sectors and clients in the regulated market (distributors).

Contributes to greater predictability the diversified generation portfolio – encompassing hydroelectric, thermoelectric and complementary power plants. This diversity serves to reduce the impacts related to climatic events such as low rainfall or decreased sunlight and winds in certain regions.

- **Predictability of cash flow**: in addition to the above-mentioned long-term contracting, energy sales agreements are indexed to inflation. Another factor, which contributes to greater predictability, is the diversified generation portfolio – encompassing hydroelectric, thermoelectric and complementary power plants. This diversity serves to reduce the impacts related to climatic events such as low rainfall or less sunlight and wind in certain regions.

- **High degree of operational performance**: the power generating units, which the Company operates, show a high level of uptime and reliability. Contributing to this result are NBR ISO 9001 (management of quality), NBR ISO 14001 (management of the environment) and OSHAS 18001 (occupational health and safety management) certification, which the majority of plants hold.

- **Stable financial performance**: the association of strong cash generation, high average EBITDA margin, consistent net income and the absence of currency exposure all contribute to the financial stability of the Company and its consequent resilience under inclement macroeconomic scenarios. Additionally, as a solid organization with a market value of R$ 22.8 billion at the end of 2016, ENGIE Brasil Energia has access to attractive lines of credit, thus enhancing its competitive edge.

- **Differentiated risk classification**: Fitch Ratings has assigned a Long-Term National Company Rating of 'AAA (bra)' and on the global scale, 'BB+(bra)', one notch above the sovereign rating.

- **Best practices of governance and sustainability**: just as with the Management Board, the Board of Directors is made up of experienced professionals with a broad-based knowledge of the sector and duly prepared to take decisions covering the interests of the shareholders and other stakeholders that may be involved. Thus, economic, social and environmental aspects are indissolubly part of the decision-making process.

Intangible assets

ENGIE Brasil Energia's principal intangible assets are human and intellectual capital, research, development and innovation activities and the corporate image as well as those considered in the Accounting Statements.

Human and intellectual capital

ENGIE Brasil Energia's work force is characterized by diversity of age group with a mix of young talent and experienced professionals. The Company fosters the continuing evolution of its employees, investing in actions directed towards career development and also focused on wellbeing and occupational health and safety.

Image

ENGIE Brasil Energia's reputation is based on integrity, a hallmark of its relationship with different stakeholders. In this context, transparency and dialog constitute essential elements in the construction and maintenance of an image, which adheres to the values of the Company, as well as the commitments that it assumes.

RESEARCH, DEVELOPMENT AND INNOVATION ARE INCREASINGLY MORE RELATED TO BUSINESS STRATEGY, A REFLECTION OF THE ENERGY TRANSITION.



ENGIE Brasil Energia maintains channels for permanent communication with stakeholders as a means of providing information on its initiatives and projects. The Company website is a particularly important medium in this respect for publishing policies, reports, news items and market announcements, among other information.

In 2016, ENGIE adopted a single corporate logotype for all its companies as a way of increasing Group visibility both in Brazil and worldwide. In the light of the change in the Company's corporate denomination and logo, several communication initiatives were run to consolidate the new corporate identity both internally and externally.

Research, development and innovation [GRI G4 - DMA Sectoral]

Research, development and innovation (RD&I) activities are becoming increasingly strategic to the Company's business model. In 2016, this trend gained traction with the creation of the Operating Unit for Strategy and Innovation, an area under the Strategy and Regulation Department. The Unit's objective is to create innovative solutions to meet the demands of society in the context of the energy transition. To assist this process, the Company intends to strengthen further the existing partnerships with Brazilian universities and research centers in order to consolidate the culture of open innovation, integral to its development strategy.

The Research and Development Program regulated under Law 9991/2010 is an important instrument for conducting these activities. The relevant legislation mandates that generation, transmission and distribution companies should apply 1% of their net annual revenues in R&D projects. It is the responsibility of the companies to establish the objectives of the projects to be developed and to submit them for Aneel's assessment.

ENGIE Brasil Energia's total investments in its 2016 R&D Program were R$ 32 million and allocated as follows:

- **R$ 12.3 million** to the National Scientific and Technological Development Fund (FNDCT);
- **R$ 6.1 million** to the Ministry of Mines and Energy (MME), as the Company's contribution to the funding of the Energy Research Company (EPE); and
- **R$ 13.6 million** for projects with work in progress involving aspects listed in the following table.

Areas of R&D projects - 2016

Area	Amount invested (R$)
Energy efficiency	490,850.51
Alternative sources of electric energy generation	8,581,132.64
Electric energy generation	11,405.33
Thermoelectric generation	404,957.87
Management of the R&D Program	756,659.08
Environment	1,374,318.43
Operation of electric energy systems	362,192.55
Planning of the electric energy system	671,886.34
Supervision, control and protection of electric energy systems	986,880.36
TOTAL	**13,640,283.11**



The search for sustainable solutions for energy generation is among the main goals of R&D projects, which are focused on reducing environmental impacts and guaranteeing the reliability of the electricity system. In 2016, an example of these efforts was recognized with the triple award made to the Cidade Azul Solar Energy Plant project. This plant is the result of a research project initiated by the Company in 2011 in cooperation with the Universidade Federal de Santa Catarina (UFSC) and another 11 companies in the electric energy sector.

The project consists of the installation, operation and monitoring of eight trial modules, each one employing seven diferent photovoltaic technologies and solar monitoring stations at eight locations with different climates. The project also involves the installation and maintenance of the Cidade Azul Photovoltaic Plant - in operation since 2014. The plant has a 3.0 MWp power output and was installed in Tubarão (SC), adjacent to the Company's Jorge Lacerda Thermoelectric Complex (CTJL). The trial modules are recording preliminary results and have proved to be an important source of information for the analysis of how different technologies work in distinct regions.

In the light of these results, the project won the Rio de Janeiro American Chamber of Commerce's Brazil Environmental Award and the *Expressão* Ecology Award presented by Editora Expressão, both awards in the Innovation category. The project was also a finalist in the Von Martius Award for Sustainability, Technology Category, sponsored by the Brazil-Germany Chamber of Industry and Commerce.

The Company also fosters a culture of innovation both with its own employees as well as with external stakeholders. It runs the in-house *Inove* Program, which awards innovative ideas and projects in five categories: Operation and Maintenance, Research and Development (R&D), Commercial and Business, Socio-environmental and Management. All employees are eligible to enter, except managers of the organizational units and members of the Innovation Committee.

The second ENGIE Brasil Award for Innovation was held in 2016. Sponsored by ENGIE Brazil Energia's controlling company, the initiative recognizes companies, startups and entrepreneurs that devise innovative solutions, either of a technological or commercial nature, for areas of Group interest. Among such areas, we would highlight decentralized energy, green mobility and smart city, energy storage, smart grids or social inclusion through energy efficiency and access to energy.

3.0 MWp

is the capacity of Cidade Azul Photovoltaic Plant, installed in Tubarão.

THE INNOVATION CULTURE IS FOSTERED BY THE COMPANY THROUGH ACTIONS DIRECTED AT BOTH EMPLOYEES AND THE EXTERNAL PUBLIC.

Value Creation

ENGIE Brasil Energia's business model covers the capital essential to the activities of the Company and its capacity to create value – in the short, medium and long terms – both for the organization and also for its principal stakeholders. In this way, an integrated vision is developed of the connection between the inputs required for managing the Company's activities and the value created and shared with all stakeholders as shown as follows.

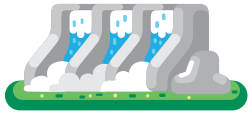
CAPITAL



FINANCIAL CAPITAL
- Capital stock
- Third party capital
- Revenues



NATURAL CAPITAL
- Water
- Wind
- Sun
- Biomass
- Mineral coal
- Biodiversity surrounding the operations



MANUFACTURED CAPITAL
- Hydroelectric, thermoelectric and complementary plants
- Administrative installations (head office and regional offices)
- Operational infrastructure (equipment, materials and technologies)



HUMAN CAPITAL
- Own employees
- Contracted companies' personnel (outsourced)
- Engagement and competencies for execution of the strategy



INTELLECTUAL CAPITAL
- Knowledge
- Research and Development
- Intellectual property



SOCIAL AND RELATIONSHIP CAPITAL
- Agreements with suppliers and clients
- Relationship with communities surrounding the operations
- Interaction with other audiences

COMPANY

BASIS OF MANAGEMENT:
- Mission, vision and values
- Policies and practices
- Strategy
- Governance

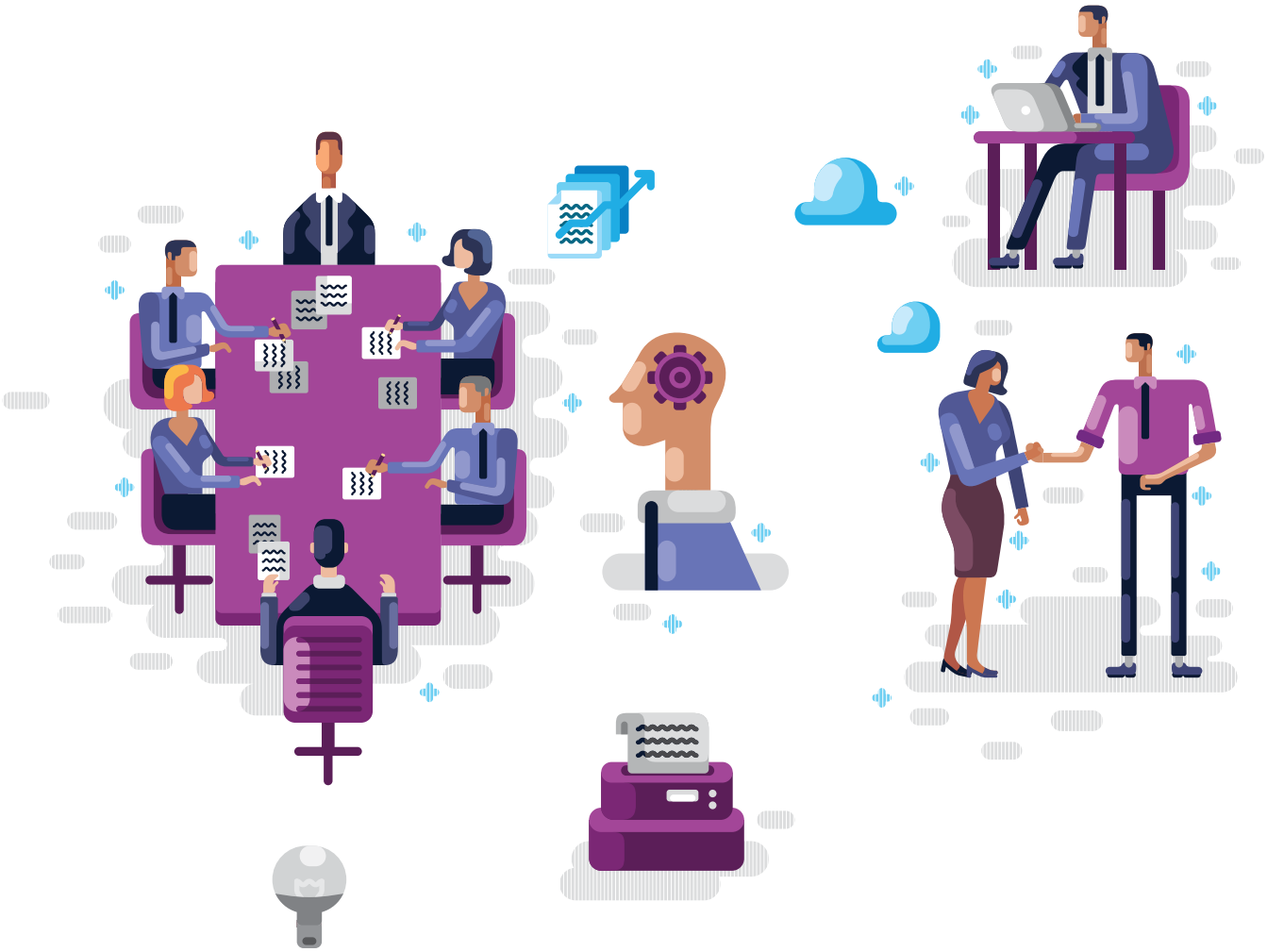
ACTIVITIES
- Centralized generation
- Distributed generation
- Energy commercialization

VALUE CREATED
- Operational efficacy
- Economic-financial performance
- Operating licenses
- Reputation
- Enhancing client loyalty
- Risk management
- Competitiveness

SHARED VALUE

	SDG*
Return on invested capital Income distribution Taxes	8
Rational use of natural resources Prioritization of renewable sources for energy generation Management of environmental impacts Conservation and recuperation of the biodiversity Mitigation of Greenhouse Gas emissions (GHG) Maintenance of environmental quality in the region of the operations	6 7 13 14 12 15
Improvement in the country's infrastructure Quality of the energy generation process Reliability in energy supply Efficiency in the use of natural and financial resources	7 9 11
Offer of employment Compensation and benefits Occupational health and safety Professional development Promotion of diversity	3 5 8
Innovation in processes and services Scientific and technological development Sharing of knowledge with teaching and research institutions and other partner organizations	9 11
Access to energy Client satisfaction Socio-economic development of the regions in which the operations are located Dissemination of sustainable practices along the value chain Broader access to socio-cultural and educational activities Improvement in the quality of life of the communities surrounding the operations	4 7 8 10 11 16

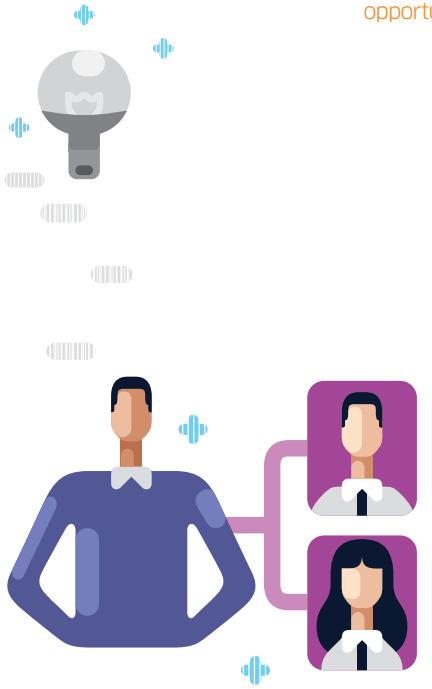
*SDG - 17 UN Sustainable Development Goals, and how the Company collaborates with direct and indirect promotion. More information at https://nacoesunidas.org/pos2015/



3 CORPORATE GOVERNANCE

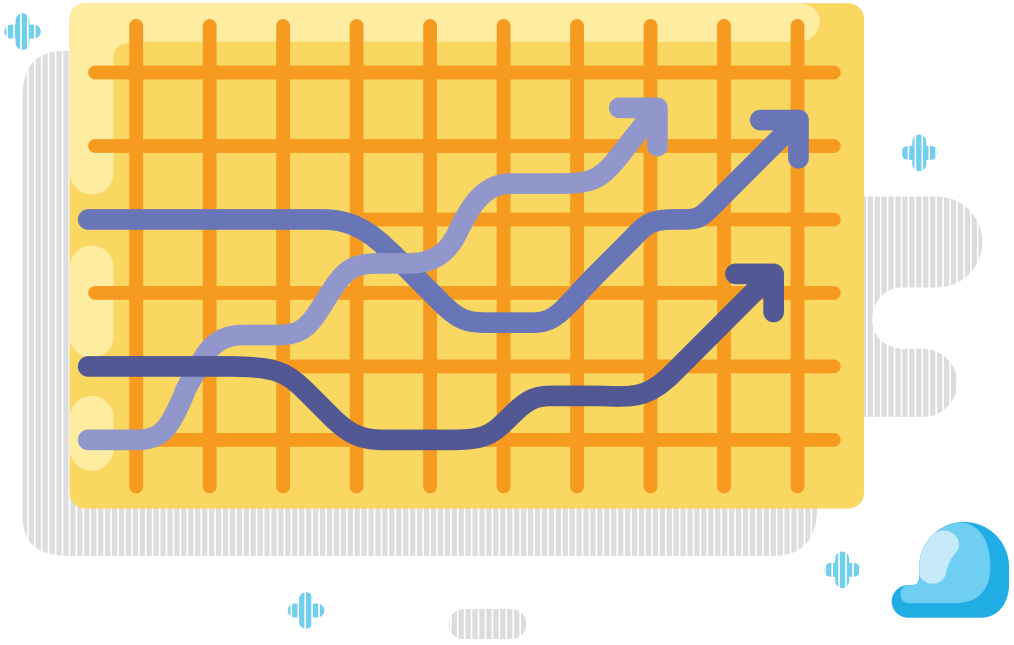
IN THIS CHAPTER:

- Management Structure
- Management Board
- Management of risks and opportunities



ENGIE Brasil Energia's operations are aligned to the best market practices of corporate governance including the requirements of the Sarbanes-Oxley Act. The Company conducts its businesses based on ethics and integrity, committed to guaranteeing the rights of the shareholders and transparency of its actions.

The Company is part of BM&FBovespa's Novo Mercado, a segment destined for the trading of shares of companies, which voluntarily adopt corporate governance practices additional to those required by the Brazilian legislation. A listing in this segment requires the adoption of corporate rules, which enhance investors rights, as well as a comprehensive policy for disclosing information to the market.



With the purpose of protecting the interests of all shareholders, ENGIE Brasil Energia guarantees them the following rights:

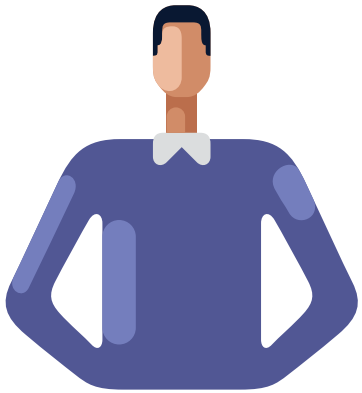
- Voting in General Meetings, both annual and extraordinary.
- Submitting recommendations to the Board of Directors through a specific channel in the website's Investors Portal.
- Receiving dividends and participating in the distribution of earnings or other distributions.
- Supervising management's activities and withdrawing from the Company should specific situations enshrined in the Joint Stock Company Law arise.
- Receiving at least 100% of the price paid per common share of the controlling bloc in the event of a public offering of shares as a result of the sale of a controlling stake (100% tag along) in accordance with Novo Mercado listing regulations.

The Company is part of **BM&FBovespa's** Novo Mercado, a segment destined for the trading of shares of companies, which voluntarily adopt corporate governance practices additional to those required by the Brazilian legislation.



ENGIE Brasil Energia's corporate bylaws establish that any dispute between shareholders especially related to the capital markets and to corporate law must be settled through the independent and confidential Market Arbitration Panel – a body under the auspices of the BM&FBovespa - for the solution of disagreements.

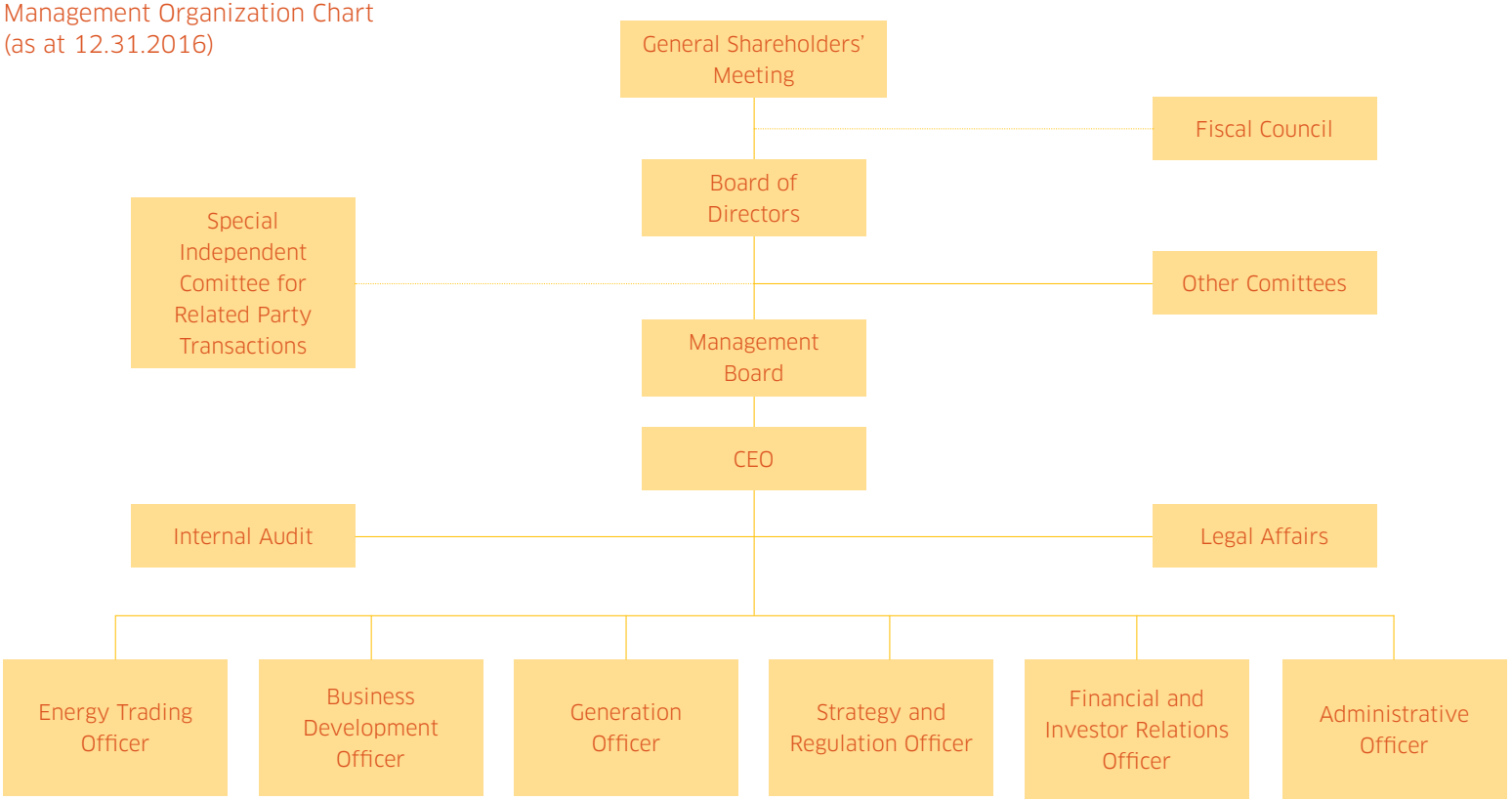
These and other guidelines on the relationship established between ENGIE Brasil Energia and its shareholders may be consulted in the Company's Bylaws, available from its website (www.engieenergia.com.br).



Management Structure [GRI G4-34]

The General Shareholders' Meeting is the most senior deliberative body in ENGIE Brasil Energia's governance structure, followed by the Board of Directors and the Management Board.

Management Organization Chart (as at 12.31.2016)



Board of Directors

[GRI G4-38]

ENGIE Brasil Energia's Board of Directors has the duty of establishing policies, strategies and general guidelines for the conducting of the business. The analysis of economic, environmental and social aspects and impacts on the Company are also the responsibility of the directors who meet ordinarily for examining performance, to supervise management acts and provide guidance to the Management Board.

As provided in the Bylaws, the Board must be made up of at least five and at the most, nine effective members, and an equal number of alternates, all of them elected by the General Shareholders' Meeting. Their mandate runs for a period of two years, reelection being permitted. At least 20% of Board members must be independent, pursuant to Novo Mercado listing regulations.

At the Annual General Meeting held on April 14, 2016, on a multiple voting basis, shareholders' representatives elected the members of ENGIE Brasil Energia's Board of Directors for a two-year term of office (2016-2018)[1]. Out of the nine members, two represent the minority shareholders and one acts on behalf of the employees. In line with the best governance practices, the Chairman of the Board of Directors exercises no executive function in the Company. **[GRI G4-39]**

1 Elected in April, the director Shankar Krishnamoorthy was replaced by Paulo Jorge Tavares Almirante, pursuant to the decision of the Extraordinary General Meeting held on July 14, 2016.

Board of Directors (as at 12.31.2016)

Members	Alternates
Maurício Stolle Bähr *Chairman*	Natacha Marly Herero Et Guichard*
Manoel Arlindo Zaroni Torres *Vice Chairman*	José Luiz Jansson Laydner
Dirk Achiel Marc Beeuwsaert	Gil de Methodio Maranhão Neto
José Pais Rangel *Minority shareholders representative*	José João Abdalla Filho *Minority shareholders representative*
Luiz Leonardo Cantidiano Varnieri Ribeiro *Minority shareholders representative*	Antonio Alberto Gouvêa Vieira *Minority shareholders representative*
Paulo Jorge Tavares Almirante	Gustavo Henrique Labanca Novo
Pierre Jean Bernard Guiollot	Marcelo Fernandes Soares
Roberto Henrique Tejada Vencato *Representative of the employees*	Luiz Antônio Barbosa *Representative of the employees*
Willem Frans Alfons Van Twembeke	José Carlos Cauduro Minuzzo

* She has still to take up the position as approval from the appropriate Brazilian authorities is still pending.

Fiscal Council

ENGIE Brasil Energia's Fiscal Council is permanently installed and responsible for examining the Company's Account Statements, supervising the acts of the Management Board and evaluating the risk management and internal controls' systems. In addition, it is incumbent on this body to analyze the proposals to be submitted to the Board of Directors in the event of engaging services complementary to the auditing of the Financial Statements.

The term of office of the three fiscal councilors, all of whom independent, is of one year, reelection being permitted. Shareholders at the Annual General Meeting of April 14, 2016 reelected the same fiscal councilors as those sitting on the Fiscal Council for the preceding term of office in 2015.

Fiscal Council
(as at 12.31.2016)

Members	Alternates
Carlos Guerreiro Pinto	Manoel Eduardo Bouzan de Almeida
Manoel Eduardo Lima Lopes	Ailton Pinto Siqueira
Paulo de Resende Salgado	Flávio Marques Lisboa Campos





It is up to the Fiscal Council to analyze the proposals to be submitted to the Board of Directors in the event of engaging services complementary to the auditing of the Financial Statements.

Management Board

Nominated by the Board of Directors and elected by the General Meeting, the Management Board works on a collegiate basis, adopting a matricial approach to all matters within its perview, although respecting the specific duties of each executive officer on the Board. It is incumbent on the Chief Executive Officer to coordinate and provide guidance to the other officers, delegating tariffs and executing the strategies outlined by the Board of Directors.

In 2016, the Company restructured the responsibilities of the Management Board with the creation of three departments: Generation, incorporating the activities relating to energy generation and the installation of new projects, Business Development focused on the identification of opportunities and establishing the feasibility of implementing them in practice and Strategy and Regulation, responsible for coordinating the activities of planning, control and strategic initiatives.

This process also saw the completion of the succession of the Company's Chief Executive Officer. With the departure of Manoel Arlindo Zaroni Torres, who has assumed the position of Vice Chairman of the Board of Directors, Eduardo Antonio Gori Sattamini was elected the new Chief Executive Officer of ENGIE Brasil Energia, taking up his post on June 30, 2016.



Management Board
(as at 12.31.2016)

Name	Position
Eduardo Antonio Gori Sattamini	Chief Executive, Financial and Investor Relations Officer
Edson Luiz da Silva	Chief Strategy and Regulation Officer
Gustavo Henrique Labanca Novo	Chief Business Development Officer
José Luiz Jansson Laydner	Chief Generation Officer
Júlio César Lunardi	Administration Officer
Marco Antônio Amaral Sureck	Energy Commercialization Officer

EDUARDO GORI SATTAMINI WAS ELECTED THE NEW CHIEF EXECUTIVE OFFICER OF ENGIE BRASIL ENERGIA.

Committees

- **Strategy Committee**: examines specific matters raised by the Board of Directors and the Management Board such as the selection and monitoring of expansion projects involving the generator complex and the analysis of tendencies in the electric sector, among other aspects relative to Company strategy.

- **Human Performance Committee**: responsible for the analysis of issues involving safety and productivity of the employees and outsourced personnel as well as plant uptime and the reduction in operating costs and environmental impacts.

- **Financial Committee**: has the function of proposing and monitoring the application of policies and the development of activities related to corporate finance, treasury, insurance and financial risk.

- **Energy Committee**: deliberates on the strategy for energy sales and proposes actions for the management of client portfolio risk.

- **Committee for Security in Industrial Control Systems**: designed to guarantee the safety of the Company's industrial control systems by proposing, implementing and monitoring policies and action plans involving the various areas of ENGIE Brasil Energia.



11 COMMITTEES ASSIST THE DIRECTORS AND OFFICERS IN DECISION MAKING ON SPECIFIC THEMES.

- **Risk Management Committee**: responsible for promoting awareness as to corporate risks, establishing goals and guidelines and suggesting management improvements as well as establishing procedures for controlling Company risks.

- **Innovation Committee**: strengthens the entrepreneurial culture in the Company, stimulating continual innovation of processes and business models.

- **Tax Governance Committee**: analyzes matters of a tax nature, proposing actions, which generate less exposure to risks relating to the issue as well as for maximizing tax break systems.

- **Sustainability Committee**: contributes to consolidating sustainability as part of the Company's organizational culture, proposing goals and actions for sustainable development. Stimulates initiatives and evaluates requests for support of actions benefiting communities in regions where ENGIE Brasil Energia has its operations.

- **Special Independent Committee for Transactions with Related Parties**: installed by the Board of Directors whenever the Company intends to negotiate any transaction with related parties. The Committee is predominantly made up of representatives of the minority shareholders with seats on the Board of Directors and has the responsibility of analyzing, negotiating and recommending (or otherwise) the execution of transactions with related parties.

- **Ethics Committee**: responsible for disclosing, applying and monitoring the pillars of ethical behavior established by the Company with a view to preventing ethical risk and fostering good professional practices in line with ENGIE Brasil Energia commitments.

Codes and policies

ENGIE Brasil Energia's corporate codes and policies express corporate values and the organizational culture, establishing markers for the conduct of the businesses as well as the relationship with the different stakeholders with which the Company interacts. These documents are developed, reviewed and updated periodically to ensure their compatibility with external and internal scenarios.

In 2016, ENGIE Brasil Energia published its Ethics Policy, which is complementary to the Code of Ethics. The document establishes guidelines for the incorporation of ethical principles into the Company's strategy, and professional practices, providing guidance for actions in all places and under all circumstances according to corporate values and in compliance with current legislation and regulations. Again, in 2016, the Board of Directors approved a new Opportunities and Risk Management Policy. **[GRI G4-56]**

THE NEW OPPORTUNITIES AND RISK MANAGEMENT POLICY WAS APPROVED BY THE BOARD IN 2016.

SHARED POLICIES

The corporate policies and codes shared with the stakeholders and available from the website are:

- **Ethics Code**: a series of fundamental principles to be followed by all who directly or indirectly are involved in actions of responsibility at the Company.
- **Environmental Code**: establishes the Company's commitments with the environment and sustainable development.
- **ENGIE's Policy for Sustainable Management**: expresses the Company's guidelines with respect to quality, the environment, occupational health and safety, social responsibility and energy management.
- **ENGIE's Policy on Climate Change**: establishes commitments and actions for contributing to the mitigation of and adaptation to climate change.
- **Human Rights Policy**: establishes commitments and guidelines focusing on the Company's projects, operations and value chain.
- **Stakeholder Engagement Policy**: details the procedures to be adopted by the Company and its subsidiaries in the relationship with its stakeholders during the stages of development, implementation and operation of the projects under its responsibility.
- **Trading and Disclosure Policy**: lays down practices for disclosure and the use of corporate information as well as for the trading of securities issued by ENGIE Brasil Energia, such as shares and debentures.
- **Investments and Derivatives Policy**: establishes the criteria for investing available resources in the financial market and limits on the use of derivatives.

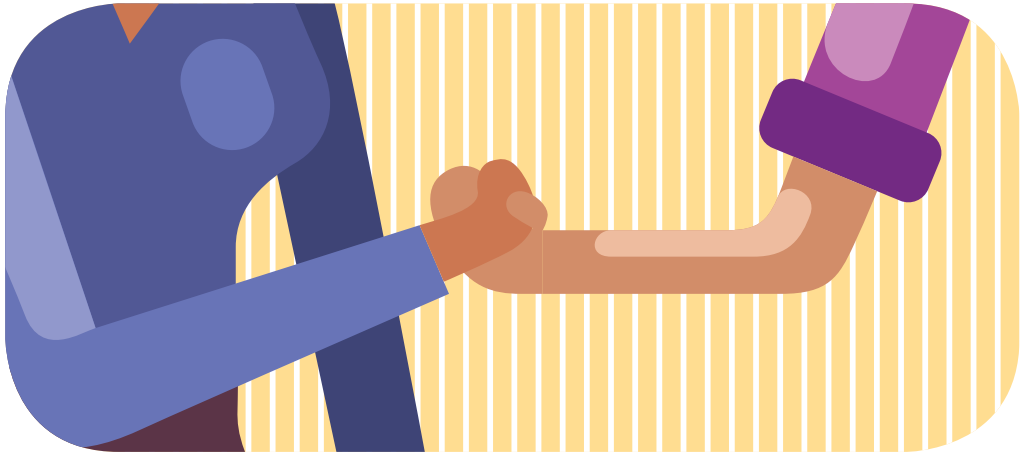
Ethics and integrity

With the Board's approval of the Policy for Combating Bribery and Corruption, ENGIE Brasil Energia underscored its commitment to ethics and integrity in 2016. In the document shared with employees, suppliers and other stakeholders, the Company sets out guidelines, which repudiate corrupt practices at any level of relationship. It reiterates that corruption and bribery are contrary to ENGIE Brasil Energia's ethical principles and that the Company will not tolerate such behavior under any circumstances in any of its business activities whether with public or private sectors. **[GRI G4-56]**

The Policy also provides guidance on the mechanism to be adopted in denouncing unethical or unlawful behavior, establishing the Ethics Committee as the prime and confidential channel for receiving such complaints. The Committee also has the responsibility for the strict monitoring of all the Company's preventive policies, procedures and processes for precluding corruption and bribery. **[GRI G4-57; G4-58]**

- ENGIE Brasil Energia employs regular practices for ensuring compliance with the new Policy as well as the Code of Ethics directed towards prevention and verification of situations of risk and improper events. Such practices include processes of due diligence, auditing, programs for training and increased awareness, contractual provisions and an internal program for controlling the Company's activities. ENGIE Brasil Energia provides the following channels for information, guidance or whistle blowing when ethical principles and compliance are thought to have been infringed:

The Policy for Combating Bribery and Corruption, approved by the Board in 2016, set out guidelines which repudiate corrupt practices at any level of relationship.



- Website: for whistleblowing either on an anonymous or identified basis.

- Email: comitedeetica.brenergia@engie.com - for messages where the author is identified.

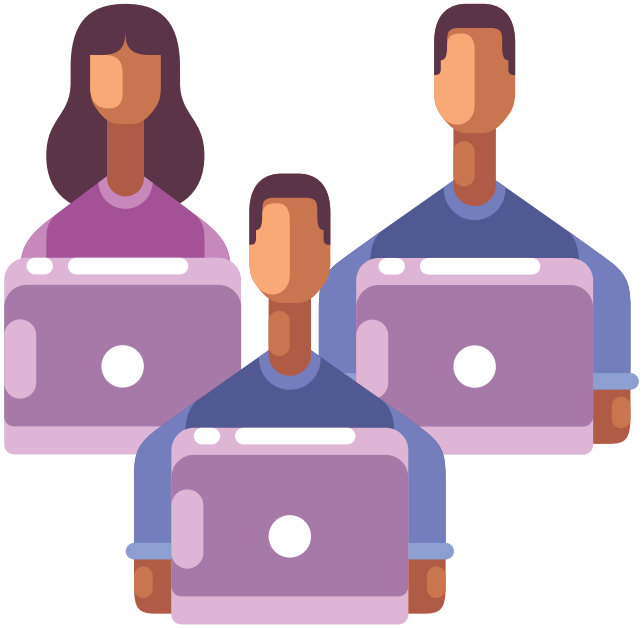
In the light of the implementation of the foregoing preventive measures, in 2016 no incidents of corruption involving the Company were reported. **[GRI - G4-SO5]**

Internal controls

ENGIE Brasil Energia prioritizes the ethical conduct of its subsidiaries. In addition to the Policy and Code of Ethics, the Company adopts a rigorous program of internal controls known as Income and implemented by all direct and indirect subsidiaries. The program was launched in 2005 in the light of the enactment of the Sarbanes-Oxley Act. All the Company's operations are incorporated under 12 processes, each of which in turn are divided in 14 sub-processes. Further to the use of the processes and sub-processes under the Income program for evaluating internal controls, an analysis of the overall control environment is conducted based on the methodology of the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In addition, the results of the internal audit tests and the evaluation of the overall controls environment are approved by the Chief Executive Officer and by the Chief Financial and Investor Relations Officer, then being submitted to the Fiscal Council and the Board of Directors.

THE ANALYSIS OF BUSINESS RISKS ENCOMPASSES THEIR IDENTIFICATION AND CLASSIFICATION AS TO THE PROBABILITY OF OCCURRENCE AND SIGNIFICANCE IN TERMS OF FINANCIAL, STRATEGIC AND OPERATIONAL IMPACT.



Management of risks and opportunities

Evaluation and control

The analysis of corporate risks and opportunities is conducted through a systemic process, which permeates all corporate activities and involves all employees and senior management. In 2016, the Board of Directors approved a new Policy for Management of Risks and Opportunities, an internal document that establishes guidelines for the conduct of the businesses with the following objectives:

- Creation and maintenance of value, reputation and internal motivation.
- Encouraging a certain degree of risk taking, deemed reasonable in relation to legal, economic and social aspects.
- Assurance of conformity of actions with legal and regulatory obligations as well as with ENGIE Brasil Energia's values.

As called for in the Policy, the analysis of business risks encompasses their identification and classification as to the probability of occurrence and significance in terms of financial, strategic and operational impact. Among the risks managed and handled, of particular importance are: **[GRI G4-14]**

- **Market risk**: the supply of and demand for electricity can deviate from forecast so affecting energy prices and volume.
- **Regulatory risk**: adverse movements in electricity sector regulations. Historically, the Federal Government exercises a high degree of influence on the Company's businesses, including the industry's underlying business models, the terms and conditions of the power purchasing agreements, which ENGIE Brasil Energia is authorized to sign, as well as on production levels.
- **Taxation risk**: adverse evolution in the tax legislation and the actions taken by the internal revenue authorities.
- **Risk arising from economic factors**: alteration in the economic variables such as interest, currency rates, commodity prices, economic growth and inflation, with an impact on the Company's businesses.
- **Contractual default risk**: non-compliance with the provisions in the Company's power purchasing agreements and with the rules of the Electric Energy Trade Board (CCEE). Another key aspect in this context is the possibility of a concession contract signed

with the Federal Government being rescinded unilaterally under unforeseen conditions.

- **Socio-environmental risk of the plants in operation**: unfavorable changes in the environmental regulations and the activities of organized social movements in relation to the plants in operation.

- **Risk in the development and installation of new projects**: occurrence of events in the development and installation of projects resulting in delays to the construction schedule or additional costs for installation or involving plant operations.

- **Risk of energy shortages**: shortfall in the physical guarantee of the Company's proprietary plants and in purchased energy. Among the factors influencing the availability of energy are drought and fuel shortages for conventional thermoelectric and biomass plants. A shortage of primary energy in conjunction with the obligation to deliver assured energy may result in the Company's exposure to the short-term market where prices tend to be high.

- **Risk of human resources**: labor shortages (own or third party employees) due to the failure to hire and train within a suitable period for meeting the Company's expansion needs and to replace vacancies on the payroll; increase in costs due to competition for human resources resulting from economic growth; strikes and stoppages as well work-related accidents.

- **Technological risk of information**: unavailability or lack of security of IT resources may negatively affect the Company's operations and image.

- **Risk of major loss**: major accidents and disasters due to natural or man-made causes, involving the implementation of projects, the operation of plants and the management of the Company. Payment of substantial costs of restoring the environment and for environmental indemnification may oblige ENGIE Brasil Energia to delay or reallocate investments to other areas, having a negative effect on the businesses.

- **Ethical risks and human rights**: Non-compliance with ethical values or human rights, internally or in external collusion - corruption, fraudulent use of the Company, interference in the competition law and contravening labor conditions and relations.

CONTINGENCY PLANS [GRI G4-DMA SECTORAL]

Within the scope of risk management processes, emergency situations in the form of major accidents and disasters are subject to permanent control on the part of the Company where such events are the result of human and natural causes involving the installation of projects, plant operations and the management of the business. In this context, all plants are certified under the NBR ISO 14001 standard and maintain Emergency Response Plans, which provide for specific responses to a range of different emergency contingencies according to the reality and nature of each plant operation.

In the case of dams, all those operated by ENGIE Brasil Energia are classified as low risk in the matrix regulated by the National Waters Agency (ANA) and adopted by Aneel. The Company adopts premium engineering practices in its hydroelectric projects, from construction to operation and maintenance activities. These practices contemplate the monitoring of the civil structures through inspections, analysis and preventive maintenance undertaken by a specialized team. Consequently, potential impacts on human life, the environment and the economy are mitigated.

ENGIE Brasil Energia adopts dam safety methodology in accordance with Aneel Normative Resolution 696 of December 2015 as well as Law 12.334 of September 2010, which established the National Dam Safety Policy. The Company also adheres to the recommendations of ICOLD - International Commission on Large Dams and the CBGB – Brazilian Large Dams Committee. On the basis of these norms, ENGIE Brasil Energia has prepared Dam Safety Plans for all the hydroelectric power plants under its responsibility.

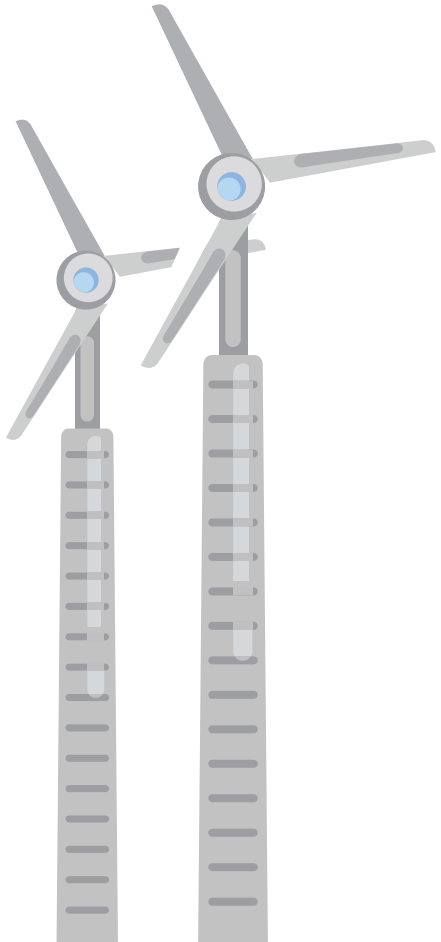
According to Aneel, the hydroelectric plants are still the main source of energy generation in Brazil, representing 60.86% of installed energy.

Scenarios and perspectives

In the same way as risk management, the Company systematically identifies opportunities based on its long term vision. In this context, the analysis of business opportunities is a function of the perspectives and the sustainability of the electric energy sector.

Expansion of Brazilian energy matrix

Currently, Brazil has 4,645 plants in operation with a total installed capacity of 150,135,737 kW. Aneel data shows that hydroelectric plants continue to be the principal source of energy generation in Brazil, accounting for 60.9% of the installed capacity, followed by thermal power plants, responsible for 27.4% of domestic capacity. The following table shows the composition of the matrix divided into type of generation type.

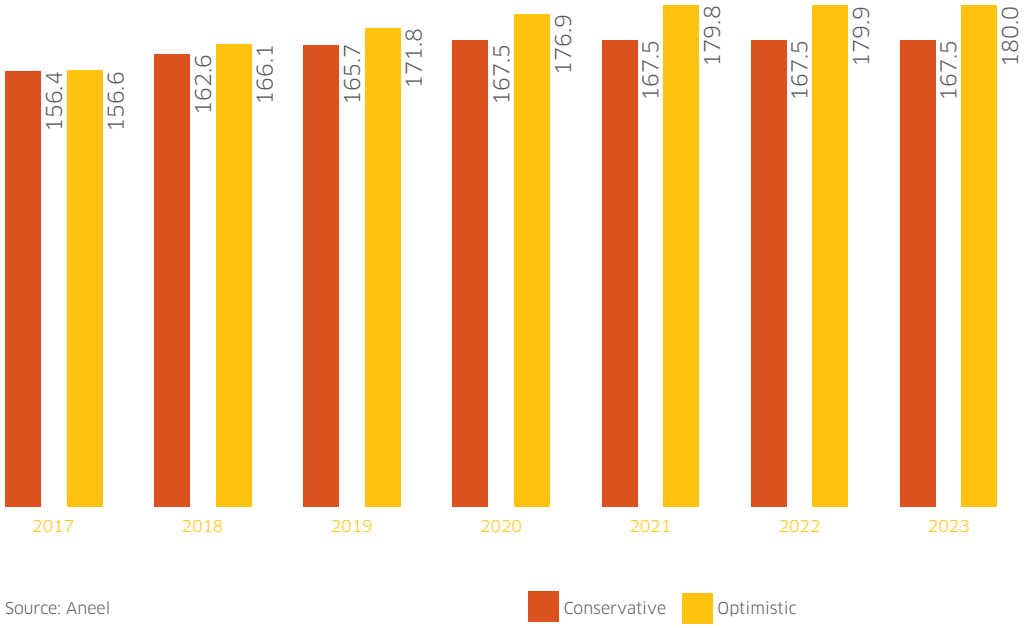


Installed Capacity
(to 12/31/2016)

TYPE	Numbers	Capacity (kW)	%
Hydroelectric plants	219	91,499,178	60.9%
Thermoelectric plants	2,947	41,099,709	27.4%
Wind plants	413	10,123,942	8.9%
Small hydroelectric plants	441	4,918,967	3.3%
Thermonuclear plants	2	1,990,000	1.3%
Small hydroelectric plants up to a capacity of 1.0MW	581	480,933	0.3%
Photovoltaic plants	42	23,008	0.00
SUBTOTAL	**4,645**	**150,135,737**	**100.0**

Source: Aneel (National Electric Energy Agency) - managerial information bulletin (03.06.2017)

Forecast of installed capacity in Brazil (in GW)

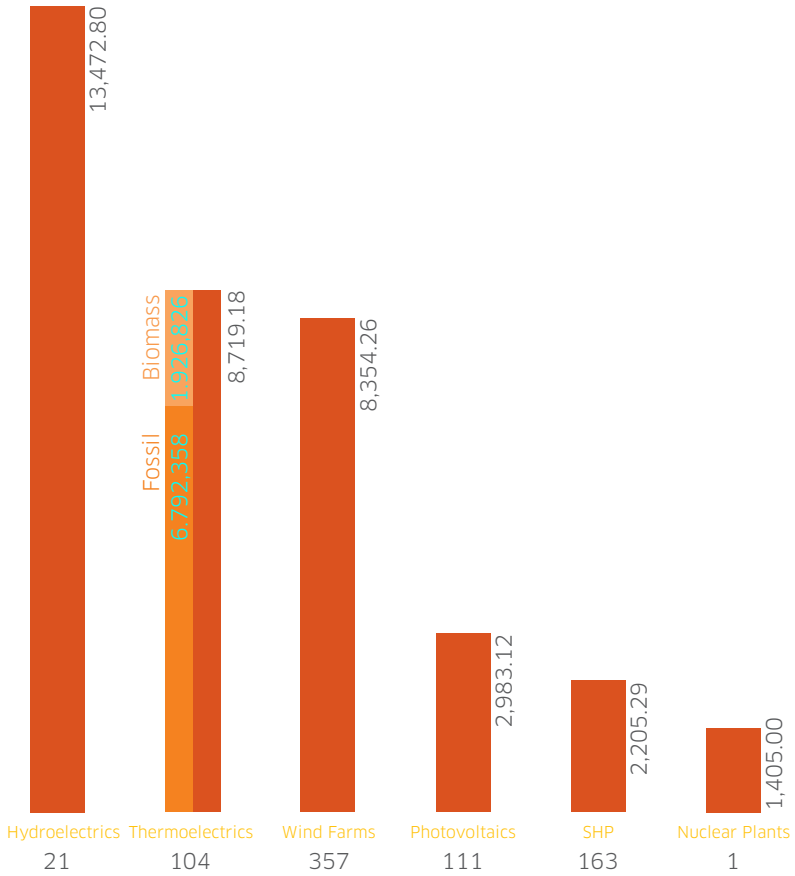


Source: Aneel

The capacity of the Brazilian electric energy sector is expected to expand by 37,139.65 MW over the next few years, comprising 757 plants - currently being installed and subject to periodic inspection by Aneel - for which authority for generation has already been granted.

The following graph – published by Aneel in October 2016 – shows these projects in the process of installation and indicating capacity (in MW) and the number of plants by generation type and subdivided by fuel source in the case of the thermoelectric plants.

Supervision of installation by generation type, capacity (MW) and number of plants



Source: Aneel

Sustainability in the electric sector

In the context of global energy sector norms, sector entities are required to operate and plan their future actions based on the principles of sustainable development. In the light of structural changes in energy systems resulting from the so-called energy transition, companies and governments have been concentrating efforts on supplying energy on an increasingly more comprehensive and efficient basis while at the same time reducing carbon emissions. The goal is to reach equilibrium between expanding access to energy and mitigating climate change in order to reach the Paris Agreement target set in 2015: to maintain the increase in global temperatures to a maximum of 2ºC over pre-industrial levels.

As in other economic segments, the effects of climate change have a direct influence on operations in the electric sector. In view of this, the Company evaluates the related risks, including any adverse impacts on revenue and costs. Such events for instance may come about as a result of regulatory amendments or changes in hydrological patterns or due to the incidence of winds. In this context, there are risks of a future carbon tax on emissions eventually being built into the criteria governing energy dispatch by the National Electrical System Operator. Consequently, the Company's risk matrix includes aspects on this theme, which is systematically monitored. However, the impacts of such aspects on ENGIE Brasil Energia's financial performance is still difficult to forecast. **[GRI G4-EC2]**



In the light of structural changes in energy systems resulting from the so-called energy transition, companies and governments have been concentrating efforts on supplying energy on an increasingly more comprehensive and efficient basis while at the same time reducing carbon emissions.

In the following infographic, we show some concepts, tendencies and opportunities with respect to the energy transition as well as its impact on society.

ENERGY TRANSITION

DISRUPTIVE FORCES: TENDENCIES, WHICH DRIVE CHANGE AND CREATE OPPORTUNITIES

DIGITIZATION
New technologies permit gains in energy efficiency and automation of energy-related systems with the aim of greater economy and comfort. Mobile devices, the internet of things and big data are key elements in this process.

DECENTRALIZATION
The use of photovoltaic solar panels allows people or companies, irrespective of location, to generate autonomously, at competitive costs, also obviating the need for connection to the grid. The reduction in solar panel prices, more accentuated in recent years, is accelerating the process of decentralization.

DECARBONIZATION
The drive for sustainable development requires that society adjust its activities to a low-carbon economy. This implies a change in individual habits as well as business models to ensure quality of life for future generations.

TRANSITION: THE CHALLENGES OF THE CURRENT SCENARIO

INTERMITTENT GENERATION
In a situation where thousands of photovoltaic panels operate in a city, any cloudiness means that energy generation drops off drastically in a question of seconds. The challenge therefore is to maintain an adequate voltage and frequency in the region without interruption to supplies.

BI-DIRECTIONAL ENERGY FLOW
Today's distribution network is unidirectional: energy moves in just one direction. With the introduction of decentralized generation, energy becomes bi-directional, bringing in and sending out energy in a complex flow of supply/demand.

REGULARITY ADJUSTMENTS
With consumers also assuming the generation function as well as the greater complexity of energy management, the new reality of the market will require adapting the legislation, which regulates the sector.

A SHIFT IN INVESTMENTS
Companies and governments are gradually ceasing to invest in fossil fuels – new installations, research and development and subsidies, for example. Consequently, investments are migrating to renewable sources, enhancing their importance.

RESERVE CAPACITY
Generated energy needs to be stored in residences, electric vehicles or larger-sized battery banks.

GREATER COMPLEXITY OF THE SYSTEM
The operation and management of the electricity system, particularly in major cities, are becoming more complex, requiring solutions for ensuring reliability.

INVESTMENTS IN INFRASTRUCTURE AND NEW TECHNOLOGIES
The entire energy generation chain – from government to consumers through the intermediary of companies which operate in the sector – to a greater or lesser degree, will need to update and expand their energy structures as well as develop and disseminate technological solutions.

FUTURE SCENARIO: THE EXPECTED TRANSFORMATIONS

"PROSUMER"
The individual or company that generates its own energy becomes a producer and consumer simultaneously, known as a "prosumer". Perhaps he may even be able to choose to whom he sells his energy – and for how much.

INTELLIGENT PRODUCTS
The internet of things allows products to be programmed to consume energy at times when the resource is cheaper. Or, on the other hand: can be switched off automatically when prices are high.

INFORMATION AND PRICE IN REAL TIME
Intelligent meters will permit demand to be managed based on variation in energy price and notified in real time. Consequently, it is possible to encourage consumption at a time of excess generation - normally, occurring during the day due to peak availability of photovoltaic energy - and to discourage the use of energy during periods of limited generation through an increase in prices.

ENERGY CLOUD
Energy surpluses generated in a residence is fed into the network and can therefore be consumed by the owner anywhere – shopping center or public square, for example.

CLEANER MATRIX
The reduced share of fossil fuels in the energy matrix results in a reduction in greenhouse gas emissions, contributing to the combat of climate change.



4 MANAGEMENT OF QUALITY

IN THIS CHAPTER:

- Operating performance

The Integrated Management System (SIG) together with corporate policies provide the underlying guidance for the management of the Company's manufactured capital and covers five dimensions: quality, environment, occupational health and safety, social responsibility and energy management. In all, 14 of the 29 plants which ENGIE Brasil Energia operates are certified according to NBR ISO 9001 (quality), NBR ISO 14001 (environment) and NBR OHSAS 18001 (Occupational Health and Safety) standards. In 2016, Estreito HPP was certified under these standards, thus increasing the percentage of certified installed capacity from 83.6% to 95.3% – this discounting the non-renewal of Charqueadas TPP's certification in the light of the closure of plant activities.

The Jorge Lacerda Thermoelectric Complex, which has three plants among the 14 certified, has also certification according to the NBR ISO 50001 standard with respect to Energy Efficiency. The Company seeks to adhere to guidance under the NBR ISO 26000 standard (for which there is no certification) on social responsibility.

THE PERCENTAGE OF CERTIFIED INSTALLED CAPACITY OF THE COMPANY REACHED 95.3% IN 2016.

97.2% was the plant uptime recorded by the plants operated by the Company in 2016, excluding scheduled stoppages



Operating performance

ENGIE Brasil Energia considers the reliability, uptime and safety of the generating complex as aspects essential to management of quality. These aspects are measured by the Company through the plant internal uptime indicator, which tracks the energy supply capacity of the installations and the hours of urgent and unscheduled downtime of the generator units.

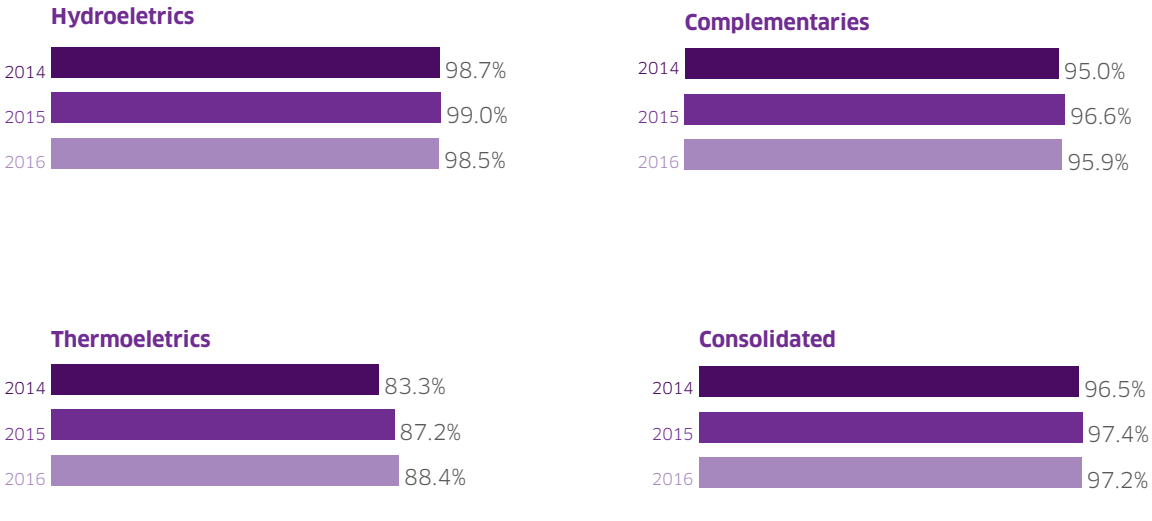
For the full year 2016, excluding scheduled stoppages, the plants recorded uptime of 97.2%: 98.5% for the hydroelectric plants, 88.4% for the thermoelectric units and 95.9% fired from complementary sources. Consequently, the goal established by the Company for this indicator (≥ 98.7%) was not reached.

If all scheduled stoppages are tabulated, generator uptime was 86.8%: 88.5% for the hydroelectric plants, 75.0% for the thermoelectric units and 87.8% fired from complementary sources. **[GRI G4-EU30]**

The key factors which affected hydroelectric uptime in 2016, when compared with the preceding year, were modernization work on the Generator Unit 3 of Ponte de Pedra HPP and on Units 3 and 4 of Salto Santiago HPP. Maintenance activity also took place on Unit 1 of the Passo Fundo HPP and on Units 1 and 2 of São Salvador HPP. Another factor impacting uptime ratios was the modernization of the velocity and voltage regulators on Generator Unit 1 of Cana Brava HPP.

As to the thermoelectric plants, uptime working was most affected by scheduled maintenance on Generator Units 2, 4 and 5 of the Jorge Lacerda Thermoelectric Complex and on Unit 3 of the William Arjona TPP. An additional impact came from the decommissioning of the Charqueadas TPP. In the case of the plants fired from complementary sources, uptime ratios were affected by maintenance on the Unit 3 turbine of the José Gelázio SHP.

Plant uptime, excluding scheduled stoppages



In 2016, net electric energy output was 43,521 GWh (4,955 average MW), a year-on-year reduction of 6.3%. Out of total generation, the hydroelectric plants corresponded for 38,078 GWh (4,335 average MW), a 3.2% decrease; the thermoelectric plants for 4,113 GWh (468 average MW), a reduction of 29.3%; and the complementary-powered plants for 1,332 GWh (152 average MW), an increase of 0.5%. **[GRI G4-EU2]**

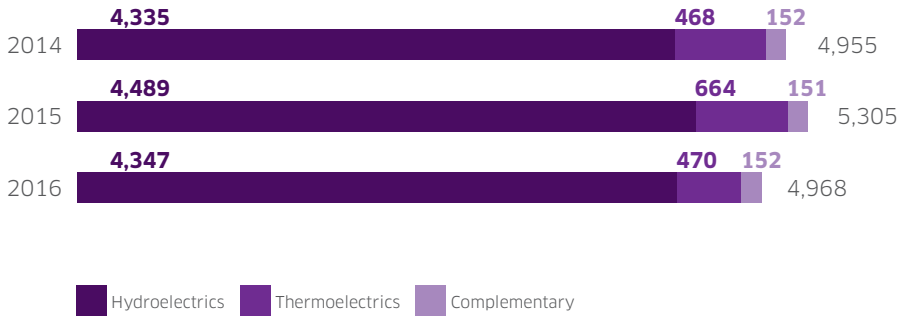
There was no particular event at the hydro plants meriting specific mention other than the less favorable hydrological conditions prevailing in 2016. The decreased generation from thermoelectric sources is due to reduced generation by order of merit and also the temporary shutdown in operations at the William Arjona TPP for reasons of operating convenience and the decommissioning of the Charqueadas TPP, already mentioned.

Generation from complementary plants was virtually stable, the key factor in this case being reduced generation from the SHPs in the light of low rainfall, albeit offset by increased generation from the wind power plants with initial commercial operations at the Santa Mônica and Cacimbas wind farms.

In this context, it is worth pointing out that an increase in the Company's hydroelectric generation does not necessarily reflect an improvement in economic-financial performance.

Conversely, a reduction in this type of generation does not inevitably imply a deterioration in economic-financial performance due to the adoption of the Energy Reallocation Mechanism (MRE), which defrays the risks of hydro generation among its participants. As to the Company's thermal generation, its increase might reduce (as a function of the Company's level of contracting) exposure to the Price for the Settlement of Differences (PLD), the opposite being the case when there is a decrease, all other variables being equal.

Net electric energy generation (Average MW)



Average efficiency of ENGIE Brasil Energia [G4-EU11]

Thermoelectric Plant /Unit		Installed capacity (MW)	Average efficiency (%)	Principal fuel	Aneel benchmark (RN 500)[1]
Jorge Lacerda Complex	UTLA1[2]	100	22.578	Coal	30
	UTLA2[2]	132	28.79	Coal	30
	UTLB	262	28.244	Coal	35
	UTLC	363	33.595	Coal	35
	CTJL total[3]	**857**	**30.329**	**Coal**	**33.6**
Charqueadas	UTCH	36	18.311	Coal	25

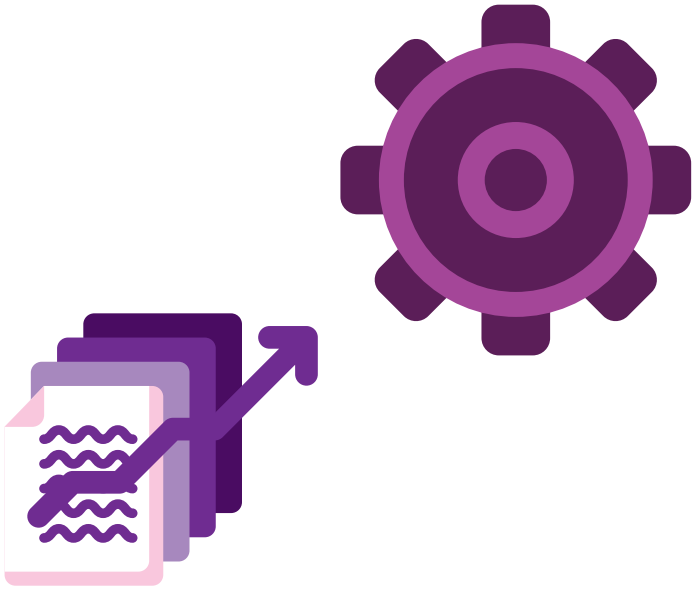
1 The benchmark values cited in Aneel Normative Resolution 500 relate to coal-fired plants only.

2 The UTLA units were highlighted individually (under 1 and 2) since they differ in various respects (time in operation, manufacturer, installed capacity etc.).

3 In the case of the thermoelectric complexes where there is more than one plant pertaining to the same concessionaire, the benchmark for verifying net energy efficiency may be applied on a joint basis.

Remote operations

On October 10, 2016, the Company initiated remote operating at Ponte de Pedra HPP and at the José Gelázio da Rocha and Rondonópolis small hydroelectric power plants. Located in the state of Mato Grosso, these operations are now controlled out of the Generation Operations Center (COG), installed at the Company's headquarters in Florianópolis (SC).



THE INFRASTRUCTURE OF THE COG INCORPORATES HIGHLY SOPHISTICATED TECHNOLOGICAL RESOURCES ALLOWING REAL TIME MONITORING AND ENSURING THE RELIABILITY OF THE SYSTEM.

Projected with a focus on digitization and operating excellence, the infrastructure of the COG incorporates highly sophisticated technological resources allowing real time monitoring and ensuring the reliability of the system. To this end, several adaptations have been made to existing systems, equipment and procedures as well as intensive training of operators, the relative investment amounting to about R$ 4 million. The Company conducted all stages of planning, execution and management of the project with reduced recourse to outside hiring.

It is worth recalling that ENGIE Brasil Energia already has considerable experience in remote operations that had previously been adopted at the Cana Brava (GO) and São Salvador (TO) hydroelectric power plants and controlled from Salto Santiago HPP (PR), as well as Passo Fundo HPP (RS), operated remotely from Itá HPP (SC). In addition, before becoming an integral part of COG, the José Gelázio da Rocha and Rondonópolis small hydroelectric plants, both in the state of Mato Grosso, were controlled remotely from Ponte de Pedra HPP.

5 ECONOMIC-FINANCIAL MANAGEMENT



IN THIS CHAPTER:

- Macroeconomic scenario
- Electric sector context
- ENGIE Brasil Energia's economic-financial performance



Macroeconomic scenario

Throughout 2016, the Brazilian economy continued the recessionary trajectory of the preceding year. Gross Domestic Product reported a retraction of 3.6% or 9% when compounded with the decline since the outset of the economic recession in 2014. This was the first time that Brazil has recorded two consecutive years of economic downturn since the inception of the official series in 1948. In 2015, GDP fell by 3.8%, the greatest decline in 25 years.

IBGE data shows that the country ended the year reporting official inflation at 6.3%[1] – at the ceiling of the government's inflation band and driven largely by food prices. The accumulated primary deficit for the public sector was R$ 154.3 billion – representing 2.4% of GDP, the worst result for the historic series . The commercial US Dollar closed 2016 reporting a 17.7% devaluation against the Real at R$ 3.2497, the first annual decline in the US currency since 2010.

Industrial production posted a decrease of 6.6% in relation to 2015. The labor market was also affected: at the end of the year, jobless numbers in Brazil stood at 12.3 million – the average unemployed rate for 2016 as a whole was 11.5% and above the result of 8.5% for 2015.[2]

A study on competitiveness by the National Confederation for Industry (CNI) classified Brazil in 17th place in a ranking of 18 countries. The CNI found that due to the economic recession, the country lost ground in four of the nine items evaluated: availability and cost of labor, the macro-economic environment, competition and scale of the domestic market and technology and innovation. On the other hand, there was an improvement in the item for education.



1 Source: IBGE – Instituto Brasileiro de Geografia e Estatística
2 Source: Banco Central do Brasil

COMPARED WITH 2015, ENERGY CONSUMPTION REPORTED 6.8% GROWTH IN THE FREE CONSUMER MARKET AND FELL 3.5% IN THE CAPTIVE MARKET.

Electric sector context

An economy in recession reflected directly in demand for electric energy in Brazil. According to Energy Research Company (EPE) data electricity consumption amounted to 460,001 GWh in 2016, a decrease of 0.9% compared with 2015. The residential segment represented 132,893 GWh of this total and 1.4% year-on-year higher, the only segment to record an increase in consumption in the period. However, average residential consumption ended the year practically unchanged – 160 kWh/month relative to 161 kWh/month reported for 2015. Annual consumption for the commercial and industrial segments was 88,185 GWh (-2.5%) and 164,034 GWh (-2.9%), respectively.

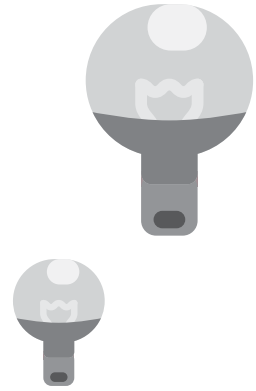
Most notable in terms of consumption by region were decreases in the Southeast (-1.8%) and in the Center-West (-1.0%) of the country. The Northeast and South regions turned in almost stable results in relation to 2015, albeit both with a slight decline of 0.3%. The North region was the only one to register growth - 2.0%.

Consumption also reported growth in the free consumer market at 123.3 TWh – an increase of 6.8% compared with 2015. Meanwhile, consumption in the captive market fell 3.5% in the period.

The scenario in 2016 was an even more critical one than 2015 in relation to hydrology and corresponding hydroelectric plant inflows. Both the North and Northeast regions experienced their second worst year ever. Conversely, strong inflows in the Southeast and the Center-West region in January 2016 combined with regular inflows in the South for the best part of the year together with a significant decrease in energy consumption, resulted in the Price for the Settlement of Differences (PLD) remaining relatively low for the period.

Authorization was given to increase reservoir storage at the hydroelectric plants in relation to 2015. Although this in practice meant just a modest rise in water levels, the consequence was that plant efficiency rose with more energy being produced with less water. This increase was more intense in early 2016 due to stronger inflows reported for the Southeast and Center-West, permitting reduced dispatch from the hydro plants in the North and the Northeast. It was in this period that PLD values fell to their lowest point. The impact of restrictions on energy transmission combined with the reduced supply of hydroelectricity in the North and the Northeast meant that the PLD for these regions exceeded that for the remaining regions on several occasions.

Electric Energy Trade Board data reveals that the Generation Scale Factor - representing the percentage of physical guarantee generated by the hydroelectric plants - was 87.1% in 2016, higher than the 84.3% reported in 2015.



ENGIE Brasil Energia's economic financial performance

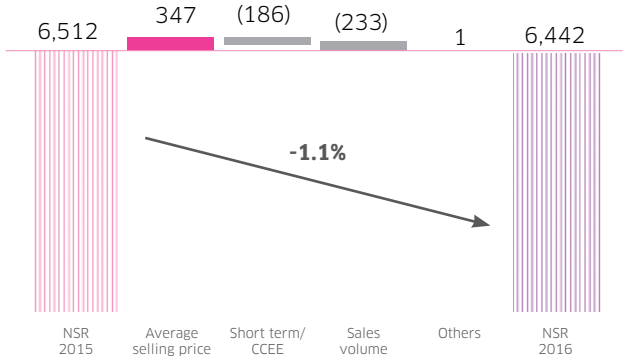
Net revenue from sales

When comparing full years, net revenue from sales declined from R$ 6,512.0 million in 2015 to R$ 6,442.4 million in 2016, representing a reduction of R$ 69.6 million or 1.1%. This decline is essentially a reflection of the following combination of events: (i) +R$ 347.0 million due to the increase in average net selling price; (ii) -R$ 232.5 million due to lower volumes of energy sold; and (iii) -R$ 185.5 million, a reflection of the reduction in revenue from transactions conducted across the short-term market, more particularly those executed within the scope of the CCEE..

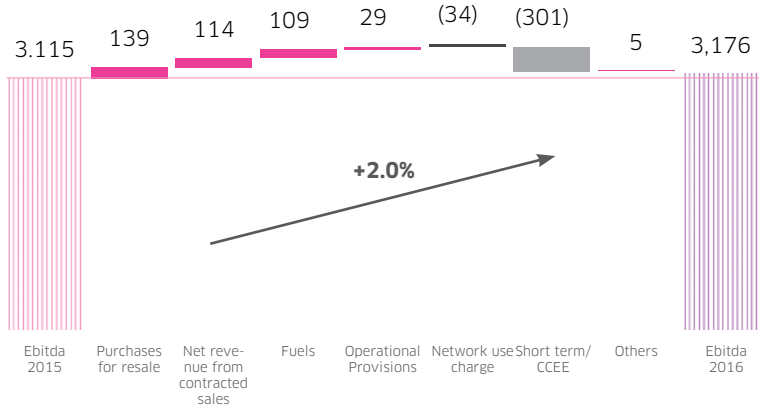
Ebitda and Ebitda Margin

Ebitda posted an increase of R$ 61.0 million (or 2.0%) from R$ 3,114.6 million in 2015 to R$ 3,175.6 million in 2016. The Ebitda margin in 2016 was 49.3%, representing an increase of 1.5 p.p. in relation to 2015. These increases reflect principally a combination of factors: (i) the negative R$ 301.0 million in transactions executed in the short-term market – more specifically, those executed within the scope of the CCEE; (ii) a reduction of R$ 139.2 million in energy purchases for resale; (iii) a growth of R$ 114.5 million in net revenue from the sale of contracted energy; (iv) a decrease of R$ 109.0 million in fuel consumption; (v) an increase of R$ 34.3 million in charges for the use of the electricity network and connections; (vi) the positive effect of R$ 28.7 million in net operating provisions; and (vii) the decrease of R$ 4.9 million in other costs and operating expenses.

Trend in net sales revenue - NSR
(R$ million)



Trend in Ebitda*
(R$ million)



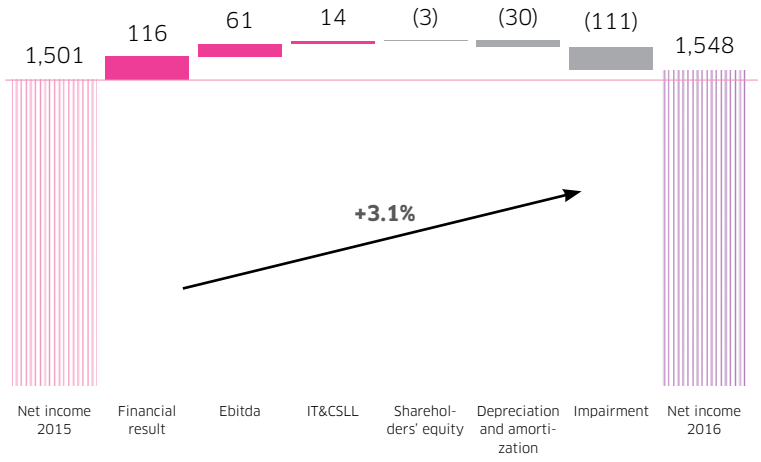
*EBITDA represents: net income + income tax and social contribution + net financial expenses + depreciation and amortization

Net Income



In 2016, net income increased from R$ 1,501.3 million in 2015 to R$ 1,548.3 million, an increase of R$ 47.0 million or 3.1%. This variation is due to the following factors: (i) growth of R$ 61.0 million in Ebitda; (ii) an increase of R$ 29.8 million in depreciation and amortization; (iii) growth in asset impairment of R$ 110.6 million; (iv) a reduction of R$115.7 million of net financial expenses; (v) a decrease of R$ 13.5 million in Income Tax and Social Contribution; and (vi) a negative amount for the equity item of R$ 2.8 million.

Trend in net income (R$ million)



Value Added

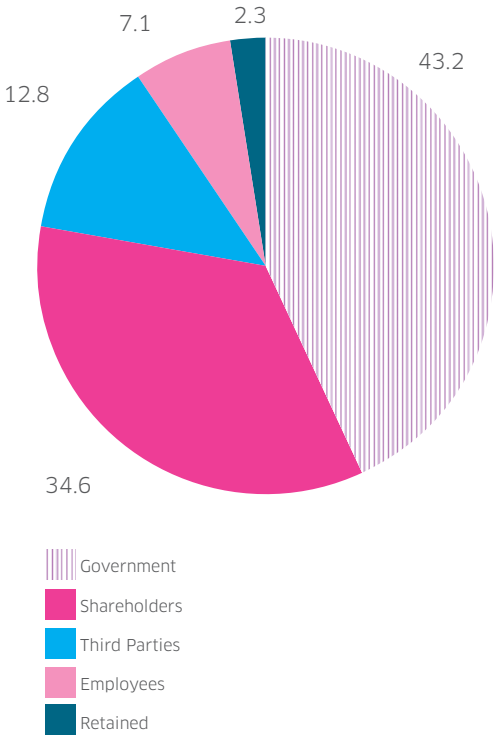
Total Value Added (VAT) in 2016 was R$ 4,199.7 million, a year-on-year increase of R$ 78.4 million (or 1.9%). This amount, which represents value created by the Company on the basis of a global vision of performance, was distributed among the stakeholders as shown in the following chart.

Detailed information on the composition of each of the Company's results and in relation to the context in which they were obtained can be found in the Management Report 2016 (click here).

The table below summarizes ENGIE Brasil Energia's principal economic-financial results for 2016 compared to those reported in preceding years.



Distribution of Value Added (DVA) in 2016 (%)



Summary - Economic-Financial Performance

[GRI G4-EC1]

	2014	2015	2016	Variation 2016/2015
Financial Information (R$ million)				
Total Assets	13.609,6	15.289,4	14.419,7	-5,7%
Shareholder's equity	5.654,9	6.642,1	6.614,4	-0,4%
Net revenue from sales	6.472,5	6.512,0	6.442,4	-1,1%
Gross Income	2.497,7	2.708,9	2.740,9	1,2%
Income before financial result/taxes (EBIT) [1]	2.302,9	2.503,8	2.421,6	-3,3%
Income before taxes	1.956,6	2.033,2	2.066,7	1,6%
Net income	1.383,1	1.501,3	1.548,3	3,1%
EBITDA [2]	2.895,1	3.114,6	3.175,6	2,0%
Financial Indicators (R$ million)				
Total debit (loans, financing and debentures)	3.988,5	3.758,4	3.088,7	-17,8%
Cash and cash equivalents and restricted deposits	1.750,7	2.543,6	1.995,5	-21,5%
Net Debt	2.237,8	1.214,8	1.093,2	-10,0%
ROCE[3] (%)	22,3	23,1	21,9	-1,2 p.p.
Gross Debit/EBITDA	1,4	1,2	1,0	-0,2 p.p.
Net Debt/EBITDA	0,8	0,4	0,3	-0,1 p.p.
Participation of third party capital in relation to total assets (%)	58,4	56,6	54,1	-2,5 p.p.
Operational margin (%)	30,2	31,2	32,1	0,9 p.p.
Net margin (%)	21,4	23,1	24,0	0,9 p.p.
Shares				
Net earnings per share (R$)	2,1189	2,3000	2,3720	3,1%
Average price per share[4] - ON (R$)	30,30	31,72	35,99	13,5%
Dividends per share (R$)	1,1876	1,2789	2,2786	78,2%
Employees' salaries and benefits	**263,7**	**292,3**	**297,5**	**1,8%**
Payments to government	**1.681,3**	**1.858,7**	**1.814,5**	**-2,4%**

1 EBIT = operating income + financial result;
2 EBITDA = net income + income tax and social contribution + net financial expenses + depreciation and amortization + provision for impairments;
3 ROCE (return on employed capital) = results from the service/non-current assets; and
4 Simple average of daily average prices adjusted for dividends.

Total debt
(R$ million)



Debt

The Company's total gross consolidated debt as at December 31, 2016, represented mainly by loans, financing and debentures, net of hedge operations, totaled R$ 3,088.7 million, a decrease of 17.8% (R$ 669.7 million) compared to the position as at December 31, 2015.

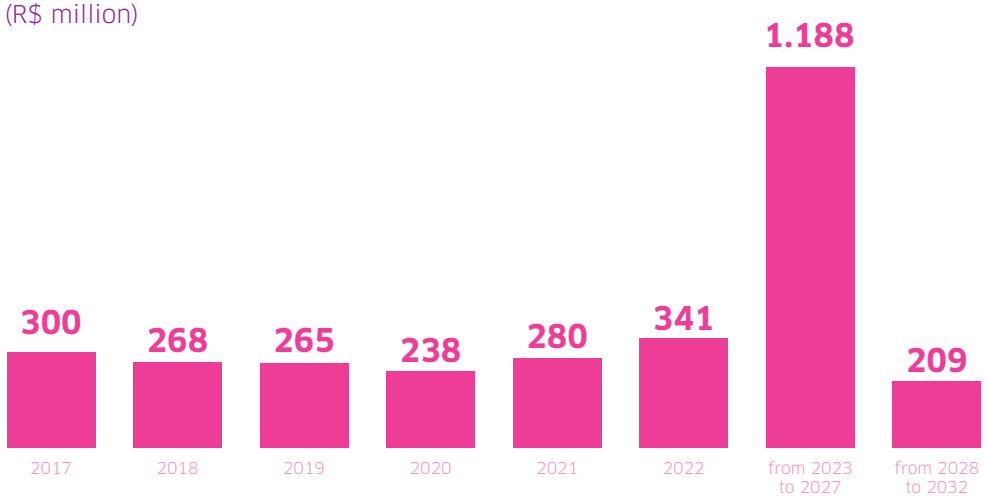
Out of total debt at year-end 2016, there was no foreign currency denominated debt outstanding compared with 2015, when debt denominated in foreign currency was 34.2% of the total. Currency loans and their respective hedges were settled in December 2016 on due date.

The average weighted nominal cost of debt in the end of 2016 was 10.5%.

On December 31, 2016, the Company's net debt (total debt less derivative operations, deposits earmarked to the guarantee of debt servicing and cash and cash equivalents) was R$ 1,093.2 million, a reduction of 10.0% compared with the end of 2015.

The Company's total gross consolidated debt as at December 31, 2016 was 17.8% inferior compared to the position as at December 31, 2015.

Loan maturity profile
(R$ million)



Net debt
(R$ million)

	12/31/2014	12/31/2015	12/31/2016	Var. % 2016/2015
Gross debt	4,052.7	4,247.2	3,088.7	-27.3
Result of derivatives operations	(64.2)	(488.8)	0.0	-100.0
Deposits earmarked for the payment of debt	(146.0)	(146.8)	(180.2)	22.8
Cash and cash equivalents	(1,604.7)	(2,369.9)	(1,815.3)	-24.3
TOTAL NET DEBT	**2,237.8**	**1,214.8**	**1,093.2**	**-10.0**

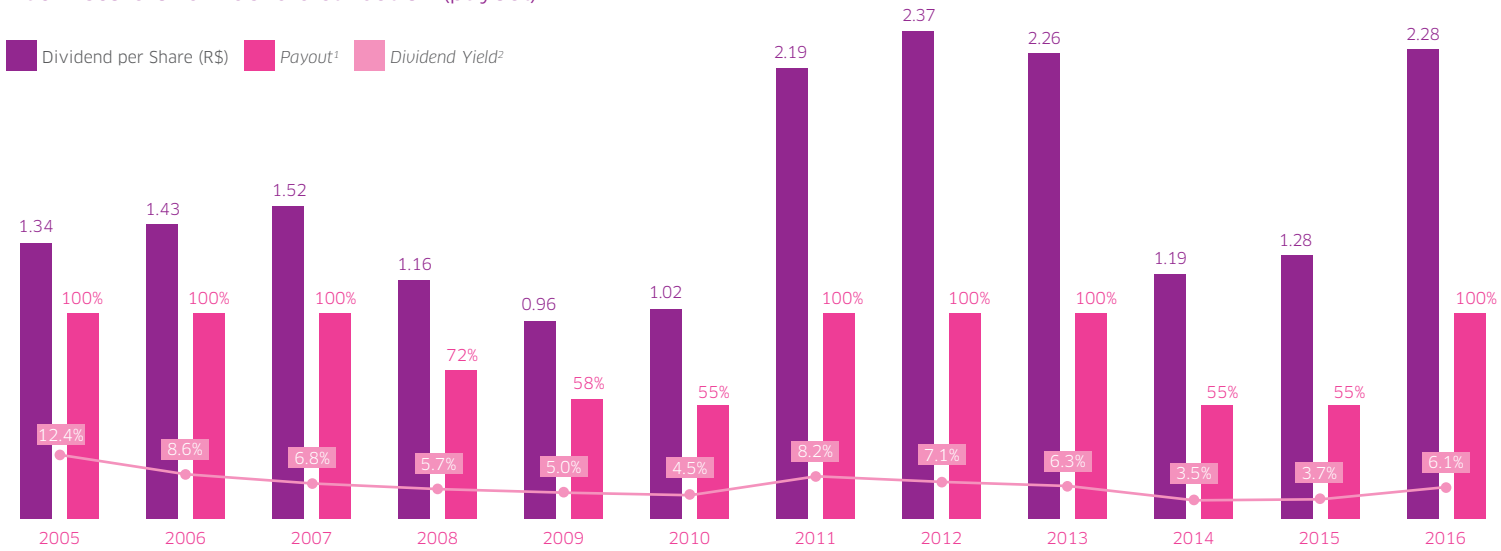
Capital expenditures

In 2016, the Company invested a total of R$ 1,189.7 million in construction, maintenance and revitalization of its generator complex and in the acquisition of projects. Construction work at the Santa Mônica and Campo Largo Wind Parks, the Pampa Sul TPP and the Central Fotovoltaica Assú involved further investments of R$ 875.1 million. An additional R$ 191.6 million was dedicated to investments in maintenance projects with a view to the continuation of a high plant uptime fator, this being 97.2% in 2016 as mentioned in the "Uptime" item. A total of R$ 97.8 million was invested in the modernization of Salto Santiago and Passo Fundo plants. During the year, the Company also acquired projects totaling R$ 25.2 million.

Proposed complementary dividends

The Board of Directors' total proposed payout for fiscal year 2016, including interest on shareholders' equity and ratified by the Annual General Meeting, amounted to R$ 1,487.3 million, equivalent to R$ 2.278604 per share or 100% of the adjusted distributable net income.

Track record of dividend distribution (payout)



1 Considering adjusted net income for the fiscal year. **2** Based on the closing price weighted for the volume of common shares in the period.

Capital markets

Since July 21, 2016 and in the light of the new corporate denomination, the Company's shares have been traded on the BM&FBOVESPA under the new stock exchange name of ENGIE BRASIL and EGIE3 replacing the former TBLE3 symbol. In addition to its presence in the Brazilian capital markets, Company's Level 1 American Depositary Receipts (ADRs) are traded on the United States over-the-counter market (OTC) under the EGIEY symbol at the ratio of one ADR to each common share.

The listing on the Novo Mercado – BM&FBovespa's highest level of corporate governance – enhances shareholders' rights and provides guarantees as to the quality of disclosed information in relation to the businesses. The following are the stock indices of which ENGIE Brasil Energia is a component:

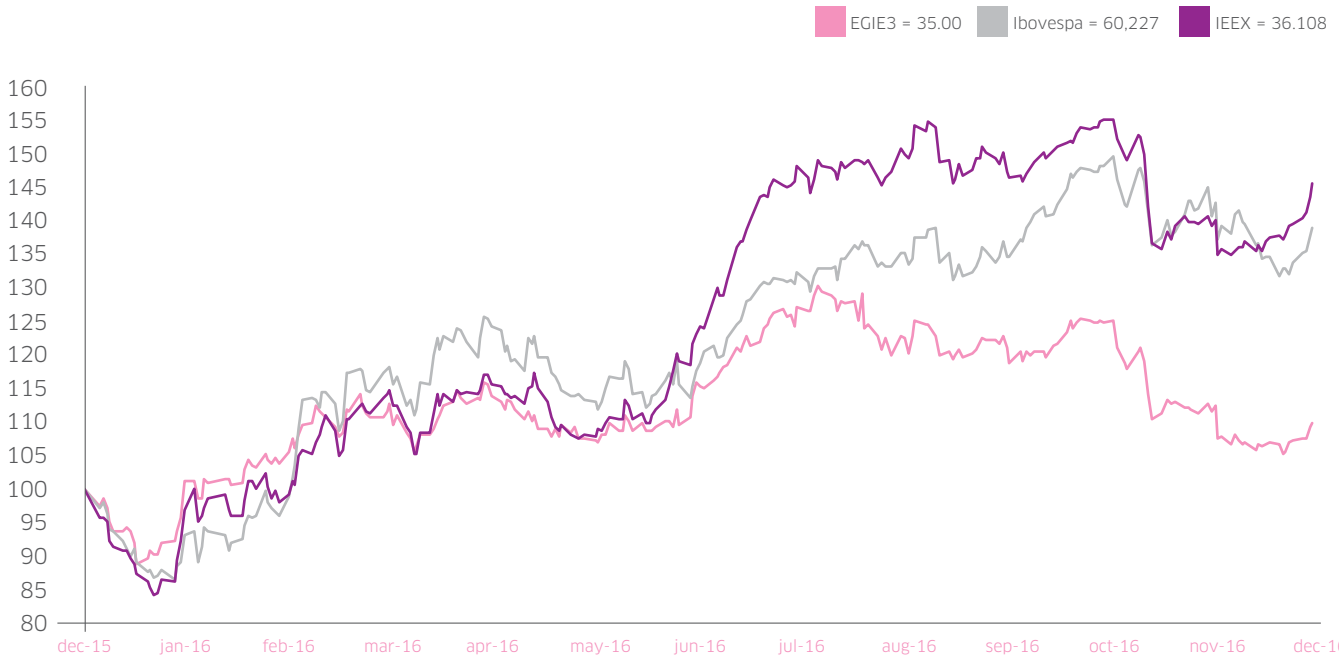
- **Bovespa Stock Index (Ibovespa)**
- **Differentiated Corporate Governance Stock Index (IGC)**
- **Differentiated Tag Along Stock Index (ITAG)**
- **Corporate Sustainability Stock Index (ISE)**
- **Electric Energy Stock Index (IEEX)**
- **Vigeo Eiris EM 70**

Share performance

After three consecutive years of decline, the Ibovespa, Brazil's benchmark stock index, reported a year-on-year appreciation of 38.9% in 2016 in spite of sharp volatility and set against the background of a tumultuous political scenario. The variation reflected essentially investor optimism in the light of the impeachment proceedings against the ex-president and the market outlook for greater political and fiscal stability. Abroad, the year was marked by the unexpected outcome to the Brexit referendum, losses in Deutsche Bank's market value, political uncertainty in countries such as France and Italy and by the election of Donald Trump in the United States.

In this scenario, ENGIE Brasil Energia's shares closed 2016 with an appreciation of 9.9% compared with 2015, less than the performance recorded for the Ibovespa and the Electric Energy Stock Index (IEEX), which reported increases in valuation of 38.9% and 45.6%, respectively. EGIE3's closing price for 2016 was R$ 35.0, equivalent to a market valuation of R$ 22.8 billion. For 2016 as a whole, the average daily trading volume was R$ 33.5 million, an increase of 20.2% in relation to 2015.

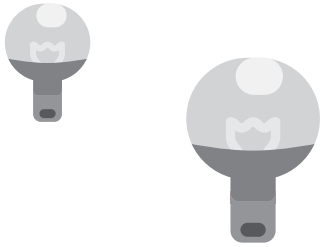
EGIE vs. Ibovespa vs. IEEX (Baseline 100 – 12.31.2015)

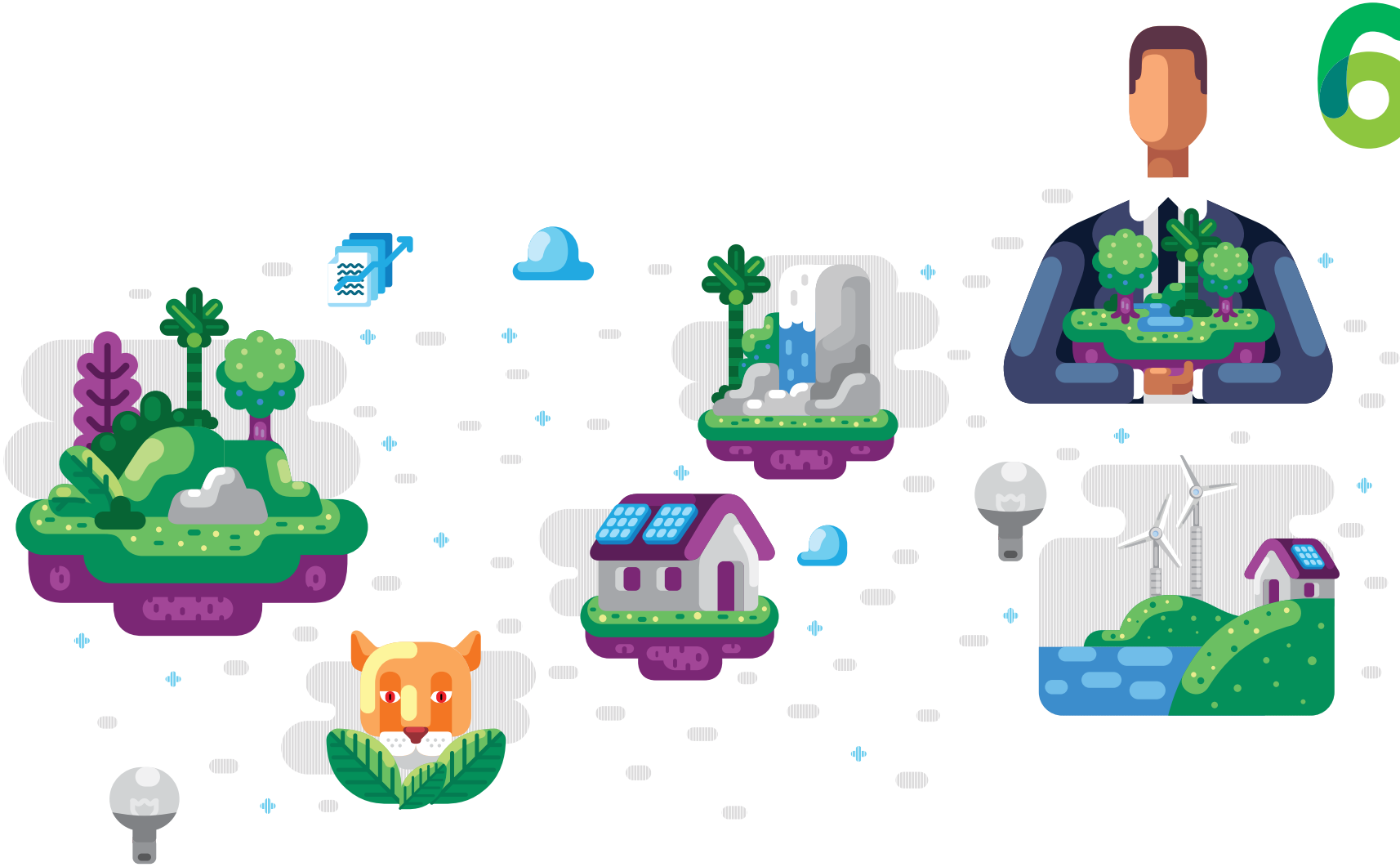


Ratings

The Company's risk classification rating suffered a downgrade in 2016 to 'brAA-' due to the downgrading of Brazil's sovereign rating. Fitch Ratings downgraded the Company's international foreign currency rating from BBB- to BB+ with a negative outlook.

ENGIE Brasil Energia's Long-Term National rating remained at 'AAA (bra)', with a stable outlook.





6 ENVIRONMENTAL MANAGEMENT

IN THIS CHAPTER:

- Biodiversity
- Water
- Fuels
- Waste
- Emissions
- Investments



Respect for the environment is a fundamental value of ENGIE Brasil Energia. Besides the rational consumption of natural resources, the Company adopts the practice of identifying the environmental impacts and aspects arising from its activities, establishing for the purpose monitoring and control programs and initiatives. **[GRI G4-14]**

NBR ISO 14001 certification of 14 plants contributes to the continual improvement of the Company's environmental management. In 2016, Estreito Hydroelectric Plant was awarded certification, joining a group of a further eight hydroelectric plants, two thermoelectrics and one biomass-fired plant. The certified plants together now account for 96.0% of the Company's installed capacity and are responsible for 96.7% of net energy generation.

The Company sets annual management goals for the environmental aspects and impacts identified as the most critical for all certified units. By the end of 2016, 61.5% of the 109 environmental goals set for the year were achieved while a further 17.4% were pending completion.

Targets are based on specific environmental performance indicators and are continually monitored by the Company. Targets include aspects relating to management of the biodiversity, consumption of natural resources, disposal of waste and greenhouse gas emissions, among others.

CERTIFIED PLANTS - NBR ISO 14001

Hydroelectric	Thermoelectric	Biomass
Estreito São Salvador Cana Brava Itá Machadinho Passo Fundo Ponte de Pedra Salto Osório Salto Santiago	Jorge Lacerda Thermoelectric Complex	Lages Co-generation Unit

At the end of 2016, all these same plants were recertified according to NBR ISO 14001, NBR ISO 9001 (quality) and OHSAS 18001 (occupational health and safety) standards by Bureau Veritas Certification.

LEGAL COMPLIANCE

All plants operated by ENGIE Brasil Energia have the environmental authorizations and licenses required by the current legislation. The Company monitors permanently changes in laws, standards and resolutions regulating its activities, adjusting operations and procedures whenever necessary to ensure legal conformity throughout the generator complex as well as projects in the process of installation.

In 2016, the operational licenses of three plants in the Jorge Lacerda Thermoelectric Complex (CTJL) and the license for the Mineral Coal Terminal in the same complex, the Ibitiúva Bioenergética Thermoelectric Plant and two transmission lines linking the Trairi Wind Complex were all renewed. In addition, the Preliminary License (PL) for the Norte Catarinense Thermoelectric Power Plant was issued and the Operational License (OL) renewed for withdrawing, piping and treating water for the industrial supply of the Lages Co-Generation Plant.

Biodiversity [GRI G4-EU13]

The influence of the Company's activities on the biodiversity varies with type of operation and local environmental conditions. In 2016, ENGIE Brasil Energia launched a project for ascertaining adequate identification of this influence and establishing the status of the biodiversity in the context of the area surrounding the plants comprising the generator complex.

Known as the Biodiversity Matrix, the project was based on benchmarking of electric sector companies. In addition to evaluating the sustainability policies of these organizations, the analysis was instrumental in identifying good risk management practices and measures for mitigating impacts on the biodiversity. Nine parameters were then selected and characterized for evaluating the biodiversity. The parameters are based on national guidelines for classification and prioritization and are available and recognized in the regional, national and international context (see box).

PARAMETERS - BIODIVERSITY MATRIX

- Biomass
- Phytoecological Regions
- Conservation Units
- Indigenous Land
- Priority Areas for Conservation, Sustainable Use and Sharing the Benefits of the Brazilian Biodiversity
- Important Bird Areas – IBAs
- Migratory Bird Routes and Areas of Concentration
- Wetlands of International Importance – RAMSAR Sites
- UNESCO World Heritage

All the information and spatial bases compiled in the scope of the project are being processed in a Geographical Information System (SIG). This will facilitate specific consultations on the catchment areas of 26 operations comprising the generator complex.

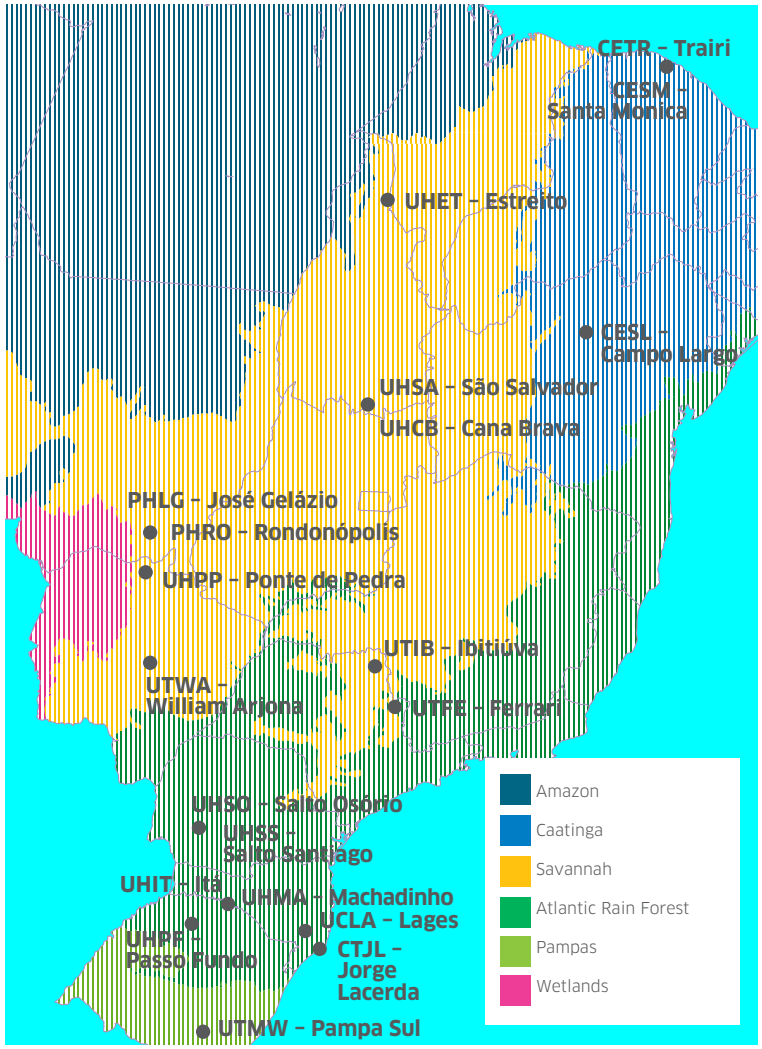
The first stage of the project to be concluded in 2017 will ensure the regional biodiversity of each operation is understood, allowing a more precise analysis and the setting of priority actions. ENGIE Brasil Energia will then be able to prepare and execute environmental programs focused on habitats or species of greater importance for conservation, in line with local realities. In addition, the expertise generated by the project will pave the way for the development of strategies in partnership with other companies, environmental protection agencies, teaching and research institutions and other entities, which share an interest in preserving the regions involved.



1 The objective of the Biodiversity Matrix is to satisfy the need for more precise and standardized identification of the impacts on the biodiversity. This initiative reflects the fact that information in studies undertaken at the time some of the older generator plants were installed may not correspond to reality. **[GRI G4-EN12]**

Biodiversity Matrix Project – Insertion of the operations in the Brazilian biomass

[GRI G4-EN12, G4-EN13, G4-EN14]



Biodiversity Matrix>Preliminary Results - 2016

16 operations impinge on

70% do parque gerador

17 Priority Areas for Conservation, Sustainable Use and Benefit Sharing of the Brazilian Biodiversity[1]

- Distributed across the Caatinga, Savannah and Atlantic Rain Forest
- 65% of these rated by the Ministry for the Environment as of extremely high biological importance

impinge on 38% of the generator complex

- Extremely high priority conservation actions are being implemented in half of these

Creation of Conservation Units demarcating indigenous lands and establishing protected areas or ecological corridors.

1 The rules for the identification of the Priority Areas for Conservation, Sustainable Use and Benefit Sharing were formally instituted under Decree 5092 of May 21, 2004 under the aegis of the Brazilian Ministry for the Environment. The Areas serve as instruments of government policy for supporting the planning and implementation of actions such as the creation of conservation units and licensing, inspection and the fostering of sustainable use.

19 operations are located close to

19 conservation units

- Situated in eight Brazilian states
- Pertain to five different categories of environmental management, among which nine parks and five environmental protection areas

283,308 hectares of protected areas surrounding the operations.

12 indigenous territories

Impinge on 28% of the generator complex's area of influence

8 operations impinge on

8 Important Areas for Bird Conservation

- Totalling 371,387 hectares
- 40 species of bird are recorded

3 impinge on areas of reproduction with a concentration of individuals : Machadinho HPP, Miroel Wolowski (Pampa Sul) and the Lages Co-Generation Unit

Key actions

Hydroelectric plants

The construction of a hydroelectric power plant results in the conversion of an aquatic habitat into a lentic environment (reservoirs create a standing water effect). While this process is taking place, changes occur in the physical-chemical characteristics of water resources. This has a direct effect on the aquatic biodiversity, more especially the ichthoyfauna (a wide spectrum of fish species inhabiting a given geographic region). Some species find the new environment conducive to their survival and reproduction, although others are unable to adapt to the new conditions. In order to assess this process over time, ENGIE Brasil Energia has been investing in R&D projects and monitoring the ichthyofauna in the regions of the hydroelectric plants it operates. The Company also promotes the periodic release of fish fries (newly hatched fish) into the reservoirs with a view to restocking them with native species. Em 2016, for example 550 fish of the dorado and the grumatã species were released into the Uruguay River in the catchment area of the Itá and Machadinho hydroelectric power plants.

Another impact arising from the installation of a hydroelectric plant is the loss of habitat resulting from flooding during the reservoir filling process. In the course of this process, ENGIE Brasil Energia recovers and relocates stranded fauna and flora from areas where brush has been cleared to alternative areas in keeping with their original habitat. Once the reservoir is filled, the Company is responsible for the creation of a permanent preservation area and for the restoration of areas degraded by construction.

Complementary to these activities, ENGIE Brasil Energia cultivates, plants and donates native forest seedlings to local communities. In 2016, 340,269 seedlings were planted and donated in regions surrounding the plants.

Thermoelectric plants

During the year, ENGIE Brasil Energia continued construction work at the Pampa Sul TPP in Candiota (RS). In 2015, the Company introduced its Vegetal Germplasm Recovery Subprogram for preserving the regional biome through the recovery of species on the Critically Endangered Species of Flora List in the state of Rio Grande do Sul. A further five environmental programs are now in operation in the region for recovery of fauna, replanting riparian margins, reforestation, monitoring of the ichthyofauna and the control of invasive species of vegetation.

Wind farms

The Rational Brush Clearance Plan for the installation of the Santa Mônica Wind Farm Complex, begun in 2014, sets out procedures for reducing the impact on the local flora and fauna. While the Company was authorized to clear brush over a 175.1-hectare area, in practice only 28% of this area was effectively cleared. Clearance of 5.79 hectares of a Permanent Preservation Area (APP) for the installation of the project required specific licenses and the replacement of forestry cover in an area equivalent to twice the size of the area cleared (11.58 hectares), also located in an APP. The entire brush clearance phase at the Complex was run in tandem with the Fauna Rescue and Monitoring Program. Other key initiatives under the Basic Environmental Plan (PBA) of the Santa Mônica Wind Complex are:

- Program for Recovery of Degraded Areas and Control of Erosive Processes;
- Program for Monitoring Water Quality (surface and ground);
- Program for Monitoring Soil Quality;
- Noise and Vibration Level Monitoring Program; and
- Environmental Education Program.

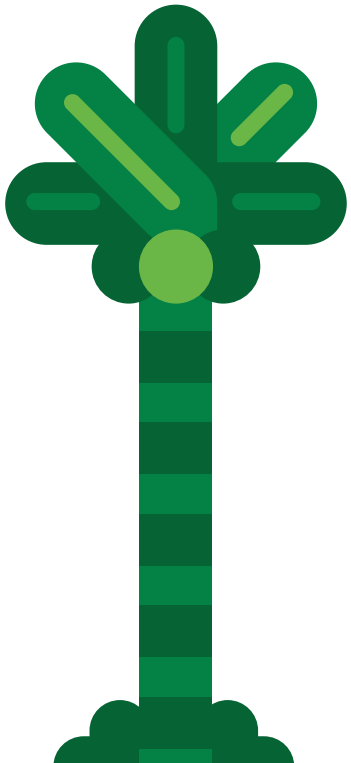


Operating units in protected areas [GRI G4-EN11]

ENGIE Brasil Energia has operating units located within or adjacent to protected areas and areas of high biodiversity value. The following shows information on the hydroelectric plants making up the generator complex, the regional biodiversity data shown being extracted from studies undertaken at the time of installation and also the result of ongoing environmental monitoring activities.

Plant	Location	Reservoir area	Permanent Preservation Area (APP)	Regional biodiversity	Conservation Units
Itá HPP	Between the municipalities of Itá (SC) and Aratiba (RS).	142 km²	22.56 km²	27 species of mammal, 94 species of birds, 31 species of reptiles, 11 species of amphibians, 40 species of fish and 60 species of flora (tree species).	Parque Estadual Fritz Plaumann (SC), 7.41 km²; Parque Municipal Teixeira Soares (RS), 4.61 km²; Parque Municipal de Preservação Ambiental de Severiano de Almeida (RS), 0.15 km².
Cana Brava HPP	Cavalcante (GO)	139 km²	3.2 km²	92 species of mammal, 304 species of birds, 98 species of fish, 41 species of amphibians and 77 species of reptiles.	Avá-Canoeiro indigenous reserve.
Passo Fundo HPP	Entre Rios do Sul (RS)	151 km²	4.11 km²	18 species of mammal, 122 species of birds, 14 species of reptiles, 10 species of amphibians, 44 species of fish and 20 species of flora.	Parque Estadual Rondinha, 10 km2; and Reserva Municipal da Sagrisa, 4 km².
Machadinho HPP	Between Piratuba (SC) and Maximiliano de Almeida (RS).	79 km²	44.05 km²	52 species of mammal, 192 species of birds, 63 species of fish, at least 2 important species of reptiles and 522 species of flora.	Parque Florestal Estadual Espigão Alto (RS), 13.33 km²
Salto Santiago HPP	Between Rio Bonito do Iguaçu and Saudade do Iguaçu (PR).	208 km²	at the time the plant was built, mandatory acquisition of areas for the formation of an APP was not required by the legislation.	14 species of mammal, 302 species of birds, 14 species of amphibians and 39 species of fish.	





Plant	Location	Reservoir area	Permanent Preservation Area (APP)	Regional biodiversity	Conservation Units
Ponte de Pedra HPP	between Itiquira (MT) and Sonora (MS).	14.5 km²	7.8 km²	80 species of mammal, 249 species of birds, 58 species of reptiles, 17 species of amphibians and 9 of invertebrates.	The plant reservoir lies adjacent to the Parque Estadual da Serra de Sonora with an area of approximately 79 km².
José Gelazio da Rocha SHP	Rondonópolis (MT)	0.27 km²	The legislation does not require the installation of an APP along the plant's reservoir margin.	80 species of mammal, 249 species of birds, 58 species of reptiles, 17 species of amphibians and 9 invertebrates.	Parque Estadual Dom Osório Stoffel, 64.22 km²
Salto Osório HPP	between São Jorge d'Oeste and Quedas do Iguaçu (PR).	55 km²	At the time the plant was built, mandatory acquisition of areas for the formation of an APP was not required by the legislation.	13 species of mammal, 303 species of birds, 9 species of amphibians and 39 species of fish.	
Rondonópolis SHP	Rondonópolis (MT)	0.024 km²	Legislation of the day did not require the installation of an APP along the reservoir margins.	80 species of mammal, 249 species of birds, 58 species of reptiles, 17 species of amphibians and 9 invertebrates.	Parque Estadual Dom Osório Stoffel, 64.22 km²
São Salvador HPP	between São Salvador do Tocantins and Paranã (TO).	104 km²	47.53 km²	26 species of mammal, 242 species of birds, 38 species of reptiles, 29 species of amphibians and 209 species of fish.	Environmental Protection Area of Lago de São Salvador do Tocantins, Paranã and Palmeirópolis,145,25 km²

As a practice, ENGIE Brasil Energia compensates for the installation of its operations by supporting the creation and maintenance of Conservation Units in some regions where it carries on its business. Examples of this practice are Parque Estadual Fritz Plaumann in Concórdia (SC) and Parque Natural Municipal Mata do Rio Uruguai Teixeira Soares in Marcelino Ramos (RS), both located in the Itá Hydroelectric Plant's sphere of influence.

Yet another practice which collaborates with the conservation of biodiversity, is the Program for Planting and Donating of Seedlings. Among the program's activities are the cultivation and distribution to communities of flora, native to the region in which plant operations are located. In 2016 alone, the Company planted and donated 340,269 seedlings.

Plant	Location	Reservoir area	Permanent Preservation Area (APP)	Regional biodiversity	Conservation Units
Estreito HPP	between Estreito (MA), Aguiarnópolis and Palmeiras do Tocantins (TO).	555.0 km²	125.0 km²	2 species of aquatic mammal, 164 species of birds, 21 species of reptiles, 38 species of amphibians and 50 species of fish.	The reservoir is adjacent to the Monumento Natural das Árvores Fossilizadas Conservation Unit, 356,3 km²
Areia Branca SHP	Caratinga and Ipanema (MG)	1.36 km²	112.71 hectares surrounding the plant reservoir.	17 species of mammal, 191 species of birds, 6 species of reptiles and 20 species of amphibians.	No such units directly in the affected area.

ECOLOGICALLY RESTORED AREAS [GRI G4-EN13]

The Company conducts special programs for restoring degraded areas following the installation of generator operations. These programs include the planting of native species and other measures for returning the local habitat to as close as possible to the situation found prior to construction work. In 2016, an area of approximately 127.9 thousand square meters surrounding the Santa Mônica Wind Complex was restored with species native to the region. Recovery/restoration work is expected to begin in 2017 at the Campo Largo Wind Complex, the Assú V Photovoltaic Plant and the Santo Agostino Wind Complex

Water

ENGIE Brasil Energia continually monitors indicators associated with the withdrawal of water used in its operations. Including all water sources, total volumes withdrawn were 704,355,905.06 m³ in 2016 - a year-on-year reduction of 16.7%.

Among the main contributory factors were lower thermoelectric generation, thus implying reduced water consumption, as well as the employment of closed circuit systems allowing the reuse and recirculation of rainwater to reduce demand from hydraulic sources.

Total water withdrawal by source [GRI G4-EN8]

Sources	Volume withdrawn	
	2016[1]	2015[2]
Surface water, including wetland areas, rivers, lakes and oceans	701,083,410.07 m³	840,195,481.25 m³
Ground water	18,972.13 m³	21,006.94 m³
Rainwater collected directly and stored by the organization	1,199,733.33 m³	2,076,400.00 m³
Water provided by public utilities	2,053,789.53 m³	1,992,472.00 m³
TOTAL VOLUME TOTAL	**704,355,905.06 m³**	**844,285,360. 19 m³**

Use of water in thermoelectric plants - 2016 [GRI G4-EN8 - Sectoral]

Processing	5,300,070.85 m³
Cooling	503,132,911.92 m³
Consumption	7,346,160.96 m³

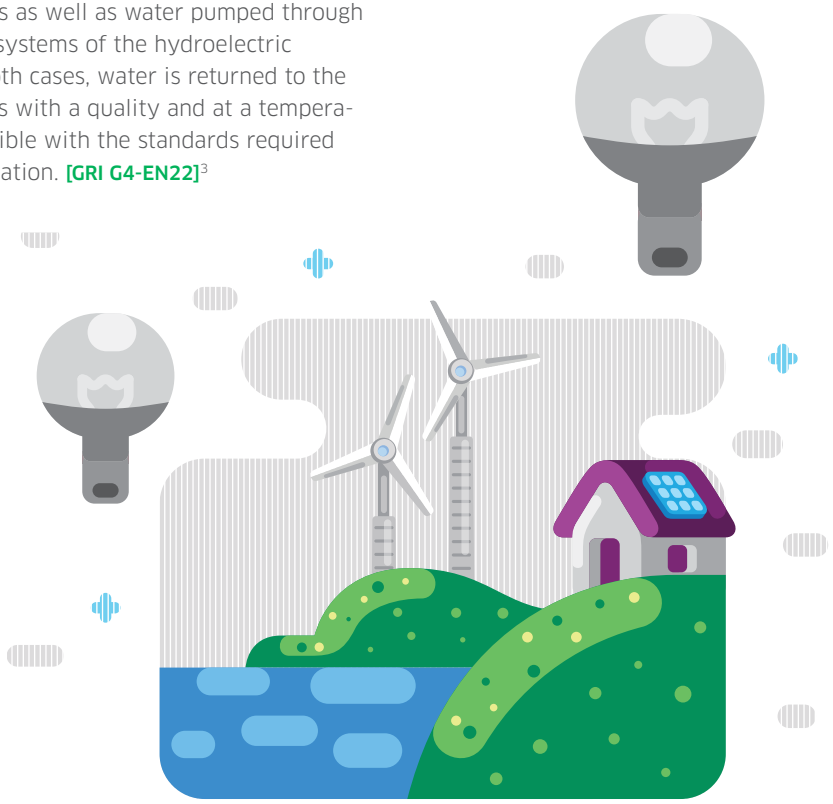
Total volume and percentage of recycled, reused water and collected from rainwater [GRI G4-EN10]

	2016[1]	2015[2]
Recycled water	24,601,029.72 m³ (3.49%)	22,514,316.79 m³ (2.66%)
Reused water	2,444,243.74 m³ (0.35%)	7,646,243.66 m³ (0.90%)
Rainwater	1,199,733.33 m³ (0.17%)	2,076,400.00 m³ (0.25%)

1 The information regarding the indicator was collected at the beginning of October, so the values related to October, November and December were estimated based on consumption from September. **2** The figures for 2015 were adjusted in relation to those published in the 2015 Sustainability Report in the light of final confirmation of consumption for the months of November and December 2015, but estimated at the time of the publication of the 2015 Report.

A qualidade da água lançada em corpos hídricos pela Companhia também é acompanhada de forma contínua, por meio de análises físico-químicas e bioquímicas. Em 2016, o descarte planejado de água totalizou 696.869.429,47

The quality of the water that the Company discharges into water bodies is also tracked on a continual basis through physical-chemical and biochemical analysis. In 2016, the planned discharge of water totaled 696,869,429.47 m³ relating to release from the thermoelectric power plants as well as water pumped through the cooling systems of the hydroelectric plants. In both cases, water is returned to the water bodies with a quality and at a temperature compatible with the standards required by the legislation. **[GRI G4-EN22]**[3]



Engagement
[GRI - DMA Sectoral - Water]

ENGIE Brasil Energia is a member of eight Hydrographic Basin Committees - part of its contribution to the conservation of water resources - and the forum through which it discusses the sustainable use of water by society jointly with other public and private institutions. The Company has a seat on the State Water Resources Councils for the states of Santa Catarina and Paraná with the same objectives.

In the areas of influence of the hydroelectric plants, multiple reservoir usage is also considered under the umbrella of conservation as a whole. This is disciplined by the Environmental Plan for Conservation and Use of the Riparian Margins of Artificial Reservoirs (Pacuera), a legally constituted instrument for minimizing the negative impacts of operations in the regions surrounding the power plants.

On a different front, and jointly with communities adjacent to some plants, ENGIE Brasil Energia runs the Headwaters Conservation Program, designed to maintain the quality and quantity of water in the areas influenced by its operations. The Program also has the dual purpose of raising the local population's awareness of the importance of the matter. In 2016 alone, 391 springs were either recuperated or protected, adding to the other 967 conserved since the inception of the Program -- the large proportion of these in the regions of the Salto Osório and Salto Santiago hydroelectric plants in the state of Paraná.

3 The information regarding the indicator was collected at the beginning of October. Figures for October, November and December values were estimated based on consumption in the month of September.

Fuels

ENGIE Brasil Energia's Climate Change Policy incorporates measures for reducing the consumption of fossil fuels, among these the preferential use of flex-fueled vehicles, the contracting of collective transportation services for employees at the majority of plants and the frequent use of conference calls and video conferencing in order to avoid physical travel.

In 2016, energy consumption from non-renewable sources declined 30% compared with 2015 with significant reductions in the use of gas (GLP) and fuel oil as well as coal given lower dispatch from the thermoelectric plants during the year. These reductions are reflected in total energy consumed by the Company over the years: 62,295,876.81 GJ, a volume 25.8% less than reported in 2015. **[GRI G4-EN6]**

Energy consumption within the organization **[GRI G4-EN3]**

		2016	2015
Non-renewable sources	Coal	48,770,775.91 GJ	58,370,842.88 GJ
	Diesel Oil	174,667.21 GJ	112,604.13 GJ
	Fuel Oil	63,499.93 GJ	198,905.66 GJ
	Gas	1,681,787.21 GJ	13,643,509.79 GJ
	TOTAL	**50,690,730.26 GJ**	**72,325,862.46 GJ**
Renewable sources	Wood biomass	1,320,807.43 GJ	2,441,765.81 GJ
	Sugar-cane biomass	9,682,965.21 GJ	8,635,209.87 GJ
	TOTAL	**11,003,772.64 GJ**	**11,076,975.68 GJ**
Electricity consumption from the grid2[2]		601,373.90 GJ	660,145.50 GJ[1]
TOTAL ENERGY CONSUMPTION[3]		**62,295,876.81 GJ**	**84,062,983.64 GJ**

The technical aspects to which the IMS should be submitted to ONS guidance" para " The ONS provides guidance on the technical aspects to which the IMS is subject.

1 The amount relates to energy consumption at the units (industrial use + administrative buildings). **2** References (electric energy): the Invoicing Metering System (IMS) is responsible for recording data for electric energy generated and consumed by the plants. There are various norms for minimizing equipment faults and avoiding possible fraud. The technical aspects, to which the IMS should be submitted to ONS guidance. On the other hand, the way the data is handled and the terms and rules for delivering the information are established by the Electric Energy Trade Board (CCEE). **3** Total energy consumption = total renewable fuels + total non-renewable fuels + consumption of electricity from the grid.

Energy sales by type **[GRI G4-EN3]**

	2016	2015
Electric energy	34,789 (3,971 average MW)	36,012 GWh (4,111 average MW)
Steam	16.3 GWh	24 GWh

Energy intensity* **[GRI G4-EN5]**

	2016	2015
Energy consumption within the Company (GJ)	62,295,876.81	84,062,983.64
Energy Production (GJ)	160,532,337.19	176,191,271.92
Energy intensity (Consumption of energy within the organization/Energy production)[1]	0.39	0.48

* Types of energy included in the intensity ratio: fossil fuels, renewable fuels and energy from the Grid

ENERGY EFFICIENCY

The Jorge Lacerda Thermoelectric Complex is responsible for about 75% of all fuel consumption in the thermoelectric plants that the Company operates. The Complex is NBR ISO 50.001 certified, a norm, which focuses on the continual improvement of energy performance including aspects relating to the efficient use of energy. Several control measures have been introduced to meet requirements under this standard, these being subject to internal and external auditing to ensure continued certification.



Waste
[GRI G4-EN23]

ENGIE Brasil Energia has as a guiding principle: to ensure the suitable and final disposal of waste at all its units. The Company requires that the companies engaged to collect and dispose waste comply with the prevailing environmental legislation, more especially Law 12.305 of 2010, which regulates the National Solid Waste Policy.

In comparison with 2015, the total volume of Company waste in 2016 reported a decline of 5%, a reflection of reduced energy output from the thermoelectric plants. This in turn was the result of lower ash volumes from the burning of fossil fuels as well as initiatives designed to continually improve this indicator through targets to reduce waste at all plants as well as head office.

Waste disposal

HAZARDOUS WASTE (t)		
Type of Disposal	**2016**	**2015**
Reuse	50.92	66.58
Recycling	114.18	42.33
Recovery, including energy recovery	0 .00	0.0063
Incineration (mass burn)	0.03	17.04
Landfill	191.79	226.42
On-site storage	82.44	93.38
Co-Processing	268.25	223.64
TOTAL	**707.60**	**669.39**

NON-HAZARDOUS WASTE (t)		
Type of Disposal	**2016**	**2015**
Reuse	3.22	2.12
Recycling	1,053,046.10	1,806,806.09
Composting	67.76	69.05
Recovery of degraded areas	690,187.05	563.01
Recovery, including energy recovery	78.78	116.83
Landfills	456.19	1,592.05
Coal mine shafts	33,546.94	61,187.49
On-site storage	21.68	25.94
Co-processing	34.61	24.4
Highway surfacing	0.00	0.51
TOTAL	**1,777,742.20**	**1,872,402.49**



Emissions

As stated in ENGIE's Policy on Climate Change, from time to time, the Company prepares a Greenhouse Gas Emissions Inventory (GHG) , the focus being on the continual improvement in its actions and mitigation and adaptation strategies. Audited by an external independent party, the Inventory is designed to record and quantify emissions based on the concepts and guidelines of the Brazilian GHG Protocol Program. The consolidation of inventory data considers the two approaches used by the Program: operational control and corporate participation[5].

The document uses 2010 as its base year, the first year the Company published its GHG Emissions Inventory, gases considered being CO2, CH4, N2O, HFCs PFCs, SF6 and NF3[6].

In the year 2016, the operational control approach registred a reduction of 1,304,409.5 in emissions (scope 1, 2 and 3), exclusivelly due to reduction of coal consuption at thermoelectric plants - less requested to generation in 2016, as a consequence of improvement at hydrologic scenario in the country. **[G4-EN19]**

4 ENGIE Brasil Energia's GHG Emissions Inventory in 2016 was audited by SGS, representing the independent external auditing party.

5 The operational control approach includes 100% of all emissions from the plants and companies over which the Company has operational control, irrespective of corporate stake. Conversely, the corporate participation approach considers emissions from operations of plants according to the Company's percentage holding in each entity.

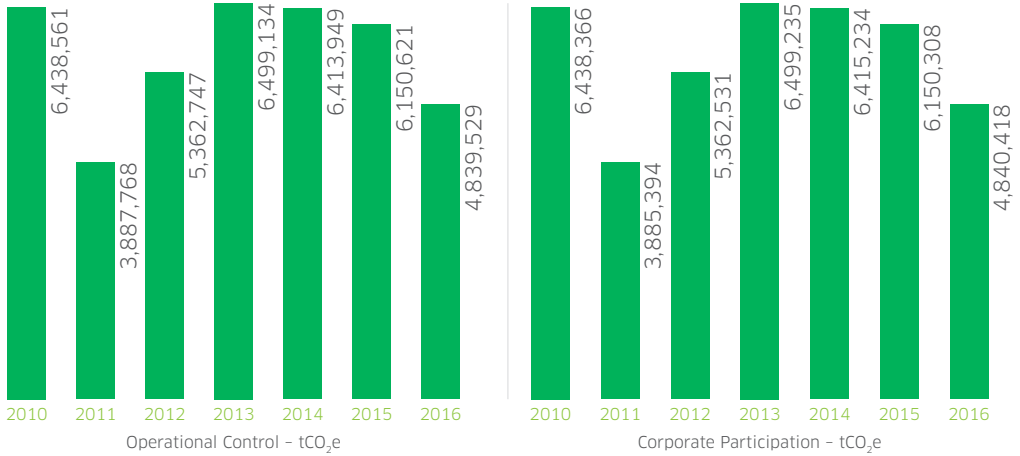
6 The methodological references for the addopted emission factors can be found in Table 7 of the Greenhouse Gas Emissions Inventory (GHG) - to access, click here.

DISPOSAL OF ASH

The Company sells fly ash from its coal-fired thermoelectric plants for the manufacture of cement as part of its commitment in the corporate Policy on Climate Change. In 2016, 927.8 thousand tons of ash were delivered to cement manufacturers where it is used as an input to substitute limestone, thus contributing to a reduction in emissions of CO_2.

A further 110.9 thousand tons of ash originating from the biomass-fired plants were used for agricultural activities. Additionally, bottom ash is employed as foundation material for highway asphaltic paving. This same material is also used to neutralize soil acidity in the recovery of coalmine tailing dumps with high pH levels.

Trend in total emissions (In tCO_2e)



Below, please find the principal results of the Inventory, available in full from the Company's website (click here to access).

Direct emissions

In scope 1, ENGIE Brasil Energia reported total direct emissions of 4,801,366.33 tCO_2e using the operational control approach and 4,801,287.37 tCO_2e according to the corporate participation method. Compared with 2015, there was an approximate decline of 20%, reflecting lower dispatch from the thermal plants and consequently reducing consumption of coal and natural gas. Worthy of note in this context is that the coal-fired thermoelectric plants account for 97% of all the Company's direct emissions.

The emissions from biomass (scope 1) were 1,055,548.47 tCO_2e for operational control, and 968,328,.92 tCO_2e for corporate participation. **[G4-EN15]**

Direct emissions - Scope 1 (In tCO_2e) **[G4-EN15]**

	2014		2015		2016	
	Operational control	**Corporate participation**	**Operational control**	**Corporate participation**	**Operational control**	**Corporate participation**
Stationary combustion	6,358,562.58	6,357,397.51	6,093,182.65	6,091,658.38	4,796,867.41	4,795,133.36
Mobile combustion	671.54	693.97	637.11	658.51	536.97	555.09
Processes	4,120.11	4,120.11	5,345.05	5,345.05	3,360.39	3,360.39
Fugitive emissions	26.14	1,170.04	226.73	236.13	574.15	2,207.65
Agricultural activities	4.63	11.21	5.73	8.3	23.66	25.81
Solid waste	0.37	0.37	12.61	2.89	3.76	5.05
TOTAL SCOPE 1	**6,363,385.37**	**6,363,393.22**	**6,099,409.88**	**6,097,919.26**	**4,801,366.34**	**4,801,287.35**

Scope 1 - Variation (%)

	Operational Control	Corporate participation
2014	-1.38%	-1.35%
2015	-4.15%	-4.17%
2016	-21.28%	-21.26%

Indirect emissions

Acquisition and consumption of energy

ENGIE's total scope 2 emissions in 2016 were 10,231.74 tCO_2e using the operational control method and 10,938.15 tCO_2e according to the corporate participation approach. In volume terms, these totals represented a year-on-year decline of approximately 45%. The variation is principally due to lower energy consumed from the grid together with a decline in the average emissions factor of the National Interconnected System (SIN) - a 34.4% decrease over 2015, due to an improvement in the hydrological situation nationwide and as a result, lesser demand for generation at the thermal plants. **[G4-EN16]**

Indirect emissions -Scope 2 (In tCO_2e) **[G4-EN16]**

	2014		2015		2016	
	Operational control	**Corporate participation**	**Operational control**	**Corporate participation**	**Operational control**	**Corporate participation**
Energy	18,711.25	19,670.31	18,751.32	19,709.00	10,231.74	10,938.15

Scope 2 - Variation (%)

	Operational control	Corporate participation
2014	-0.72%	-2.47%
2015	0.21%	0.20%
2016	-45.43%	-44.50%

Other sources

In relation to scope 3 - covering indirect emissions due to transportation of raw materials, employee commuting, business travel and waste generated in the operations - the Company recorded 27,930.83 tCO_2e using the operational control approach and 28,192.34 tCO_2e for the corporate participation method. Compared to the result for 2015, scope 3 emissions fell by approximately 14% in 2016. Lower consumption of diesel oil in transportation activities is among the factors contributing to this reduction.

The emissions from biomass (scope 3) were 2.,333.79 tCO_2e for operational control, and 2,224.85 tCO_2e for corporate participation. **[G4-EN17]**

Indirect emissions - Scope 3 (In tCO_2e) **[G4-EN17]**

	2014		2015		2016	
	Operational control	**Corporate participation**	**Operational control**	**Corporate participation**	**Operational control**	**Corporate participation**
Activities related to fuel and energy not included in scopes 1 and 2	1,642.86	1,642.86	39.97	39.97	2.57	2.57
Transportation and distribution (upstream)	18,679.86	18,800.61	19,824.84	19,929.93	17,360.36	17,458.07
Waste generated in the operations	502.26	503.31	807.45	816.05	531.11	543.27
Business travel	662.6	718.35	915.34	981.16	944.05	1,030.41
Employee commuting (residence - work)	345.1	484.87	458.34	498.53	304.73	370.00
Transportation and distribution (downstream)	10,020.20	10,020.20	10,414.26	10,414.26	8,788.02	8,788.02
TOTAL - SCOPE 3	**31,852.87**	**32,170.20**	**32,460.21**	**32,679.90**	**27,930.84**	**28,192.34**

Scope 3 - Variation (%)

	Operational control	Corporate participation
2014	13.77%	13.59%
2015	1.91%	1.58%
2016	-13.95%	-13.73%

Complementary indicators

Emissions intensity (tCO_2/MWh)[7]

[G4-EN18]

Operational control		Variation (%)	Corporate participation		Variation (%)
2014	0.2308	-2.0%	**2014**	0.1715	-
2015	0.2115	-8.3%	**2015**	0.1592	-7.2%
2016	0.1917	-9.4%	**2016**	0.1436	-9.8%

7 The emissions intensity calculation is based on the net energy and considers emissions from Scopes 1, 2 and 3.

Emissions of ozone depleting substances (ODS)

[G4-EN20]

ODS	Operational control	Corporate participation	Operational control	Corporate participation	Operational control	Corporate participation
	2015		**2016**		**Variation 2015/2016**	
HCFC (R-22)	374.67	438.35	426.20	438.18	13.75%	-0.04%

NOx, SOx emissions and other significant air emissions in t/MWh

[G4-EN21]

	2013	2014	2015	2016	Variation
NOX	0.00038	0.00036	0.0003311	0.000307082	-7.3%
SOX	0.00278	0.00242	0.0025165	0.002319571	-7.83%
Particulate matter (PM)	0.00006	0.00008	0.0000756	0.0000659	-12.8%

Volume of NOx, Sox emissions and Particulate Matter

[G4-EN21]

	2015	2016	Variation
NOX	21,951.55	13,364.40	-39.1%
SOX	119,853.50	100949.037	-15.8%
Particulate matter (PM)	3,643.13	2,867.33	-21.3%

Emissions by net generation (total) and combustion units

[G4-EN21]

	Emissions	Net generation (t/Mwh)	Combustion plants (t/Mwh)
NOX	13,364.40	0.00031	0.00290
SOX	100949.037	0.00232	0.02187
Particulate matter (PM)	2,867.33	0.00007	0.00062



Investments

In 2016, ENGIE Brasil Energia allocated approximately R$ 14.8 million to investment initiatives of an environmental nature. The following table shows the principal investments in the area during the year.

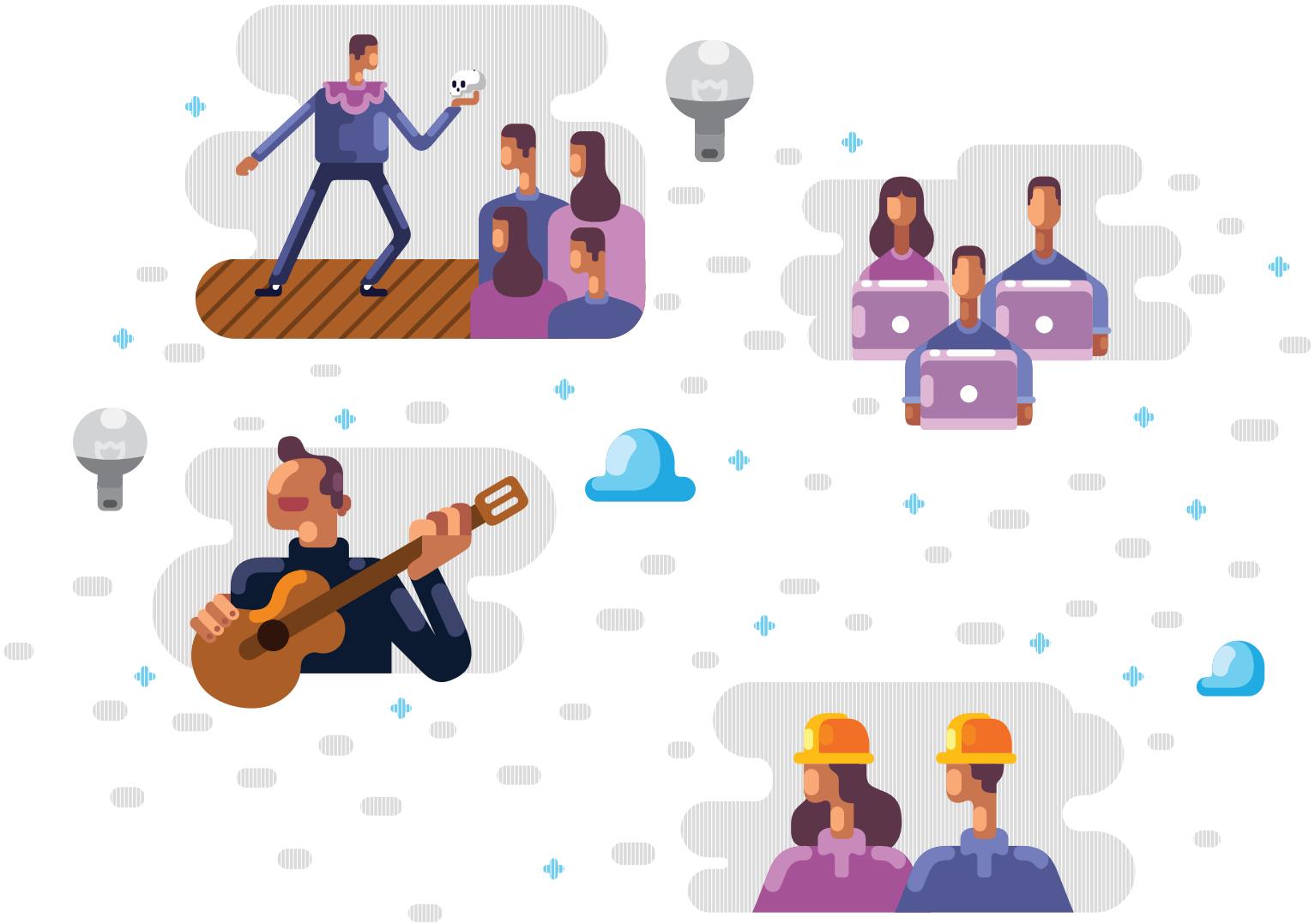
Total environmental protection expenditures and investments by type

[GRI G4-EN31][1]

Category	Allocation	Amount (R$)
Prevention and environmental management costs	Environmental Education Programs[2]	1,853,574.34
	Research and Development	9,959,136.38
	Extra expenditures with the installation of cleaner technologies	2,710,708.20
	Kitchen to Horta Modelo area - Environmental Education	56,347.01
Waste disposal, emissions treatment and remediation costs	Emissions monitoring	127,618.14
	Expenditures on equipment, maintenance and operating materials and services and related personnel costs	97,293.30
	TOTAL:	**14,804,677.37**

1 Investments made between January and October 2015 except research and development values and environmental education programs where the figures are for the January-December 2016 period.

2 Item classified as Operating Expenditures (Opex), the remaining amount in the category being R$ 18,917,727.41.



7 SOCIAL AND RELATIONSHIP MANAGEMENT

IN THIS CHAPTER:

- Employees
- Clients
- Suppliers
- Communities

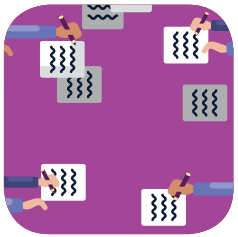
ENGIE Brasil Energia's relationship network includes the different stakeholders with which the Company shares values, policies and information. To ensure that these relationships are based on ethics and mutual respect, the Company operates a series of channels dedicated to stakeholder engagement.

In this context, dialog with stakeholders is enhanced through several initiatives such as events, public hearings, communication campaigns, opinion surveys and the plant visiting program. On a different front, ENGIE Brasil Energia engages in initiatives of the communities in which its operations are inserted as well as participating in entities and focus groups for the development of regions in its sphere of influence **[GRI G4-26]**

ENGIE Brasil Energia's stakeholders



Investors



Employees



Clients



Suppliers



Communities



Third sector organizations



Teaching and research institutions



Representative entities



Electric sector companies



Government bodies

Employees

ENGIE Brasil Energia is conscious that human capital constitutes the bedrock for executing its corporate strategy. It is in this light that the Company strives to provide an ethical working environment, which offers favorable conditions for personal and professional development, creating quality of life, recognition and satisfaction. At the end of 2016, the Company had a direct payroll of 1,044[1], of which 83% were male and 17% female. **[GRI G4-10]**

Out of all registered employees at year-end 2016, 88% were hired for an indeterminate period and 12% were engaged on temporary contracts, the latter including 130 interns and 18 participants of the Young Apprentice Program. In addition to own staff numbers of 1,192, there were a further 820 of outsourced personnel. **[GRI G4-10]**

All employees enjoy the right to free association. In 2016, 100% of the workforce was covered by collective bargaining agreements. **[G4-11]**

1 A further 66 professionals were posted to subsidiaries, 21 at Companhia Energética Estreito, seven at Itá Energética S/A and 38 at the Pampa Sul Thermoelectric Plant.

Direct payroll numbers in 2016 by gender and age group

[GRI G4-10; G4-LA12]

Age group	Men	Women
Less than 30	144	39
Between 30 and 50	560	121
More than 50	167	13
TOTAL	**871**	**173**

Direct payroll numbers in 2016 by gender and functional category

[GRI G4-10; G4-LA12]

Category	Men	Women	Total	Mulheres (%)	Total
Managerial	86	13	99 (9.5%)	13%	99 (9.5%)
Analysts, engineers and specialists	313	88	401 (38.4%)	22%	401 (38.4%)
Operators, maintenance technicians and administrative personnel	472	72	544 (52.1%)	13%	544 (52.1%)
TOTAL	**871**	**173**	**1,044 (100%)**	**17%**	**1,044 (100%)**

* The classification of functional categories is based on salary range.

Direct payroll numbers in 2016, by states in the Federation

[GRI G4-10]

State	Employee numbers	Representativeness (%/total)
Santa Catarina	681	65.23%
Rio Grande do Sul	131	12.55%
Paraná	91	8.72%
Maranhão	53	5.08%
Goiás	23	2.20%
Tocantins	13	1.25%
Ceará	10	0.96%
Mato Grosso do Sul	7	0.67%
Mato Grosso	28	2.67%
São Paulo	4	0.38%
Minas Gerais	2	0.19%
Piauí	1	0.10%
TOTAL:	**1044**	**100%**

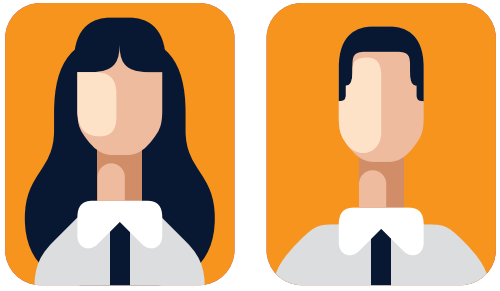


During 2016, the Company hired a total of 76 and terminated 167. Total terminations exceeded the average for previous years due largely to the Voluntary Severance Plan (PDV), under which there were 138 terminations in the period. Some of these terminations were personnel at the decommissioned Charqueadas Thermoelectric Plant. Management of human resources in respect to the plant closure process was conducted with total transparency and respect for the employees in an effort to minimize the impact on both professionals and their families. Of the workforce of 72 at the plant, five opted to rescind their contracts, 30 signed up to the Voluntary Severance Plan (PDV) proposed by the Company and 37 were approved in a selection process to work at the Pampa Sul Thermoelectric Power Plant - under construction in the municipal district of Candiota.

New hires and terminations in 2016 by gender and age group

[GRI G4-LA1]

Age group	Men		Women	
	New hires	Terminations	New hires	Terminations
Less than 30	18	1	4	1
Between 30 and 50	30	24	9	4
More than 50	4	117	0	10
TOTAL	**52**	**142**	**13**	**15**



Hiring rates in 2016, by gender*

[GRI G4-LA1]

	Male	Female	Total
2016	5%	1%	6%

* Number of employees hired / Total number of employees

Turnover in 2016 by gender and age group* [GRI G4-LA1]

Gender/age group	Turnover rate*
Women	**1.44%**
Less than 30	0.10%
Between 31 and 50	0.38%
More than 50	0.96%
Men	**13.60%**
Less than 30	0.10%
Between 31 and 50	2.30%
Moe than 50	11.21%
Total	**15.04%**

* Number of terminated employees / Total numbers of employees

Average time of service at ENGIE Brasil Energia of terminated employees in 2016 [GRI G4-LA1 - DMA Sectoral]

Gender/age group	Number of terminations	Average time of service (in years)
Women	**15**	**16**
Less than 30	1	2
Between 31 and 50	4	16
More than 50	10	29
Men	**142**	**18**
Less than 30	1	4
Between 31 and 50	24	18
More than 50	117	31
Total	**157**	**17**

Diversity

Respect for diversity features in the guidelines of both the Company's Code of Ethics and also its Human Resources Policy. These documents state that ENGIE Brasil Energia will not tolerate discrimination with respect to ethnicity, religion, gender, party political preferences, age, social status, physical restrictions and any other form of prejudice.

Although the Company's workforce is predominantly male, ENGIE is seeking to increase the number of positions held by women. This trend is already reflecting in leadership posts. In 2016, women held 13% of all managerial jobs. **GRI [G4-LA12]**

The inclusion of people with special needs is also a Company focus. At the end of 2016, 36 employees were in this category – 3% in managerial positions. **[GRI-G4-10; G4-LA12]**

Compensation and benefits

In addition to fair compensation compatible with the local and sector markets, the Company offers its employees a comprehensive benefits plan, which includes: **[GRI G4-LA2]**

- Life insurance (with coverage for permanent total or partial invalidity due to accident or illness);
- Healthcare plan (encompassing medical/hospital assistance, odontological and drugstore expenses; psycho-therapy, physiotherapy and specialized reeducation treatments; eye glasses and ophthalmological lenses; hearing aids and orthopedic devices);
- Disability and invalidity coverage (for dependents there is a Program for Assistance of Dependents with Special Needs);
- Extended maternity leave;
- Child daycare facilities;
- Agreements with fitness centers;
- Parent company stock ownership plan (although in 2016 no shares were acquired); and
- Food/meal and transportation vouchers

In addition, ENGIE Brasil Energia subsidizes 80% of drug prescription charges for employees and their dependents, 60% of the monthly tuition fees for language courses and 50% of the monthly fees for university graduation or post-graduation programs.

Outsourced workers also are entitled to a benefits program on a permanent basis, consisting of food vouchers and medical and dental care plans. The cost of these benefits is incorporated in the contracts signed with the companies supplying goods and services to ENGIE Brasil Energia.

Focus on retirement

At year-end 2016, the over 50-age group at ENGIE Brasil Energia represented about 20% of the workforce. Given the significance of this group of employees, the Company has introduced a plan for succession and the filling of new positions as well as devising its Viva Retirement Program. The latter is preparatory for retirement and helps employees understand the legal, emotional and health-related aspects of this new phase of life.

The Program is entirely optional and is divided into three stages: preparation for retirement, the termination process and the post-retirement moment with a focus on a continued relationship with the Company. In 2016, 75 employees took part in the coaching activities related to the Program. **[GRI G4-LA10]**

The Company also offers a complementary pension plan - Previg, the employee contributing between 3% and 7% of his salary for the purpose, and ENGIE matching the same contribution. During 2016, ENGIE Brasil Energia transferred R$ 21.2 million to the pension fund which had 1,822 members between existing employees and retirees. In turn, Pampa Sul transferred R$ 445.3 thousand on behalf of its workforce of 32 participating employees.

ENGIE Brasil Energia is also a sponsor of the Fundação Eletrosul de Previdência e Assistência Social (ELOS) complementary pension plan, of which some of its retired ex-employees are members. In 2016, the Company's contribution to ELOS was R$ 19.1 million. **[GRI G4-EC3]**

Training

Among the cardinal features of the Company's Human Resources Policy is the promotion of employee development through systematic training and skills upgrading. In 2016 alone, the Company offered its employees approximately 43.2 thousand training hours, an average of 41.4 hours per employee. Total investment in training in 2016 was R$ 4.9 million, a year-on-year decline of 5.8%. **[GRI G4-LA9]**

Total number of training hours in 2016 by gender

	Male	Female	Total	Variation
2015	71,852.70	7,641.70	79,494.40	-45.6%
2016	38,570.00	4,668.00	43,238.00	

Average training hours in 2016 by gender

Male	Female	General Average
44.28	26.98	41.42

Hours of training and skills upgrading - 2016 **[GRI G4-DMA]**

Training and education	
Managerial	248.00
Analysts and specialists	1,215.00
Operators, maintenance technicians and administrative personnel	2,531.00
TOTAL NUMBER OF HOURS	**3,994.00**

Occupational Health and Safety (OHS)

The physical and psychological integrity, professionalism, training and competency of the employees are Company priorities as enshrined in the Sustainable Management Policy. In addition to preserving the wellbeing of its own employees, all service agreements with suppliers contain clauses on the theme in order to ensure the occupational health and safety of subcontracted personnel and outsourced labor.

OHS principles are disseminated in all the operational units through specific training and activities directed towards accident prevention and the consolidation of a culture of health and wellbeing. In all, 11 Internal Accident Prevention Commissions (CIPAs) provide guidance to employees on compliance with safety standards to prevent work-related accidents as well as occupational illnesses. At the 12 units where no Commissions are installed, representatives are appointed to perform the same functions. The Company's CIPAs have 84 members who with the 12 appointees at other non-CIPA plants, represent the entire direct workforce. **[GRI G4-LA5]**

During the course of 2016, five work related accidents were reported involving direct employees. Other 22 accidents involved outsourced employees, one of then fatal, at Santa Monica Wind Complex. The Company goal is to achieve a zero accident rate internally and along its value chain. It has been intensifying its OHS initiatives with its own employees together with contracted companies by ramping up its awareness campaigns. **[GRI G4-LA6]**

Particularly notable in this context are the initiatives taken through the All Together for Safety Program, which had its inception in 2014 with the aim of propagating an OHS culture throughout the Company. Within the scope of the Program, in 2016, the Company ran campaigns for occupational accident prevention as well as on highway safety more especially with respect to the daily commute to and from work. Two General Pauses to Reflect on Safety were also held for reinforcing the importance of the theme among the in-house audience and the contracted service providers.

In parallel, ENGIE Brasil Energia bolstered contractual obligations providing for monetary sanctions such as rescission of contracts for companies failing to comply with the Company's requirements on the issue.

2 ENGIE Brasil Energia uses the NBR 14.280 standard to register and report accident statistics.

Work related accidents **[GRI G4-LA6]**

	2015*	2016
Direct employees		
Number of hours of exposure to risk**	2,094,099	2,024,902
Number of occupational and commuting accidents with and without absence from work***	8	5
Number of lost days – occupational accidents with absence from work	0	5
Number of work-related accidents with fatalities	0	0
Employees from contracted companies		
Number of hours of exposure to risk	3,502,115	3,247,650
Number of occupational and commuting accidents with and without absence from work	28	22
Number of work-related accidents with fatalities	0	1

*In relation to the data reported for 2015, the number of hours of exposure to risk was corrected and the total lost days due to workplace accidents involving outsourced personnel was removed since there is no audit control.

**In relation to total man-hours exposed to risk and the number of accidents, the indicator includes data for outsourced Operations and Maintenance (O&M) service providers only. The reported fatality refers to the accident at the site of the Santa Mônica project.

*** A typical accident not recorded in the indicator when after investigation no causal connection was established.

Occupational Health and Safety Indicators (OHS)

	2014	2015	2016	Target 2016	Achieved?	Target 2017
Frequency Rate (TF), not including service providers[1]	1.450	0.000	0.490	-	-	-
Severity Rate (TG), not including service providers[2]	0.062	0.000	0.002	< 0.040	Yes	< 0.030
Frequency Rate (TF), including service providers[1]	2.870	0.540	1.520	< 1.6	Yes	< 1.0 / < 2.4 [3]
Severity Rate (TG), including service providers[2]	0.023	0.000	0.001	-	-	-

1 TF = number of work-related accidents occurring for every million hours of exposure to risk
2 TG = number of lost days due to work-related accidents for every million hours of exposure to risk
3 Target < 1.0 is applicable to direct and long-term outsourced employees. The < 2.4 target relates to short-term contracts and construction or modernization work.

Occupational Health and Safety Indicators (OHS)

	2015	2016	Variation
Frequency Rate (TF), not including service providers[1]	0.000	0.000	-
Severity Rate (TG), not including service providers[2]	0.000	0.000	-
Frequency Rate (TF), including service providers[1]	3.2	4.9	↑
Severity Rate (TG), including service providers[2]	0.006	0.032	↑

1 TF = number of work-related accidents occurring for every million hours of exposure to risk
2 TG = number of lost days due to work-related accidents for every million hours of exposure to risk

The above indicators do not include accident rates for the Pampa Sul Thermoelectric Power Plant, currently under construction. Indicators are registered separately and shown in the following table.

100% of the collective labor agreements between ENGIE Brasil Energia and the labor unions have specific OHS clauses, including the training and education of first aid personnel and members of the CIPAS. For outsourced personnel, Occupational Safety Integration Training is offered, which covers the basic principles of OHS for performing emergency services in the Company's units. **[GRI G4-LA8]**

Culture of Safety

In the first half of 2016, ENGIE Brasil Energia prepared a Safety Culture Diagnosis for identifying behavioral aspects influencing OHS initiatives. The methodology involved the use of questionnaires - for which replies were received from about 75% of the workforce - as well as interviews and focus groups with stakeholders that are parties to the daily routine of the Company. The results of this work raised several points for improvement, consequently providing a basis for action plans, which will contribute to consolidating a more effective culture of safety among direct employees and outsourced personnel.

FOSTERING WELLBEING

In addition to actions, which focus directly on safety, ENGIE Brasil Energia has also designed programs for specifically enhancing the wellbeing of its employees. Among such programs, one of the highlights of 2016 was the Quality of Life Program pilot project for combating obesity. With an initial group of employees from the Jorge Lacerda Thermoelectric Complex, the initiative includes nutritional monitoring and advice on physical exercise, among other aspects. The results of this project were positive in relation to participants' health as well as productivity, the Company deciding to extend the initiative to other units in the future.

Satisfaction survey

ENGIE Brasil Energia runs an organizational climate survey every two years to gauge the impact of its people management programs on employee satisfaction. The 2016 version of the survey revealed a favorability level of 73% among the workforce. In all, 78% of the employees answered the survey. Of this total:

- **95%** would recommend ENGIE Brasil Energia as a good place to work;
- **97%** believe fully in the products and services supplied by the Company;
- **96%** believe that ENGIE Brasil Energia is a responsible company in relation to the environment; and
- **95%** believe that the Company is socially responsible.

ENGIE Brasil Energia is preparing specific action plans based on the findings of the survey, the focus being on the continuous improvement in its policies and practices for managing the organization climate.

Clients

Throughout the year 2016, ENGIE, ENGIE Brasil had agreements with 228 industrial, commercial and service clients, corresponding to 592 consumer units. The Company's relationship with these clients, whether in the regulated or free market is based on trust and the creation of value for both parties. In addition to the conventional service channels, the Company collates stakeholder opinions on its activities through periodic satisfaction surveys - the last of which was run in 2014 and recorded a favorability ratio of 95%.

The promotion of the rational use of electric energy in its value chain is one of the commitments assumed in the Climate Change Policy and executed through the ENGIE Brasil Energia Energy Efficiency Diagnosis. Since 2004, the Program has been offered free of charge to the free market client portfolio, more particularly companies in the industrial sector in an effort to help them identify the potential for reducing energy consumption in their productive processes. Among the actions suggested are changes in equipment and modifications to manufacturing processes and the organizational culture. Any decision on implementing proposals put forward by ENGIE however is entirely at the client's discretion.

In 2016, the Company carried out a diagnosis at three clients. Potential electric energy savings of 8,385 MWh were identified. Since the beginning of the Program, 44 diagnoses have been conducted at major plants in a range of different sectors, such as automobile manufacture, mining, chemicals, cosmetics and industrial gases as well as retailers. If all participating clients are taken together, energy savings arising from implementation of the proposed actions would have been in the order of 500,000 MWh annually. **[GRI DMA Sectoral]**

Among important initiatives for reaching out to both current and potential clients is the Visiting Program. This allows visitors to see some of the Company's plants and obtain a better understanding of the operations as well as in the context of the socio-environmental programs. In 2016, two visits were organized: one to the Itá Hydroelectric Power Plant with 17 guests and the other to the Jorge Lacerda Thermoelectric Complex with 13 invitees.

Suppliers

ENGIE Brasil Energia's supply chain incorporates companies of different sizes, sectors and regions of Brazil and abroad, providing goods and services, which contribute to the development of the Company's activities. In 2016, the Company enjoyed commercial agreements with 1,908 suppliers. ENGIE Brasil Energia is conscious of the potential of its supply chain and disseminates good sustainability practices among the companies it engages. **[GRI G4-12]**

Suppliers are selected with a focus on ensuring legal compliance and execution of the socio-environmental commitments that are assumed. In this respect, the Company performs periodic evaluations of suppliers to plants already in operation[3]. Evaluations consider aspects relating to quality of services; occupational safety, medicine and hygiene; the environment and legal and administrative issues. Should the average of this evaluation be less than 70%, the supplier is required to submit a plan of improvements for the approval of the Company and subsequent monitoring. In 2016, 12 suppliers (0.6% of the total) reported non-compliance with labor practices. With all the companies evaluated, ENGIE agreed various aspects for adjustment and improvement, in no case contractual rescission being necessary.

As part of its sustainability strategy, the Company prioritizes the hiring of local suppliers, that is those situated within the geographical region of its operations or its head office[4]. In 2016, these suppliers received about R$ 1.04 billion in payments, corresponding to 80% of all resources destined to companies contracted by ENGIE Brasil Energia during the year[5]. **[GRI G4-EC9]**

3 Evaluations of suppliers to power plants under construction use a different methodology, which includes compliance relating to the nature of the activities executed as well as the risks involved.

4 There is no distinction as to the significance of the Company's operations such that all operational units are deemed important.

5 In 2016, agreements with local suppliers represented 50% of total contracted.

HUMAN RIGHTS

ENGIE Brasil Energia's goal is to seek actively to protect human rights within its sphere of influence. To this end, it has drawn up a specific corporate policy on the theme with commitments and guidelines for identifying, preventing and mitigating the negative aspects of its business on human rights both internally and externally.

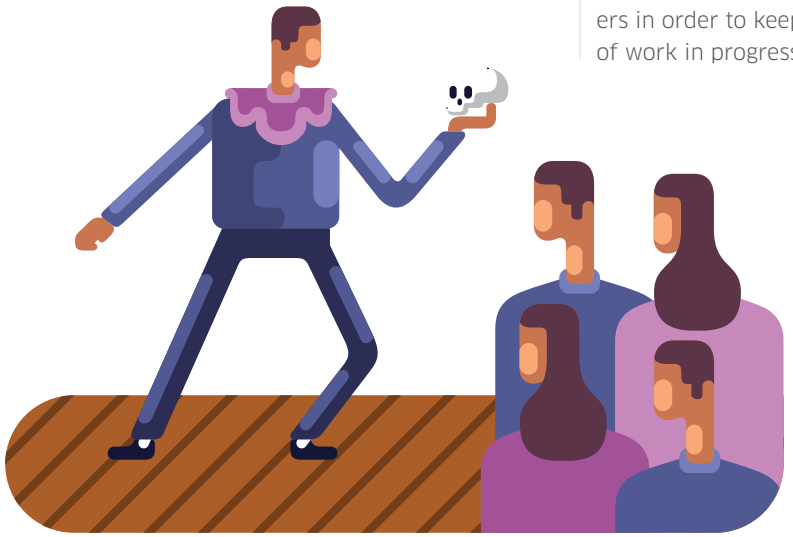
Supplier agreements contain clauses on the issue including requirements as to the combat of discrimination and restrictions on the use of child, forced or compulsory labor, among other aspects. In the course of 2016, no evidence came to light that would suggest significant risks as to the occurrence of child or forced labor along the supply chain. Similarly, during the period, no complaints were recorded on infringement of human rights or allegations in respect of discriminatory behavior. **[GRI G4-HR3; G4-HR-5; G4-HR-6; HR12]**





Communities

The communities surrounding ENGIE Brasil Energia's head office and plants represent stakeholders that are fundamental to the Company's sustainability. The relationship with this audience is one of mutual respect, based on the construction of partnerships with local entities – such as universities, third sector organizations and representative bodies –, in this way contributing effectively to local sustainable development.



Projects in the process of installation

[GRI G4-SO1; DMA-Sectoral]

In the case of projects in the process of installation, the local communities are invited to take part in the environmental licensing procedure through public hearings for disclosing details of the projects and their eventual socio-environmental impacts. Once installation work is underway, several communication channels are established to ensure dialog with the communities contiguous to construction operations. Such channels include ombudsmen and information centers, visits to neighboring families, information bulletins and primers, radio spots and announcements from loudspeaker vehicles.

In some cases, to meet environmental licensing requirements, Project Monitoring Commissions have been established, comprising members and representatives drawn from civil society, government and community leaders in order to keep the local populace abreast of work in progress.

Numbers of socio-environmental programs launched in 2016
Projects in the process of installation **[GRI G4-SO1]**

Community engagement processes	12
Social impact evaluation programs	7
Environmental impact valuation, monitoring and mitigating programs	48
Local development programs	6

* From the 73 reported projects, 59 were executed in 2016 and 14 were under preparation.

Project installation work often makes heavy demands on human resources, more especially functions involving civil construction, stonemasons, carpenters and riggers, among others. In partnership with teaching institutions, the Company endeavors to encourage the hiring of local labor by running professional initiation and skills training courses for qualifying members of the local community to occupy job positions on offer.

In the case of Pampa Sul Thermoelectric Plant for example, partnerships were established with the National Service for Industrial Training (Senai), Fundação Gaúcha do Trabalho e Ação Social (FGTAS) and the local governments of Candiota and Hulha Negra, municipalities which are in the project's sphere of influence. The aim of the partnerships is to offer professional training courses to the local community. Between June 2015 and May 2016, 16 courses were run, distributed among 29 groups totaling 564 participants, of which 417 successfully completed the courses. **[DMA Sectoral]**

In spite of the priority given to local hiring, insufficient numbers of companies and services for satisfying demand locally means that manpower is attracted from other regions to the municipalities surrounding the projects. While on the one hand this contributes to stimulating the local economy, on the other, the population influx overloads public services. When such impacts are detected, the Company adopts a series of mitigating and compensatory measures, which include investments in the areas of health, safety, leisure and sanitation. Other initiatives are taken to assist local government in structuring its actions such as the preparation of master and waste management plans.

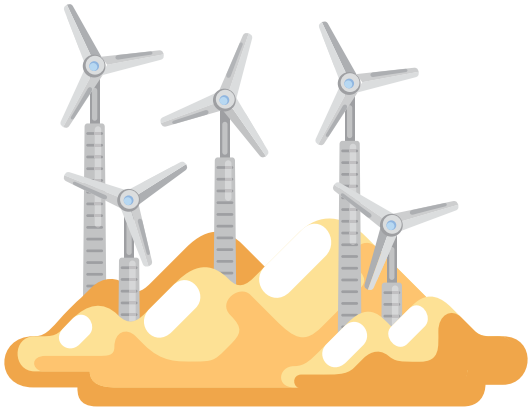
TERRITORIAL IMPACTS

The projects being implemented by the Company in 2016 involved neither acquisition nor expropriation of land. The project sites are situated in rural areas with sparse population, the latter therefore not requiring resettlement. The owners of areas affected by the installation of access roads and transmission lines are indemnified for restrictions due to project works. The impact on the historical and archeological heritage in these areas is also evaluated. If need be, sites eventually identified are either preserved in situ or artefacts recovered and sent to specialized institutes. The impact on remaining natural resources such as soil and water are the focus of specific monitoring and control programs.

Impacts on local communities - Projects being implemented

Projects

- Santa Mônica Wind Complex
- Campo Largo Wind Complex
- Santo Agostinho Wind Complex
- Assú V Photovoltaic Plant



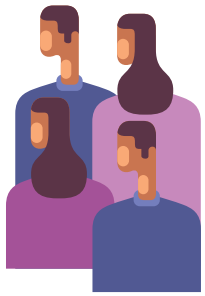
Positive impacts

- Growth of local businesses
- Increase in the tax take
- Contribution to soil use planning
- Hiring of local companies and labor
- Increase in the qualification and training of labor
- Increase in public-private partnerships for socio-economic development
- Creation of jobs and income



Negative impacts [G4-SO2]

- Emissions of dust and particle matter
- Local population's expectations raised



Source: Environmental Impact Studies of the mentioned projects.

Projects in operation

One of the principal relationship initiatives with the communities in which the Company operates are the Sustainability and Cultural Centers. Installed with the support of ENGIE Brasil Energia since 2011, these spaces make a significant contribution to the sustainable development of small population centers.

The main objectives of these centers are to:

• encourage the appreciation and dissemination of local customs and traditions in the communities in which ENGIE Brasil Energia operates;

• stimulate young people to seek knowledge through social and digital inclusion, contributing to the creation of jobs, income and the reduction in rural depopulation;

• provide various spaces for enhancing intra-community relationships for all and any type of cultural manifestation, such as the performing arts, plastic arts, dance presentations, musical shows and cinematographic exhibitions; and

• make Sustainability and Cultural Center operations economically viable with a structured program, which both generates income and controls costs.

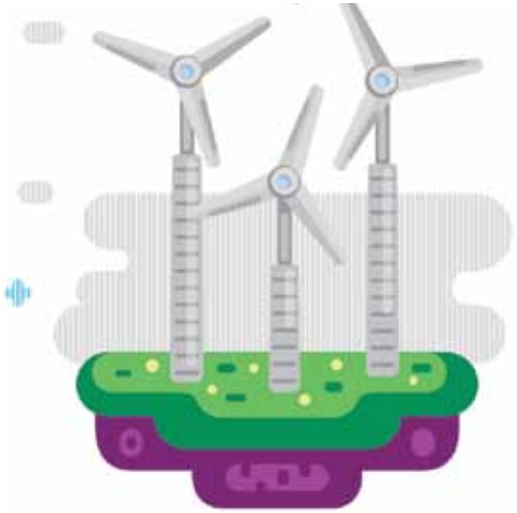
At the end of 2016, five centers were in operation: Centro de Cultura de Entre Rios do Sul (SC), Centro de Cultura de Alto Bela Vista (SC), Centro de Cultura e Sustentabilidade de Capivari de Baixo (SC), Centro de Cultura de Quedas do Iguaçu (PR) and Centro de Cultura de Concórdia (SC), installed in partnership with the local city government. In 2017, a further center will be opened in Minaçu (GO).

The Company also supported the creation of REDE. This is an organization for managers of sustainability and cultural centers already in operation and in the process of installation. The aim is that through jointly promoting the exchange of good practices and the interchange of cultural activities, relations with public and private entities can be strengthened to achieve the sustainability of the enterprises. REDE's first meeting was held in September 2016 at the Capivari de Baixo Sustainability and Cultural Center.

Capacitar

The Company launched the Capacitar Program in 2016, its focus being on socio-cultural exchanges for improving the quality of life of the communities surrounding the plants. The program provides skills upgrading for leaders and community agents involving the management of projects made feasible through tax breaks granted under federal government schemes such as the Culture Incentive Law (Lei Rouanet), the Sport Incentive Law, the Infancy and Adolescence Fund, the Fund for the Elderly, the National Support Program for Oncological Care (Pronon) and the National Health Care Support Program for People with Special Needs (Pronas/PCD).

The program works along three principal axes: upgrading of skills through the distribution of printed material, onsite meetings and online courses. More information on this project can be found by accessing www.capacitar.vc. During 2016, three onsite meetings were held in Capivari de Baixo (SC), Minaçu (GO) and Florianópolis (SC).



VISTING PROGRAM

The plant-visiting program is another important initiative for engaging local communities. In partnership with other entities, the Company operates structured programs for visits by students, researchers and tourists to the plants in the generating complex. During these visits, presentations are made on plant operations and the implementation of socio-environmental programs. Complementary to this program are the presentations made in schools and other community facilities with the focus on the same themes and an emphasis on environmental education. In 2016, a total of 92,154 people took part in the program.

Investments in social responsibility

During the year, the Company invested a total of R$ 26.6 million in social responsibility initiatives of which 18.9% was in the form of own resources and 81.1 %, incentivized funds as shown in the following table.

Investments in social responsibility (in thousands of R$) **[GRI - G4-EC1]**

	2016	2015	Variation 2016/ 2015
Non-incentivized investments	5,044.28	3,304.36	52.7%
Investments through the Infancy and Adolescence Fund (FIA)	2,544.27	1,709.01	48.9%
Investments through the Culture Incentive Law (Lei Rouanet)	10,184.72	7,465.44	36.4%
Investments through the Sport Incentive Law	2,565.29	1,420.00	80.7%
Investments through the National Support Program for Oncological Care (Pronon)	2,573.80	637.77	303.6%
Investments through the National Care Support Program for People with Special Needs (Pronas/PCD)	1,310.20	550.00	138.2%
Investments through the Municipal Fund for the Elderly	2,348.33	234.44	901.7%
TOTAL	**26,570.89**	**15,321.02**	**73.4%**

Royalties and leasing income

In addition to investments in socio-environmental initiatives, the local economy of the regions in which the plants are located is also driven by royalty payments in the form of Financial Compensation for the Use of Water Resources (*Compensação Financeira pela Utilização de Recursos Hídricos* - CFURH). The legislation requires that income from these resources should be shared 45% each between the municipalities and states and the remaining 10% to the Federal Government. The percentage area flooded in each municipality is the basis for the ratio for prorating payments among the three beneficiaries. In 2016, the Company paid out R$ 196.8 million in royalties.

The other significant economic impact arising from the activities of ENGIE Brasil Energia is the leasing of areas for installation of and contiguous to the wind farm complexes. Owners of these areas normally receive 0.5% of net revenues from the project in rental payments. Consequently, direct and indirect income is generated and circulates in the surrounding region among landowners, traders and the local economy as a whole, driving the growth of the municipalities and states as a result of the increased tax take. In 2016, ENGIE Brasil Energia paid out R$ 14.4 million in rents.

Commitment to external initiatives

[GRI G4-15; G4-16]

The Company also contributes to the development of the electricity sector as a whole and the communities surrounding the concession areas through the participation of employees and/or directors in entities, associations and forums related to the public interest and social wellbeing. In 2016, for example ENGIE Brasil Energia participated in the following bodies:

- Brazilian Association for Electric Energy Generating Companies (Abrage);
- Brazilian Association of Wind Energy (ABEEólica)
- Brazilian Mineral Coal Association (ABCM);
- Brazilian Association of Risk Management (ABGR);
- Brazilian Maintenance Association (Abraman);
- Brazilian Electric Energy Trader Agents Association (Abracel);
- Brazilian Association of Electric Energy Sector Accountants – (Abraconee);
- Brazilian Association of Independent Electric Energy Producers (Apine);
- Capivari de Baixo Commercial and Industrial Association (Acicap);
- Florianópolis Commercial and Industrial Association (Acif);
- Lages Commercial and Industrial Association (Acil);
- Tuberão Commercial and Industrial Association (Acit);
- Healthcare Association (Elosaúde);
- Energy Co-Generation Industry of São Paulo (Cogen);
- Apuaê-Inhadava Hydrographic Basin;
- State of Rio Grande do Sul Energy Planning Committee (Copergs);
- Cantuquiriguaçu Territory Development Council (Condetec)
- National Water Resources Council (CNRH);
- Santa Catarina State Water Resources Council for Santa Catarina (CERH-SC);
- Paraná State Water Resources Council (CERH-PR);
- Environment Council of the National Confederation of Industry (CNI);
- Industries Federation of the State of Santa Catarina (Fiesc);
- Confederation and Center of Industries for the State of Rio Grande do Sul (Fiergs);
- Business Management Foundation Committee (Funcoge);
- Eletrosul Social Security Foundation (Elos);
- Santa Catarina Leaders Group (LIDE-SC);
- Acende Brasil Institute;
- Brazilian Investor Relations Institute (Ibri);
- Internal Auditors of Brazil Institute (Audibra);
- International Hydropower Association (IHA).

ENGIE Brasil Energia also adheres to the Sustainable Development Goals (SDGs) through the Santa Catarina We Can Movement, which it also supports. Indirectly through the parent company ENGIE, the Company is signatory to the Carbon Disclosure Program (CDP) and the United Nations Global Compact. ENGIE Brasil Energia is also involved in the Brazilian Business Pact for Integrity and Against Corruption. All are voluntary initiatives.





About the Report

Report profile

This is the tenth consecutive year that ENGIE Brasil Energia presents its Sustainability Report to stakeholders. The report observes the guidelines of the Global Reporting Initiative (GRI), a not-for-profits organization that proposes guidelines for ensuring the quality of the reports of organizations throughout the world. **[GRI G4-29; G4-30]**

As with 2015 and with the purpose of aligning this Sustainability Report to the Integrated Report of the International Integrated Reporting Council (IIRC), ENGIE Brasil Energia has adopted the GRI G4 Core Standard. The Sustainability Report is subject to external independent assurance, this year the responsibility of EY (see the Assurance Letter published by the independent auditors on page 110), thus ratifying the commitment to transparency and providing information which is relevant to the understanding of ENGIE Brasil Energia's businesses by the different stakeholders with which the Company interacts. **[GRI G4-32; G4-33]**

Based upon GRI guidelines, this edition contains information on the management of the Company and its operational, environmental, social and economic performance in the period from January 1 to December 31, 2016. The document also incorporates GRI sectorial supplement indicators and IIRC recommendations - especially those relating to the generation of short-, medium- and long-term value and to the description of the business model. The publication also includes content extracted from the Management Report, published in February 2017. **[GRI G4-28; G4-30]**

With this same purpose in mind, ENGIE Brasil Energia discloses socio-economic indicators in its quarterly presentations of economic-financial results, at the same time also maintaining the information current in its website. The consolidated financial performance of the Company and its directly and indirectly controlled companies can be accessed from the Financial Statements section. **[GRI G4-17]**

In the 2016 Report, the Company has undertaken a revision of the materiality and prepared in the preceding report cycle (2015). We have endeavored to refine the Relevance Matrix in order to report indicators which reflect real impacts and effective management. We have maintained the principle of classifying of the Company's socio-environmental performance in a broader context of sustainability in order to identify aspects and impacts, which are common to all the segments and regions in which ENGIE Brasil Energia operates.

Hence, the definition of the indicators recorded in this Report was based on the following processes:

- The revision of the 2015 Matrix, with an analysis as to the relevance of the report, considering existing management and practices, the positioning of sector companies and the availability of information as well as stakeholders' influence in the decision-making process;
- Consultation with representatives from different stakeholder groups for evaluating the relevance of the aspects in the 2015 Report;
- The Sustainability Committee's validation of aspects selected as a result of consultations with the stakeholders; and
- Discussion and subsequent approval of the Relevance Matrix 2016, proposed by the Committee to the Company's senior management. **[GRI G4-22; G4-23; G4-29]**

In the event of any questions, comments and suggestions with respect to this Report, please contact the Company's Investor Relations Department by e-mail ri.brenergia@engie.com or by calling +55 48 3221-7221. **[GRI G4-31]**

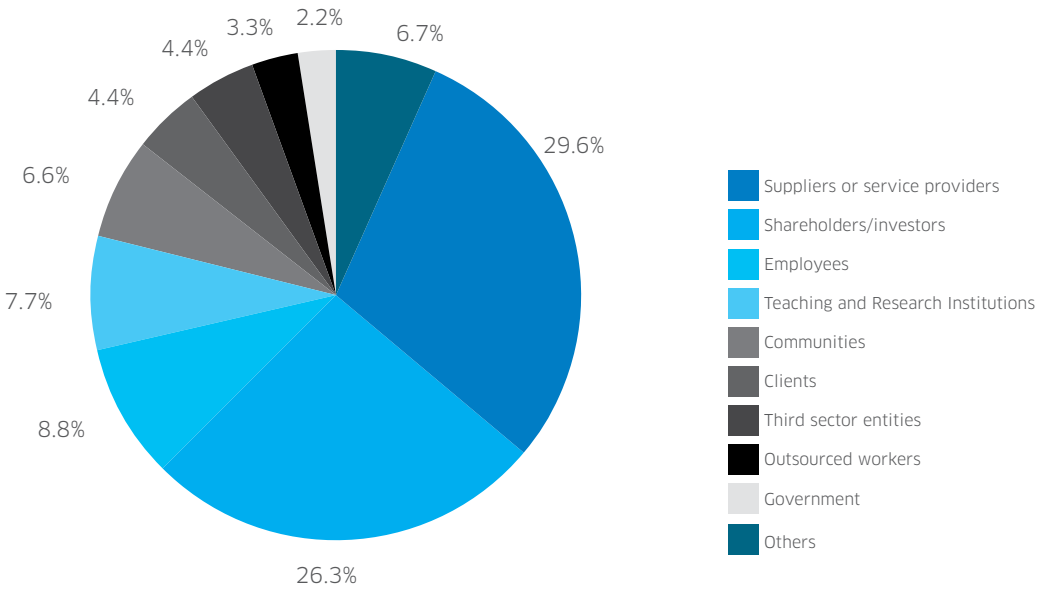
Stakeholder engagement

Constructed on the basis of a broad-based consultation with Company stakeholders, the Matrix in the 2015 Sustainability Report was used as the starting point for updating the materiality for the 2016 reporting cycle. It is the result of the engagement of 127 stakeholders in seven onsite panels during 2015 and organized in several regions where the Company has operations. Among the panel's initiatives was the identification of the principal socio-environmental impacts arising from the Company's activities. **[GRI G4-25; G4-26]**

Based on these impacts, the indicators' report for the 2015 cycle and the Sustainable Management Policy, the Company prepared a report of aspects relevant to sustainability to be validated by outside stakeholders through two consultative mechanisms: an online questionnaire and structured interviews.

Sent to all the Company's stakeholders, the online questionnaire was disclosed through the website and e-mail marketing and answered by 92 people.

Respondents' profile **[GRI G4-24]**



Stakeholders were able to classify and opine in the questionnaire on the relevance of 22 topics of sustainability indicated by the Company. Complementary to this, 21 people selected by ENGIE and representing 13 separate groups were interviewed on a qualitative consultation basis.

Definition of material aspects

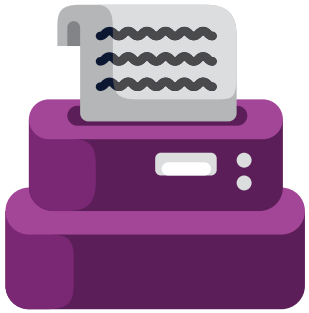
[GRI G4-18, G4-19, G4-20, G4-21, G4-27]

After consulting its stakeholder representatives, ENGIE Brasil Energia established the themes to be treated as priority in the Report. This process involved consideration of the significance of the economic, environmental and social impacts of each aspect, as well as their effective influence on stakeholder evaluations and decisions.

In this context, relevant impacts related to all the organization's activities, products, services and relationships were taken into account whether or not these same impacts occurred inside or outside the Company. On the basis of this analysis, the material indicators for the 2016 Report were pre-defined.

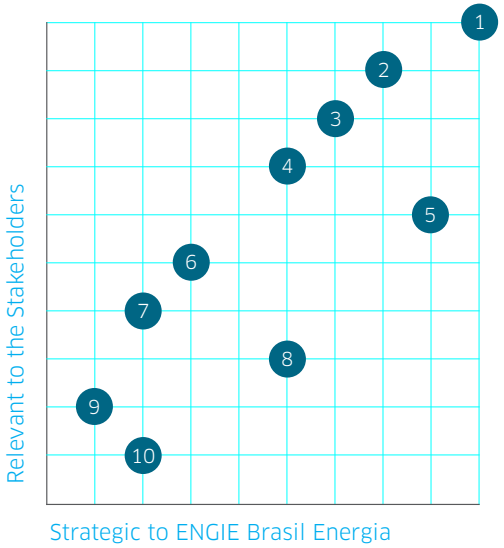
For the Company to verify its understanding as to the relevance of the themes put forward by the stakeholders, the relationship of the material aspects and indicators was presented to ENGIE Brasil Energia's Sustainability Committee at an extraordinary meeting held on January 18, 2017. At the meeting, the Committee evaluated the aspects identified by the stakeholders and the respective GRI indicators selected for reporting.

Following this process, the classification of the relevance of some themes in the matrix was altered, although without interfering with the overall set of pre-selected indicators, which were subjected to the materiality tests suggested by the GRI.



Relevance matrix

Based on the criteria described, the Relevance Matrix in ENGIE Brasil Energia's 2016 Sustainability Report contains 10 major themes deemed as relevant and which break down into material aspects, topics and indicators.



1 Ethics and integrity
2 Environmental management
3 Innovation
4 Operational performance
5 Economic performance
6 Occupational Health and Safety
7 Local communities
8 Relationship with clients
9 Training and education
10 Human rights

The following chart illustrates the Relevance Matrix consolidated according to material themes, GRI aspects and the extent of their impact, as well as the indicators for the 2016 report. In order to approximate to the model proposed in the Integrated Report of the International Integrated Reporting Council (IIRC), the chart also shows the capitals to which the themes, aspects and indicators are related. Finally, the last column shows the intersection between the material themes and the Sustainable Development Goals (SDG).

RELEVANT THEMES	MATERIAL ASPECTS (GRI)	EXTENSION OF THE IMPACT	INDICATORS	RELATED CAPITALS (IR)	RELATED SDGs
Ethics and integrity	Ethics and integrity	I/O	G4-56; G4-57; G4-58	Social and Relationship	16
	Combating corruption	I/O	G4-SO5		
	Compliance	I/O	G4-EN29; G4-SO8		
	Corporate governance	I	G4-34; G4-38		
Economic performance	Economic performance	I/O	G4-EC1, G4-EC2, G4-EC3, G4-EC4, G4-EC9	Financial, Social and Relationship	8 9
Environmental management	Energy	I/O	G4-EN3; G4-EN5; G4-EN6	Natural	6 7 12 13 14 15
	Water	I/O	G4-EN8; G4-EN10		
	Biodiversity	I/O	G4-EN11, G4-EN12, G4-EN13, G4-EN14		
	GHG emissions	I/O	G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN19, G4-EN20, G4-EN21		
	Effluent and waste	I/O	G4-EN22; G4-EN23; G4-EN24		
	Investments	I/O	G4-EN31		
	Grievance mechanisms and complaints filed on environmental impacts	I/O	G4-EN34		
Innovation	Research and development activity	I/O	DMA Sectoral (formerly EU8)	Intellectual, Social and Relationship, Financial	9

* **I** - *Inside the Company* **O** - *Outside the Company*

RELEVANT THEMES	MATERIAL ASPECTS (GRI)	EXTENSION OF THE IMPACT	INDICATORS	RELATED CAPITALS (IR)	RELATED SDGs
Operational Performance	Installed and planned capacity	D/F	EU1; EU10	Financial and Manufactured	7 8 9 11
	Net energy production	D/F	EU2		
	Energy efficiency	D/F	EU11		
	Uptime factor	D/F	EU30		
Relationship with clients	Results of client satisfaction surveys	D/F	G4-PR5; DMA Sectoral (formerly EU7); EU3	Social and Relationship	17
Society	Local communities	D/F	G4-SO1, G4-SO2; DMA Sectoral (formerly EU20)	Social and Relationship	3 4 5 10 12 16
Human rights	Non-discriminatory	D/F	G4-HR3	Human, Social and Relationship	8 10 16
	Mechanisms for airing grievances and complaints (HR)	D/F	G4-HR12		
Labor practices	Employee	D/F	G4-LA1; G4-LA2	Human, Intellectual, Social and Relationship	3 5 8 10 16
	Occupational Health and Safety	D/F	G4-LA5; G4-LA6		
	Training and Education	D	G4-LA9		
	Diversity and equality of opportunity	D	G4-LA12		

GRI CONTENT INDEX

Indicator	Page	Observation
STRATEGY AND ANALYSIS		
G4-1	7	
ORGANIZATIONAL PROFILE		
G4-3	11	
G4-4	11	
G4-5	11, 110	
G4-6	11	
G4-7	11	
G4-8	11, 20	
G4-9	4	
G4-10	81, 82, 84	
G4-11	81	
G4-12	89	
G4-13	18	
G4-14	41, 62	
G4-15	94	
G4-16	94	
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES		
G4-17	95	
G4-18	97	
G4-19	97	
G4-20	97	
G4-21	97	
G4-22	95	
G4-23	95	

Indicator	Page	Observation
STAKEHOLDER ENGAGEMENT		
G4-24	96	
G4-25	96	
G4-26	81, 96	
G4-27	97	
REPORT PROFILE		
G4-28	95	
G4-29	95	
G4-30	95	
G4-31	95	
G4-32	95	
G4-33	95	
GOVERNANCE		
G4-34	34	
G4-38	35	
G4-39	35	
ETHICS AND INTEGRITY		
G4-56	39, 40	
G4-57	40	
G4-58	40	

Indicator	Page	Observation
SPECIFIC STANDARD DISCLOSURES		
ECONOMIC PERFORMANCE		
G4-EC1	4, 57, 93	
G4-EC2	20, 45	Partial response.
G4-EC3	85	The great difference between the figures reported in 2015 and 2016 for contributions to ELOS stems from the refinement of the analysis. In 2015, only contributions related to administrative expenses were considered, while the 2016 report also considered extraordinary contributions (deficit adjustment), which is the criterion most closely adherent to the indicator guidelines.
G4-EC4	98	Reduction of IT at ENGIE Brasil Energia (São Salvador) of R$ 13.688 thousand. Reinvestment incentive (Ponte de Pedra) for the total of R$ 4,868 thousand also highlighted.
PROCUREMENT PRACTICES		
G4-EC9	89	
ENERGY		
G4-EN3	71, 72	
G4-EN5	72	
G4-EN6	71	
WATER		
G4-EN8	69	
G4-EN10	69	
BIODIVERSITY		
G4-EN11	66	
G4-EN12	63, 64	Partial response. The Company is updating information on the measurement of direct and indirect impacts, both positive and negative.
G4-EN13	64, 68	
G4-EN14	64	Partial response. The Company is updating information on the species with habitats located in areas affected by their operations.

Indicator	Page	Observation
EMISSIONS		
G4-EN15	75	
G4-EN16	76	
G4-EN17	77	
G4-EN18	78	
G4-EN19	74	
G4-EN20	78	
G4-EN21	78, 79	
EFFLUENT AND WASTE		
G4-EN22	70	
G4-EN23	73	
G4-EN24		There were no significant spills in 2016.
COMPLIANCE		
G4-EN29		In fiscal year 2016, no fines or non-monetary sanctions were incurred for non-compliance with environmental laws and regulations. Similarly, no arbitration actions were brought against the Company.
GENERAL		
G4-EN31	79	
G4-EN34	98	There was one complaint concerning environmental impacts processed in 2016 and solved in the same period.
EMPLOYMENT		
G4-LA1	83, 84	
G4-LA2	84	
OCCUPATIONAL HEALTH AND SAFETY		
G4-LA5	86	
G4-LA6	86	

Indicator	Page	Observation
TRAINING AND EDUCATION		
G4-LA8	87	
G4-LA9	85	
G4-LA10	85	
DIVERSITY AND EQUALITY OF OPPORTUNITY		
G4-LA12	82, 84	
NON DISCRIMINATION		
G4-HR3	89	
G4-HR5	89	
G4-HR6	89	
MECHANISMS FOR AIRING GRIEVANCES AND COMPLAINTS RELATING TO HUMAN RIGHTS		
G4-HR12	89	
LOCAL COMMUNITIES		
G4-SO1	90	
G4-SO2	91	
COMBATING CORRUPTION		
G4-SO5	40	
COMPLIANCE		
G4-SO8	98	In 2016, ENGIE Brasil Energia received no fines or non-monetary sanctions due to non-compliance with laws and regulations.
PRODUCTS AND SERVICES		
G4-PR5	99	The latest customer satisfaction survey was conducted in 2014. It is expected that a new edition will be held in 2017.
SECTORAL		
G4-EU1	15	
G4-EU2	49	
G4-EU3	88	

Indicator	Page	Observation
DEMAND-SIDE MANAGEMENT (FORMERLY EU7)	88	
Research and Development (FORMERLY EU8)	29	
G4-EU10	24, 25, 43	
G4-EU11	50	Unlike what was published in the Company's Sustainability Report for 2015, Aneel RN 500 does not apply to the William Arjona Thermoelectric Plant, the said resolution relating exclusively to coal-fired plants.
G4-EU13	63	Partial response. The Company is updating information that refers to the measurement of the indicator.
DMA EMPLOYMENT (FORMERLY EU14) - manpower qualification practices	90	
COMMUNITIES (FORMERLY EU20)	90	
G4-EU30	48	

Social balance sheet

1 – Calculation basis	2016 (R$ thousand)				2015 (R$ thousand)			
Net Revenues (NR)	6,442,371				6,512,037			
Operating Income (OI)	2,066,773				2,033,232			
Gross Payroll (GPR)	182,630				170,130			
Total Value Added (TVA)	4,199,756				4,121,326			
2 – Internal social indicators	**R$ thousand**	**% over GPR**	**% over NR**	**% over TVA**	**R$ thousand**	**% over GPR**	**% over NR**	**% over TVA**
Meals	16,477	9.02	0.26	0.39	17,021	10.00	0.26	0.41
Compulsory social charges	63,868	34.97	0.99	1.52	58,031	34.11	0.89	1.41
Private pension	42,331	23.18	0.66	1.01	39,304	23.10	0.60	0.95
Health	16,954	9.28	0.26	0.40	17,758	10.44	0.27	0.43
Occupational health and safety	6,078	3.33	0.09	0.14	5,741	3.37	0.09	0.14
Education	512	0.28	0.01	0.01	729	0.43	0.01	0.02
Culture	24	0.01	0.00	0.00	29	0.02	0.00	0.00
Professional training and development	5,274	2.89	0.08	0.13	3,591	2.11	0.06	0.09
Daycare or daycare assistance	178	0.10	0.00	0.00	153	0.09	0.00	0.00
Sport	500	0.27	0.01	0.01	508	0.30	0.01	0.01
Profit-sharing	44,126	24.16	0.68	1.05	43,121	25.35	0.66	1.05
Transportation	4,290	2.35	0.07	0.10	4,258	2.50	0.07	0.10
Others	1,456	0.80	0.02	0.03	1,207	0.71	0.02	0.03
TOTAL – INTERNAL SOCIAL INDICATORS	**202,068**	**110.64**	**3.14**	**4.81**	**191,451**	**112.53**	**2.94**	**4.65**
3 – External social indicators	**R$ thousand**	**% over OI**	**% over NR**	**% over TVA**	**R$ thousand**	**% over OI**	**% over NR**	**% over TVA**
Education	120	0.01	0.00	0.00	133	0.01	0.00	0.00
Culture	13,691	0.66	0.21	0.33	8,204	0.40	0.13	0.20
Health and sanitation	3,884	0.19	0.06	0.09	1,130	0.06	0.02	0.03
Sports	2,575	0.12	0.04	0.06	1,330	0.07	0.02	0.03
Others	6,298	0.30	0.10	0.15	4,518	0.22	0.07	0.11
TOTAL CONTRIBUTIONS TO SOCIETY	**26,568**	**1.29**	**0.41**	**0.63**	**15,315**	**0.75**	**0.24**	**0.37**
Taxes (excluding social charges)	1,175,089	56.86	18.24	27.98	1,218,473	59.93	18.71	29.57
TOTAL – EXTERNAL SOCIAL INDICATORS	**1,201,657**	**58.14**	**18.65**	**28.61**	**1,233,788**	**60.68**	**18.95**	**29.94**
4 – Environmental indicators	**R$ thousand**	**% over OI**	**% over NR**	**% over TVA**	**R$ thousand**	**% over OI**	**% over NR**	**% over TVA**
4.1 – Investments related to the production/operation of the Company								
Liabilities and environmental contingencies	10,170	0.49	0.16	0.24	11,448	0.56	0.18	0.28

Technological and industrial development program	9,959	0.48	0.15	0.24	24,151	1.19	0.37	0.59
Others	991	0.05	0.02	0.02	7,878	0.39	0.12	0.19
TOTAL INVESTMENT RELATED TO THE OPERATION/PRODUCTION OF THE COMPANY	**21,120**	**1.02**	**0.33**	**0.50**	**43,477**	**2.14**	**0.67**	**1.05**
4.2 – Investment in external programs and/or projects								
Environmental education projects in communities	934	0.05	0.01	0.02	1,106	0.05	0.02	0.03
Preservation and/or revitalization of degraded environments	4,254	0.21	0.07	0.10	4,848	0.24	0.07	0.12
Others	5,467	0.26	0.08	0.13	1,377	0.07	0.02	0.03
TOTAL INVESTMENTS IN EXTERNAL PROGRAMS AND/OR PROJECTS	**10,655**	**0.52**	**0.17**	**0.25**	**7,331**	**0.36**	**0.11**	**0.18**
TOTAL ENVIRONMENTAL INVESTMENT (4.1 + 4.2)	**31,775**	**1.54**	**0.49**	**0.76**	**50,808**	**2.50**	**0.78**	**1.23**

Distribution of environmental investment	**R$ thousand**	**% over total**	**R$ thousand**	**% over total**
Total investment in environmental prevention activities	8,823	27.77	23,315	45.89
Total investment in environmental maintenance activities	20,745	65.29	24,638	48.49
Total investment in environmental compensation activities	2,207	6.95	2,855	5.62
Number of environmental, administrative and legal claims filed against the company:	21		24	
Total fines and indemnifications judicially or administratively determined for environmental matters:	36.00		-	
With regard to the establishment of annual goals for the minimizing of waste, the general consumption in production/operations to increase efficiency in the use of natural resources, the company:	( ) Does not have goals ( ) Fulfilled 51% to 75% (x) Fulfilled 0% to 50% ( ) Fulfilled 76% to 100%		( ) Does not have goals ( ) Fulfilled 51% to 75% (x) Fulfilled 0% to 50% ( ) Fulfilled 76% to 100%	

5 – Workforce indicators	**2016 (in units)**	**2015 (in units)**
Number of employees at the end of the period	1044	1135
Number of new hires in the period	65	48
Number of dismissals in the period	157	45
Number of outsourced employees	820	1023
Number of interns	130	67
Number of employees by age group:		
Under 18	183	216
From 18 to 35	681	658
From 36 to 45	180	261

Number of employees by education level:		
Illiterate	0	0
Elementary education	4	5
High school education	565	640
Higher education	294	336
Postgraduate	181	154
Number and percentage of women working at the Company	173 (16.6%)	179 (15.8%)
Percentage of management positions held by women	8.6%	9.5%
Number and percentage of men working at the Company	871 (83.4%)	956 (84.2%)
Percentage of management positions held by men	10.1%	10.7%
Number of Afro-descendants working at the company	There are no formal declarations on the part of the employees as to the race to which they belong.	There are no formal declarations on the part of the employees as to the race to which they belong.
Percentage of management positions held by Afro-descendants	There are no formal declarations on the part of the employees as to the race to which they belong.	There are no formal declarations on the part of the employees as to the race to which they belong.
Number of handicapped or special-needs employees	36	35
Difference between the lowest salary paid in the company and the minimum wage (national or regional)	1	1
Difference between the lowest salary paid in the company and the minimum wage	1	1
6 – Relevant corporate citizenship information	**2016**	**2015**
Ratio of highest to lowest salary at the company	20,4	20,4
Total on-the-job accidents	ENGIE: 1 Service provider: 7	ENGIE: 0 Service provider: 3
The social and environmental projects implemented by the company were decided upon by:	( ) Directors ( ) Directors and management (x) All staff	( ) Directors ( ) Directors and management (x) All staff
The risk and security standards in the workplace were decided upon by:	( ) Directors and management ( ) All staff (x) All staff + CIPA	( ) Directors and management ( ) All staff (x) All staff + CIPA
With regard to labor unions, right for collective bargaining and internal representation of workers, the company:	( ) Does not get involved (x)Follows ILO rules ( ) Encourages and follows ILO	( ) Does not get involved (x)Follows ILO rules ( ) Encourages and follows ILO
Private pension arrangements contemplate:	( ) Directors ( ) Directors and management (x) All staff	( ) Directors ( ) Directors and management (x) All staff
Profit-sharing contemplates:	( ) Directors ( ) Directors and management (x) All staff	( ) Directors ( ) Directors and management (x) All staff

Regarding the selection of suppliers, the same ethical and social and environmental responsibility standards adopted by the company:	( ) Are not considered	( ) Are not considered
	( ) Are suggested	( ) Are suggested
	(**x**) Are required	(**x**) Are required
Regarding the participation of employees in volunteer activities, the company:	( ) Does not get involved	( ) Does not get involved
	(**x**) Supports	(**x**) Supports
	( ) Organizes and encourages	( ) Organizes and encourages
Total number of consumer complaints and criticism:	(**0**) To the company	(**0**) To the company
	(**N.A.**) To Procon	(**N.A.**) To Procon
	(**0**) To the Courts	(**0**) To the Courts

Number of labor suits filed:				
Brought against the Company	461		58	
Found to have grounds	9		15	
Found to be without grounds	30		37	
Total amount of indemnifications and fines paid by court order:	1.187.60		2.165.60	
Distribution of Value Added:	**em mil R$**	**% sobre total**	**em mil R$**	**% sobre total**
Government	1,814,508	43.2	1,858,723	45.1
Employees	297,492	7.1	292,274	7.1
Shareholders	1,453,940	34.6	835,687	20.3
Third Parties	539,455	12.8	469,026	11.4
Retained	94,361	2.3	665,616	16.2
7 – Other information	**2016**		**2015**	
Water consumption	7,367,730.60 m^3		7,677,604.90 m^3	
Electric energy consumption	150,7 GWh		182,4 GWh	
Annual amount of waste produced	1,778,045.81 ton		1,870,937.57 ton	
Annual amount of waste recycled	1,743,850.87ton		1,807,914.57 ton	

Assurance Letter

Independent Auditors' Limited Assurance Report on the Engie Brasil Energia S/A's Annual Sustainability Report based on GRI guidelines, version G4 and Reporting Option "Core".

The Board of Directors, Management and Shareholders of
Engie Brasil Energia S.A.
Florianópolis - SC

Introduction

We were engaged by the management of Engie Brasil Energia S.A. ("Engie" or "Company") to present our limited assurance report on the Global Reporting Initiative ("GRI") over the Key Performance Indicator´s (KPI´s) contained in the Annual Sustainability Report, for the year ended December 31, 2016.

Engie´s management responsibilities

Engie´s management is responsible for preparing and presenting appropriately the information contained in the Annual Sustainability Report for the year ended December 31, 2016, in accordance with criteria, assumptions and methodologies GRI – Version 4 and reporting option "Core" and for the internal controls as management determines is necessary to enable the preparation of information free from material misstatement, whether due to fraud or error.

Independent auditors' responsibility

Our responsibility is to express a conclusion on the Engie's Annual Sustainability Report GRI KPI´s for the year ended December 31, 2016, based on the limited assurance work conducted in accordance with Technical Release Nº 07/2012, approved by the Brazil's National Association of State Boards of Accountancy (CFC) based on NBC TO 3000 (Assurance Work Other Than Audit or Review), issued by the CFC, which is equivalent to international standard ISAE 3000, issued by the International Federation of Accountants, applicable to non-historical information. These standards call for compliance with ethic requirements, including independence and work carried out to obtain limited assurance that the Engie's Annual Sustainability Report for the year ended December 31, 2016 is free of material misstatement.

A limited assurance work conducted in accordance with NBC TO 3000 (ISAE 3000) consists mainly of inquires of management and other professionals from Engie who were involved in the preparation of the Annual Sustainability Report, as well as of the application of additional procedures deemed necessary to obtain evidence which enables us to conclude on the limited assurance on the Annual Sustainability Report. A limited assurance work also requires additional procedures, as the independent auditor becomes aware of matters which lead him to believe that the Annual Sustainability Report information may contain material misstatement.

The selected procedures relied on our understanding of the aspects concerning the compilation and presentation of the Annual Sustainability Report information in accordance with criteria, assumptions and own methodologies from Engie.

The procedures comprised:

- The planning of the work, considering the materiality, the volume of quantitative and qualitative information and the operating and internal control systems which supported the preparation of Engie's Annual Sustainability Report information for the year ended December 31, 2016;
- The understanding of the calculation methodology and the procedures for preparation and compilation of Annual Sustainability Report through interviews with management in charge of preparing the information;
- The application of analytical procedures on quantitative information and sample verification of certain evidence supporting the data used for the preparation of the Annual Sustainability Report;

- Comparison of the financial indicators and the GRI KPIs with the financial statements and/or accounting records.

The procedures applied in this limited assurance work also comprised compliance with the guidelines of the structure for development of the GRI - G4 applicable in the preparation of the information contained in the Engie's Annual Sustainability Report, concerning the year ended December 31, 2016.

We believe that the evidence obtained in our work was sufficient and appropriate to provide a basis for our limited conclusion.

Scope and limitations

The procedures applied in a limited assurance work are substantially less in scope than those applied in an assurance work aimed at issuing an opinion on the GRI KPIs in the Annual Sustainability Report. Therefore, we are not in a position to obtain assurance that we are aware of all matters, which would be identified in an assurance work aimed at issuing an opinion. If we had performed a work in order to issue an opinion, we could have identified other matters or misstatements in the Annual Sustainability Report GRI KPI´s. Accordingly, we did not express an opinion on these KPIs.

The review and execution of tests on Engie internal controls related to the indicators contained in the Annual Sustainability Report were not part of our scope.

The non-financial data is subject to further inherent limitations than financial data, given the nature and diversity of methods used to determine, calculate or estimate such data. Qualitative interpretations of materiality, significance and accuracy of data are subject the individual assumptions and judgments. In addition, we did not carry out any work on data reported for prior periods nor in relation to future projections and goals.

Conclusion

Based on the procedures performed and herein described, nothing came to our attention that makes us believe that the GRI KPIs in the Engie's Annual Sustainability Report, for the year ended December 31, 2016, were not measured and stated, in all material respects, in accordance with criteria, assumptions and methodologies for the development of the Global Reporting Initiative - G4 (reporting option "Core").

São Paulo, April 25th, 2017.

Ernst & Young
Auditores Independentes S.S
CRC-2SP015199/O-6

José Ricardo de Oliveira
Contador CRC 1PR041552/O-9

Corporate information

COMPANY ADDRESS
GRI G4-5
Rua Paschoal Apóstolo Pítsica, 5.064
CEP 88025-255 – Florianópolis (SC)
Tel.: (48) 3221-7000
Fax: (48) 3221-7001

INVESTOR RELATIONS
Tel.: (48) 3221-7221
Fax: (48) 3221-7166

SUSTAINABILITY COMMITTEE
Coordinator: Júlio César Lunardi
Administrative Officer
comitedesustentabilidade.brenergia@engie.com

ETHICS COMMITTEE
comitedeetica.brenergia@engie.com

LEGAL PUBLICATIONS
Diário Oficial de Santa Catarina
Diário Catarinense

SHAREHOLDER SERVICES/CUSTODIAN BANK
Banco Itaú S.A.
Departamento de Atendimento Unificado
Tel.: (11) 3003-9285 / 0800-7209-285

DEPOSITARY BANK (AMERICAN DEPOSITARY RECEIPTS)
The Bank of New York Mellon

FINANCIAL STATEMENT AUDITOR
KPMG

SUSTAINABILITY REPORT ASSURANCE
Ernst & Young Auditores Independentes

CREDITS

GENERAL COORDINATION
ENGIE Brasil Energia
Investor Relations

GRI CONSULTANCY, REDACTION, EDITION
Relata Comunicação e Sustentabilidade

DESIGN AND LAYOUT
Report Sustentabilidade

TRANSLATION
Tristar Traduções Ltda

TO KNOW THE FULL 2016 GREENHOUSE GAS INVENTORY OF ENGIE BRASIL ENERGIA, CLICK HERE