



# **2016 Sustainability Report Petrocoque Group**



*"A man's true wealth hereafter  
is the good he has done to his fellowmen."*

**Mahatma Gandhi**



## CEO's Message

Petrocoque's promise of leaving a positive legacy in terms of social and environmental approach to future generations has been reiterated throughout its 42 years of history.

2016 Sustainability Report in its fourth consecutive annual edition conveys Petrocoque's engagement and transparency proposal, and its pledge of keeping an open dialogue with all stakeholders.

Based on the Global Reporting Initiative – GRI – guidelines, it is possible to declare that one of the greatest legacies found in the process of elaborating this Report is the possibility of improving our management style, so that it becomes a tool to be used for the continuous improvement of Petrocoque Group in its search for sustainability.

For Petrocoque, socio-environmental responsibility, added to growth and profitability factors (the three sustainability pillars), mean a solid foundation for the success and perpetuation of its business. So, these organizational pillars are non-negotiable values and must be present in all our actions.

The components of the topics and indicators displayed herein assess the performance of the organization, and the data that have been compiled reflect the practices and activities of Petrocoque Group with accuracy and coherence.

Our employees and partners, to whom I bestow my profound gratitude, have placed their best efforts to collaborate in the adoption of sustainable practices together with our policy in austerity.

A lot has been achieved and the more we improve in terms of sustainability, the greater the conscience we have of how much still lies ahead of us. I count on your support and dedication, so that we make sustainability our priority.

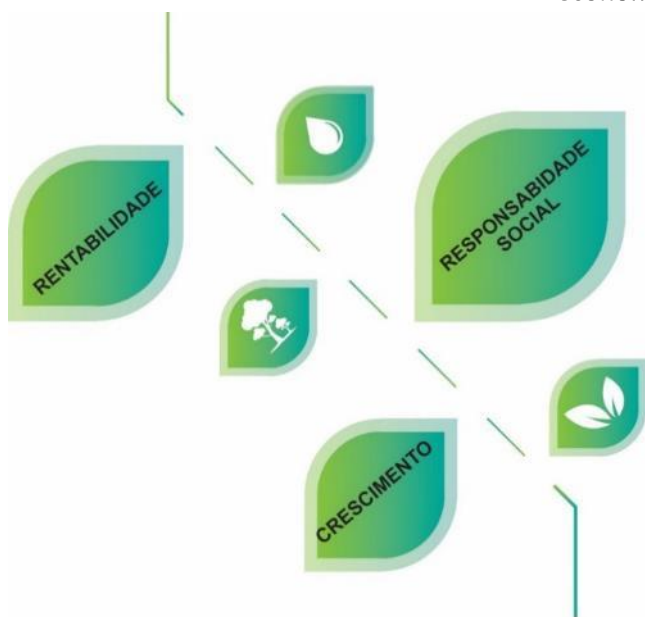
Enjoy the reading!

**Augusto Cesar F. de Carvalho**  
CEO

PETROCOQUE GROUP with its operations in the petro-chemical industry, carries on among its activities mainly the production of calcined petroleum coke and correlate products as well as the generation of energy and holds as commitment to its businesses the search for balanced conditions to meet the needs of its stakeholders and to bring force sustainable development.

1. The company offers international level quality products and services, so as to meet the clients' expectations.
2. Appraises human capital providing on-going qualification for collaborators and therefore ensuring the continuous improvement of its processes, products, and services.
3. Prioritizes environmental pollution prevention, as well as health and occupational safety, running its units with focus on the applicable legislation compliance and through standards adopted by the Company.
4. Engages on transparency on management practices, and authenticity concerning social, economic, and environmental processes for its stakeholders.
5. Human and culture diversity is broadly respected.

CEO



Our corporate strategy is based on sustainability factors (growth, profitability, and social and environmental responsibility) and the main commitment is sustainable development to “promote a better future for next generations”.

## Corporate Strategy

### Our Mission

To act on businesses of calcined petroleum coke and related products, as well as in the business of energy generation, in a sustainable way.

### Our Vision (2026)

To be the world leader in the supply of quality calcined petroleum coke recognized by our clients and to be self-sufficient in energy and water rational use.

### Our Values

- Commitment
- Results
- Innovation
- Ethics
- People
- Integration
- Sustainability



## Sustainability Factors

Petrocoque Group believes that to prevail over all the challenges it faces it is essential to perform according to principles of sustainability whenever doing business related to calcined petroleum coke, its correlate products and energy.

As a commitment to our stakeholders, it is a priority to all managers in Petrocoque Group to perform in such a way that their management and decision making process are integrated, streamlined, and according to ethical values promoting human rights and citizenship, respecting human and cultural diversity, prohibiting discrimination, and contributing to sustainable development, thus creating economic and social values and respecting the environment.

55% of our strategic objectives according to a relational analysis of our corporate strategy including sustainable development pillars to help us achieve balance, are common to the environmental, social, and economic areas holistically interacting to meet the 3 P's (*People, Planet, and Profit* that in Portuguese turn into PPL – *Pessoas, Planeta, and Lucro*).

All things considered, it is possible to say that Petrocoque strategy tries not only to be economically feasible but also socially fair and environmentally correct promoting a better future for the next generations.

The main objective of the **economic** aspect is the reduction of loss and maximization of results with a focus on growth and profitability; the **social** approach is concerned with the promotion of social and cultural values and a balance in the distribution of resources; the **environmental** course deals with the maintenance of the planet ecosystems on the long run. These three balanced views serve as the basis of sustainability.



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# Corporate Action



## Petrocoque Group

The group includes Petrocoque S.A., founded in 1972, with its industrial unit in the city of Cubatão – SP and Coquepar, established in March 2007 and located also on the same site.

The Company is 70 km away from the capital of the State of São Paulo, close to the highway complex of Anchieta-Imigrantes System, which interconnects with the Rodoanel highway system, built to facilitate the access to main state highways.

Logistics effectiveness is complemented by the proximity with raw-material supplier, Petrobras, which ensures timely delivery of top grade CPC for the whole Brazil and the world.



The Company was established with the objective of producing and trading calcined petroleum coke (CPC) through the implementation of a green petroleum coke (GPC) calcining unit. Currently its investment projects are under shareholders' analysis.



Petrocoque Group



South American leading company in calcined petroleum coke (CPC) trading and production, it has its shareholding structure equally divided between Petróleo Brasileiro S/A – Petrobras and Universal Empreendimento Participações Ltda.

Currently, its annual production capacity reaches 532 thousand tons of CPC and includes an electric power cogenerating unit that is able to generate up to 18MW, enough to supply approximately 26,000 households/monthly.

It is important to highlight that thanks to the inclusion of the Cogeneration Unit, Petrocoque became self-sustainable in energy because part of the energy that is generated and is “clean energy” is consumed by its industrial plant and the surplus is traded helping Brazil to increase the domestic supply of electric energy.



## Main Products and Services

### Calcined Petroleum Coke (CPC) and Correlate Products

Each CPC portion we produce brings in its composition the highest quality pegged to effective logistics and efficient assistance. Everything to put at clients' disposal a very high performance calcined coke with low sulphur content and continuous quality, which is the secret of our success.

CPC is a high purity carbon used by aluminum, metallurgic and steel industries. Our CPC has unique features. All these provide significant leveraging of smelters performance – Aluminum Industry. Part of this quality comes from the raw material, green petroleum coke (GPC), product with high level of consistency and supplied by Petrobras.

Petrocoque is also a supplier of products related to its calcined petroleum coke applicable in the manufacturing of anodes, in the steel mill industry, in foundries, and in the ceramics industry mainly.

With our units certified by international standards ISO 9001, ISSO 14001, ISO/IEC 17025 and OHSAS 18001, we guarantee product quality according to clients' specifications meeting international standards, preserving nature, health and safety of our employees.

High VSD

EXCELLENT  
PHYSICAL-  
CHEMICAL  
PROPERTIES

**0.72%**  
SULPHUR  
CONTENT

LOW LEVELS OF  
METAL  
CONTAMINANTS



## Main Products and Services

### Steam

In addition to producing calcined petroleum coke, Petrocoque makes annually approximately 1,300 thousand tons of steam, generated in the petroleum coke calcining process and that is the agent for clean energy, thus in line with best sustainability practices for productive processes.

Part of this steam is sold to neighbor industries which use steam as sustainable energy source through their own circuits to feed their processes no longer burning fossil fuels in their boilers, which results in non-renewable natural sources savings and also in decreased emissions in the region since it is a clean energy.

The surplus of the generated steam is used by the Electric Power Cogeneration Unit and part is consumed by Petrocoque and part placed for sale.

This is Petrocoque adopting the best practices in sustainability and in energy recovery through the optimization of the whole industrial process cycle achieving its goal of being self-sufficient in clean energy.



Photo: Petrocoque Archives

## Main Products and Services

### Electric Power

As of May, 2016 with the start-up of its Electric Power Cogeneration Unit, Petrocoque began generating electric power for its own consumption, exporting it also to the power grid. Totally interconnected to the Calcining Unit, the Company has a generating capacity of approximately 18 MWh of energy, equivalent to the supply of approximately 26,000 households/monthly making Petrocoque self-sufficient, once part of the generated energy is consumed by its industrial unit and the surplus sold, helping Brazil increase the domestic electric power supply.

The electric power produced by Petrocoque is generated through a sustainable process that deploys steam that comes from the calcining process of green petroleum coke and is sent to a turbo generator producing electric power.



Photo: Petrocoque Archives

Because it does not need new inputs in addition to those currently used during the production process, it is possible to state that Petrocoque is generating “Clean energy” that is ecologically correct and within the principles of sustainability recommended by the United Nations (UN) and by Agenda 21 of Cubatão.

The award “Executive of the Year” was bestowed to the Company’s CEO by Centro das Indústrias do Estado de São Paulo (CIESP) and in 2013 the Company received the Award for Environmental Merit bestowed by the Municipality of Cubatão.

Also in 2016 the Project was included in the group of projects appointed to represent Brazil during the *United Nations Global Compact Leaders Summit 2016*, in the category “Objective of Sustainable Development 7 – Renewable Energies – Granting access to cheap, reliable, sustainable, and renewable energy for all.”

The unit has been running for 10 months.



## Governance Structure

We are constantly looking for the enhancement of Petrocoque Corporate Governance System, implementing best practices and intensifying the relationship among shareholders, board of directors, management and control bodies. In this process, principles are translated into objective recommendations, aligning interests with the goal of preserving and optimizing organization's value, and contributing for its longevity.

- **General Assembly:** Composed of shareholders of our Group's companies, it decides about companies structural and directive subjects, being the highest body of the organization.
- **Board of Directors:** It is a collegiate and autonomous body within its prerogatives and responsibilities, according to the law and Articles of Incorporation. Its responsibility is to deal with Petrocoque matters, and also present and formalize its manifestations and opinions about our activities, in compliance with established Corporate Governance Guidelines.
- **Compensation Committee:** Composed of two regular Board of Directors advisors, with responsibility on deliberating about each and every issue with regard to Executive Directors' compensation.
- **Fiscal Council:** Permanently established to each one of our companies, it is independent from the Board of Directors and External Auditors.

### Corporate Governance

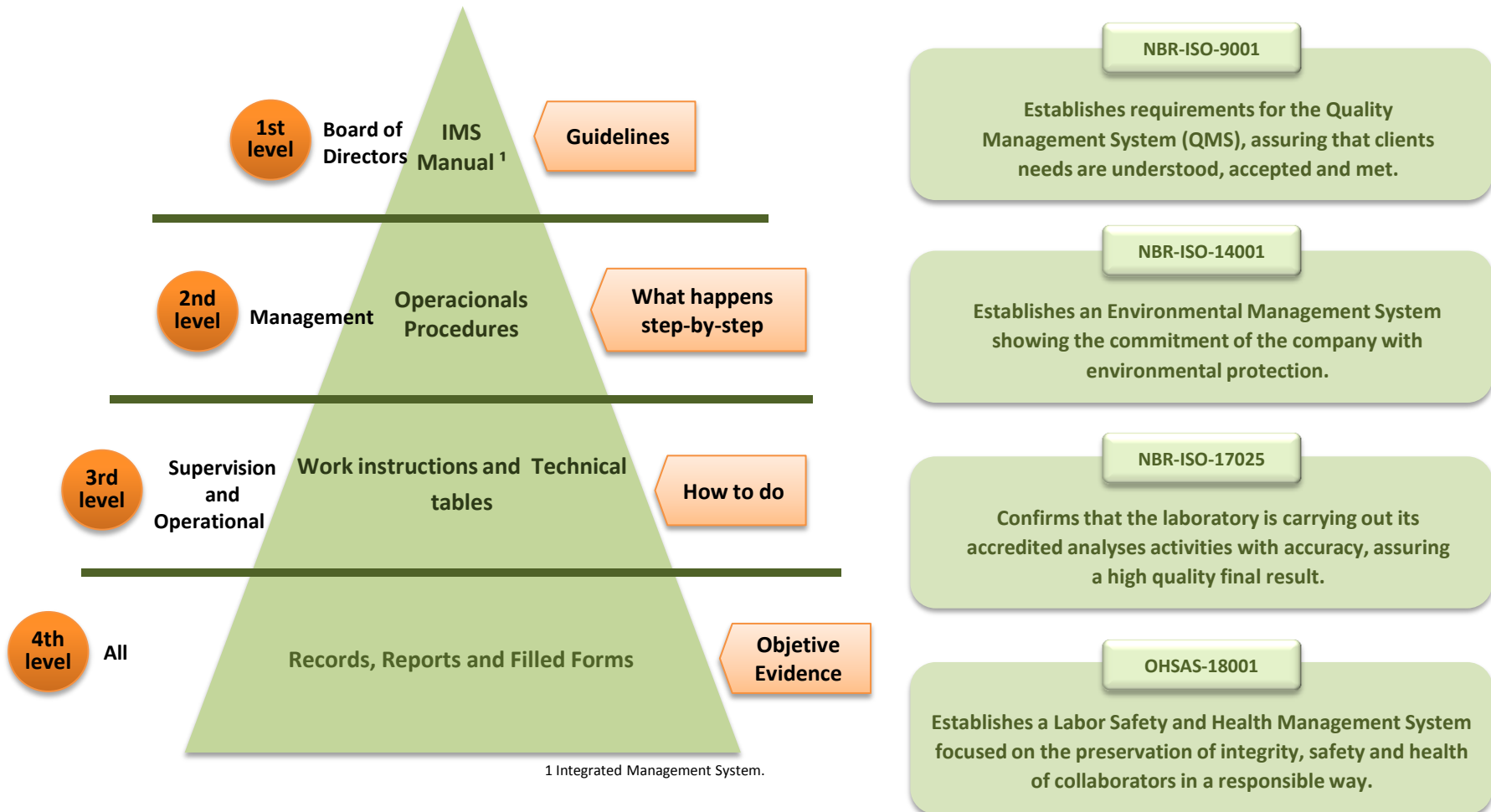
- **Executive Board :** The Executive Board is elected by the Board of Directors and includes the following officers: Chief Executive Officer, Chief Commercial Officer, Chief Industrial Officer and Chief Financial Officer. It is in charge of the corporate management of our businesses, according to the mission, objectives, strategies and guidelines approved by the Board of Directors.
- **Compliance Committee:** Created by the Board of Directors in 2015, its objective is to implement Petrocoque Program of Ethics, Compliance, and Anti-corruption, with especial focus on strengthening its image before general society and, especially, before its customers, partners and suppliers.
  - **External Audit:** Financial statements of the companies of the Group are annually audited by a renowned auditing firm and are published in local newspapers and the Federal Gazette (DOU). In addition, these are available for consultation at Petrocoque's website.

## Business Drivers

<b>Shareholder's Agreement</b>	Establish the main strategic guidelines for the Company agreed among the Shareholders.
<b>Articles of Incorporation</b>	The Company's Articles of Incorporation are based on the Law of Joint Stock Corporations which establishes the nature of Petrocoque's operations, as well as regulates its operations.
<b>Code of Ethics and Conduct</b>	Composed of ethical values and principles that are the foundation of the organization values found in guidelines used to provide guidance in the decision-making processes of all members of Petrocoque Group including herein different groups of stakeholders and taking into account the legislation in effect and contributing for the resolution of eventual conflicts of interest.
<b>Action Policy</b>	Defines the parameters and guidelines for the operations of Petrocoque, and it is broadly disclosed to all collaborators, so as to align daily activities of everyone with the commitments of the Company, providing support to the needs of all its stakeholders and especially to the practice of sustainable development. The policy is broken down into 5 guidelines that are detailed as requisites of products and services, human capital, safety, environment and health, and transparency and respect.
<b>Compliance Policy</b>	Consolidates guidelines, principles, and responsibilities, so that the operations of the Company be always in compliance with the performance of its activities. It also includes the dissemination of the practice of compliance and fight against corruption in all levels showing the importance of recognizing and performing the applicable external legal determinations, as well as Internal Policies, Rules, and Procedures for risk mitigation. It is obligatory to all its stakeholders.
<b>QSEH Policy</b>	Provides guidance to the activities involving quality, safety, environment, and health (QSEH) in Petrocoque including topics such as education, qualification, and labor force commitment with QSEH issues, the recording and treatment of such issues focused on performance, pollution, health, and safety prevention and occupational safety, risk control and monitoring. The objective is to always guarantee the sustainability of processes, products, and services of the Company.

## Certifications

To guarantee the quality of Petrocoque processes, products and services, the preservation of the environment, of health, and of the safety of our employees and collaborators, the Company has certifications for ISO and OHSAS standards as a combined part of the Integrated Management System that is periodically assessed by external entities through a systematic and independent examination to determine if the activities and results adhere to the normative requisites and to the parameters and guidelines established in the Petrocoque Action Policy. The flowchart below displays the hierarchy of functions in the Integrated Management System:





## Action Towards Sustainable Development

All our actions, from planning future activities to our daily chores, are based on the commitment with sustainable development, reinforced by our Action Policy and by our Code of Ethics and Conduct.



## Commitments and Participations

In addition to codes and policies, Petrocoque actions are developed and implemented according to commitments pledged to stakeholders. Since the unit is located in the Industrial Park in Cubatão, the Company actively participates in the development of Agenda 21 together with the municipality focusing on the definition and promotion of the strategic plan of action for the sustainable development of the municipality of Cubatão.

The Company is affiliated to the Brazilian Association of Aluminum (ABAL), Brazilian Association of Chemical Industries (ABIQUIM), Union of Chemical Products Industries (SINPROQUIM), Industries Center of the State of São Paulo (CIESP) and Federation of Industries of the State of São Paulo (FIESP). In addition, it participates in several forums, councils and associations related to this industry. Among them, there is the CIESP Community Consulting Panel, where the company periodically participates in discussions and promotions of best practices in different subjects of interest of the Cubatão community.

Since 2016, Petrocoque has voluntarily joined UN Global Compact that establishes a commitment for operating within its business practices according to fundamental values based on principles related to human rights, labor relationships, the environment and in fighting against corruption, so as to develop a global market inclusive and equalitarian through engaged corporate leaderships, and that is directly aligned with Petrocoque Mission and Vision.



## Global Compact and Petrocoque Performance

Petrocoque seeks to perform its activities according to the ten principles in the Global Compact of the United Nations, voluntarily committed to meeting and communicating its performance following principles linked to human rights, labor relationships, the environment, and the fight against corruption.

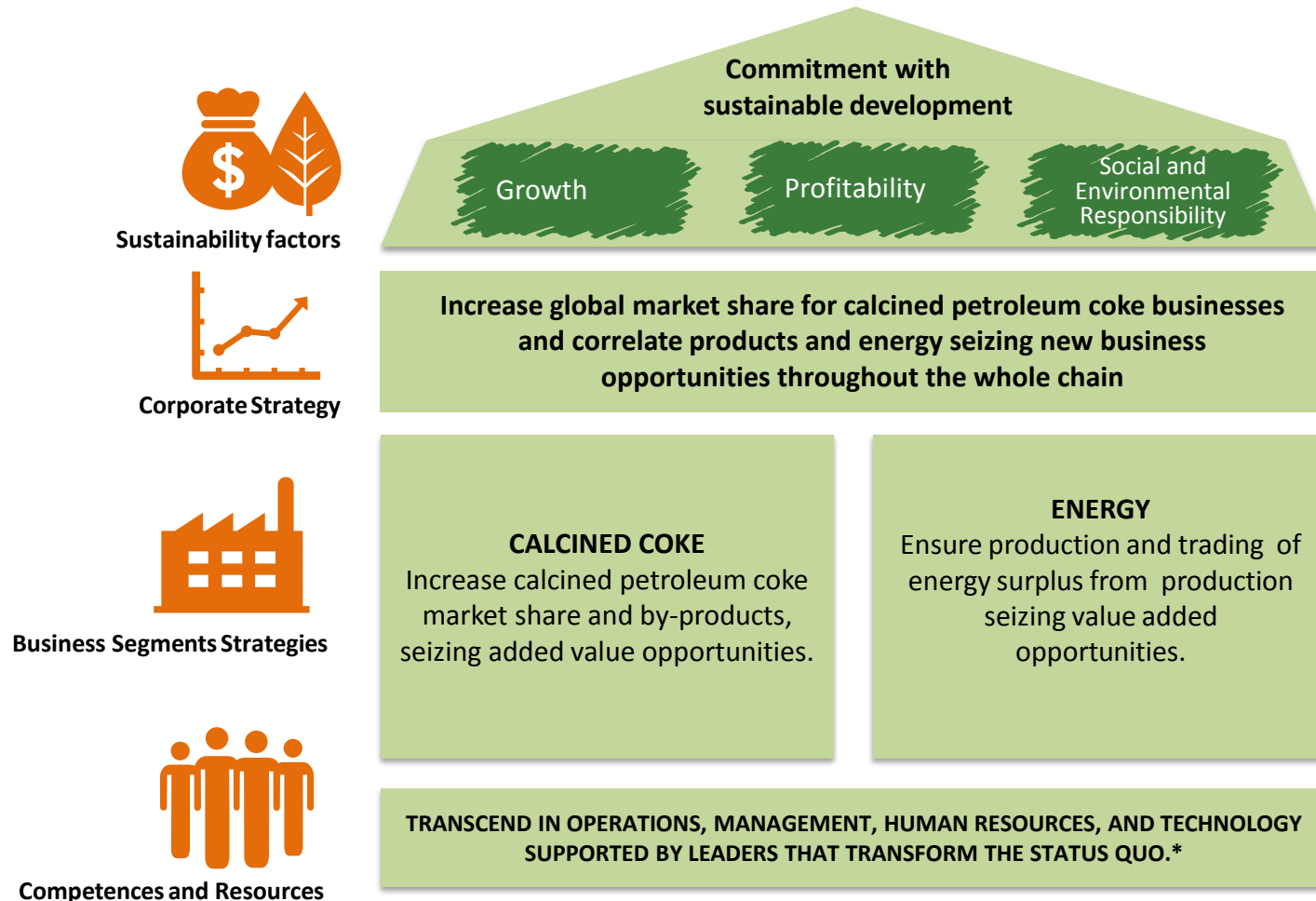
***“We support UN  
Global Compact”***

The 10 principles in the Global Compact	Petrocoque Practices
<ol style="list-style-type: none"> <li>1. Businesses should support and respect the protection of internationally proclaimed human rights; and</li> <li>2. Make sure that they are not complicit in human rights abuses.</li> </ol>	<ul style="list-style-type: none"> <li>• Values, Code of Ethics and Conduct, Policies, and Certifications</li> <li>• Social Innovation Program</li> </ul>
<ol style="list-style-type: none"> <li>3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;</li> <li>4. The elimination of all forms of forced and compulsory labor;</li> <li>5. The effective abolition of child labor; and</li> <li>6. The elimination of discrimination in respect of employment and occupation.</li> </ol>	<ul style="list-style-type: none"> <li>• Values, Code of Ethics and Conduct, Policies, (of Action, Compliance and Anticorruption, and QSEH) and Certifications</li> <li>• Program of Ethics, Compliance, and Anti-corruption</li> <li>• Rapport with Clients and Vendors</li> </ul>
<ol style="list-style-type: none"> <li>7. Businesses should support a precautionary approach to environmental challenges;</li> <li>8. Undertake initiatives to promote greater environmental responsibility; and</li> <li>9. Encourage the development and diffusion of environmentally friendly technologies.</li> <li>10. Businesses should work against corruption in all its forms, including extortion and bribery.</li> </ol>	<ul style="list-style-type: none"> <li>• Values, Code of Ethics and Conduct, Policies, (of Action, Compliance and Anticorruption, and QSEH) and Certifications</li> <li>• Rapport with Clients and Vendors</li> <li>• Program of Ethics, Compliance, and Anti-corruption</li> </ul>



# Corporate Strategy

Our 2026 Corporate Strategy is based on sustainability factors (growth, profitability, and social and environment responsibility), in that our main commitment is sustainable development to “promote a better future for next generations”.



\* According to UN definition – transformer leaders are those that are able to “create new realities seizing whatever is possible generating longevity and sustainability”.

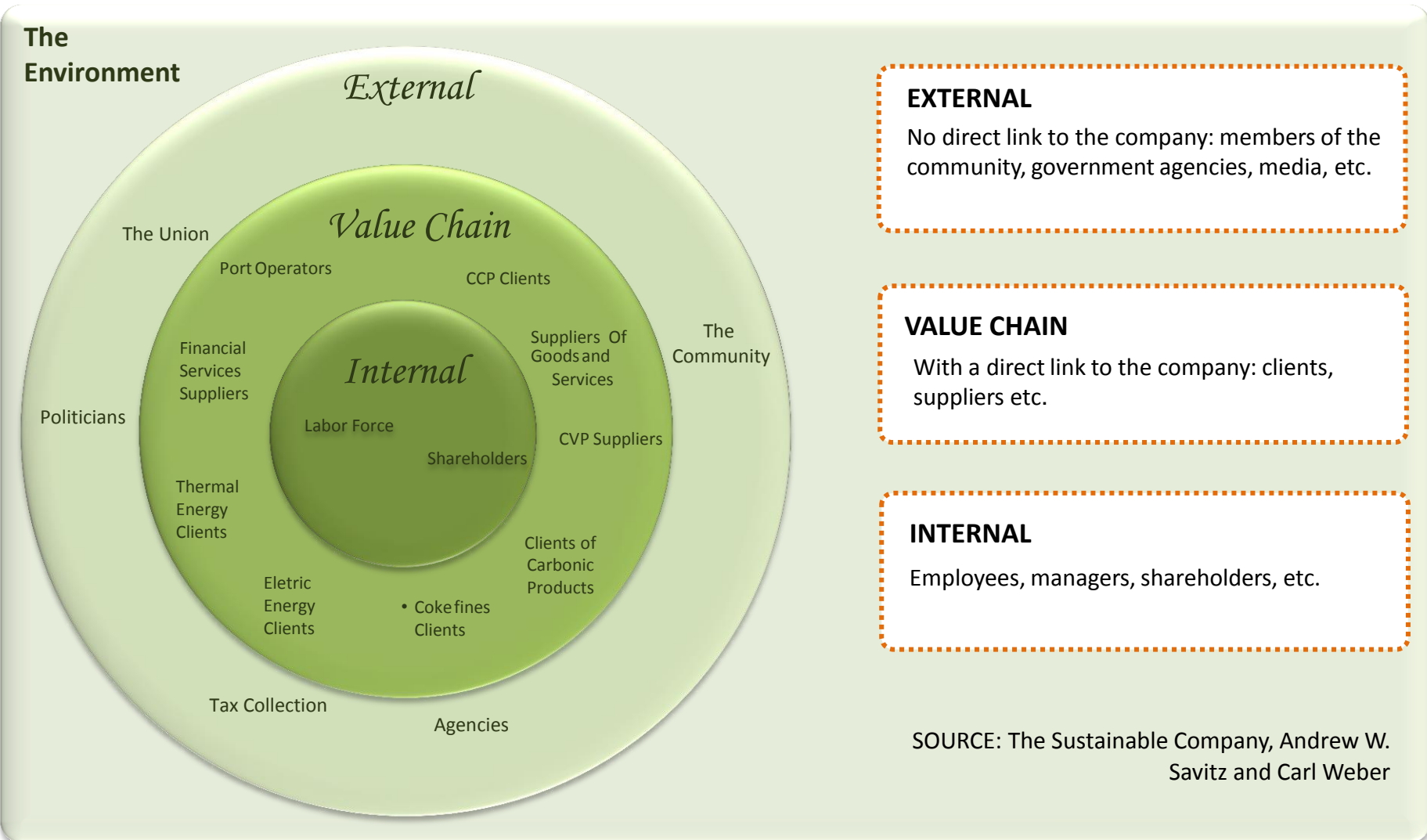
## Challenges in Competences and Resources

Our staff is trained in a set of challenges of excellence needed to make our strategy feasible and that were developed and qualified according to below:



## Stakeholders

Stakeholders, according to Petrocoque's definition, are groups of individuals or entities that bear in common issues and needs of social, political, economic, environmental, and cultural aspects and that engage or might engage into relationships and are capable of influencing or of being influenced by the Company's activities, businesses, and goodwill.





## Stakeholders

A study of priority was included into the definition and ranking of stakeholders to define and carry out necessary actions to maintain a healthy relationship among the parties with the main focus in sustainable development for all stakeholders.

- **Website Petrocoque.com** – running since September 2016 it is another channel of communications between Petrocoque and stakeholders.
- **Rapport with clients** – Annually, a clients' satisfaction survey is carried out about Petrocoque CPC quality that also includes the solution of problems and relationships. The rapport with steam clients is a dynamically maintained process established to be readily activated in the case of emergencies or any event of demand increase or reduction. As for electric power sales, the Company is currently operating in the short-term market.
- **Rapport with the community** – “Petrocoque de Portas Abertas” program that started in 2016 is an open and streamlined channel of communications between the Company and the community that includes visits to its industrial unit. In addition, the Company is also involved with the Painel Consultivo Comunitário da CIESP (CIESP Community Steering Committee), which operates as an open channel of communications between the company and the community and helps Petrocoque to get acquainted with, to discuss, and to assess issues on safety, health, environment, and social responsibility linked to Cubatão Industrial Park. It is, in short, an efficient tool of approximation and straightening of relationships among the plants, the community and its surroundings, and the representatives of municipal agencies.
- **Rapport with employees** – Programs of relationship and communications are carried out to improve the working environment. In 2016 a survey that included all the collaborators that belong to the Group was performed and the results showed that the employees are satisfied with the way Petrocoque operates. The activity “Breakfast with the Board” takes place quarterly and all the collaborators can ask questions, be informed about the Company performance indicators, and about other institutional issues.
- **Ombudsman** – It is a direct channel between Petrocoque Board of Directors or other areas and the employees and can be used as a fair link of last instance, neutral and unbiased that can receive complaints and information about recurring situations that have not been solved satisfactorily through the ordinary channels in the company; it guarantees freedom of expression, and helps to strengthen the image and culture of the company developing continuous improvement of processes, programs, and policies used by the company mainly in the area of Personnel Management and Communications.
- **Compliance Committee** – All employees of the Company are responsible and should meet Petrocoque's rules and requirements listed in the Compliance Policy and in the Code of Conduct and Ethics. Any questions can be solved by the Compliance Committee and answers are disclosed periodically through e-mails, the “Breakfast with the Board” activities, and the Newsletters placed on the bulletin information boards.

## Risk Management

Different tools that include mapping, surveys, and follow-up of the different types of risks are carried out to mitigate events that can have negative impacts on the Group businesses, and also those associated to the corporate relation with clients, society in general, and the environment. Strategic risks, market risks, operational risks, environmental risks, physical and compliance risks are monitored, so that Petrocoque's competitiveness can be maintained.

Throughout the Corporation, standard procedures created according to studies about topics that in the future might introduce a high level of complexity for the business are adopted to mitigate the occurrence of such risks, their probability, and the impact each one can cause. A systematic follow-up and revision if necessary of economic indicators together with social and environmental factors can also contribute for risk management and control. Whenever applicable, existing risks are properly insured by 1<sup>st</sup> line insurance companies.

A Crisis Management Program also exists to establish responsive actions in situations of crisis. It includes a specific committee that during such situations will take over in a collegiate and structured condition, so as to prepare the Company to deal with situations of the kind without significantly impacting in the continuity of the activities, mitigating irreversible damages and losses to the Company's image.

Championed by the Compliance Committee, the members annually identify compliance risks for the Company and the procedures to follow for the safekeeping of the Company and to help strengthen its image towards society in general and especially towards its clients, partners, and vendors.



By images all free downloads

## Environmental Risk Management

From the moment it started, environmental risks management has been considered a priority in Petrocoque's strategy. The control of air, water, and soil polluting potential sources is performed using the best technology available in the world, so as to guarantee that waste emissions after treatment and control remain well below the legal limits and technical standards required by the environmental agency.

The labor force is strongly encouraged to engage in prevention through programs with the goal of providing guidance concerning preventive actions mainly for those tasks with some potential of causing a significant impact on the environment.



Petrocoque's standards demand that employees and people working for the company no matter what level and position they carry, be aware of:

- the importance of compliance with the environmental policy and requisites of the Environmental Management System;
- significant environmental impacts and corresponding actual or potential impacts associated to their activities, and of the resulting environmental benefits with the improvement of personal performance;
- their functions and responsibilities towards reaching compliance and meeting the requisites in the Environmental Management System, and
- the possible consequences if specific operational procedures are not followed.



## Accident Prevention

Petrocoque establishes strict internal operational standards and procedures for the prevention of accidents and risk control in addition to meeting International and Brazilian safety standards in its facilities. The Company has and periodically promotes a Safety Manual with emergency assistance procedures and risk and hazards assessment. Each and every employee, as well as collaborators are acquainted with and follow the internal guidelines that help prevent the occurrence of accidents.

All the calcining units in the plant have the appropriate infrastructure embedded and are able to perform operational activities safely. In order to provide continuous identification of hazards, risk evaluation, and a definition of the necessary controls, daily maintenance activities are only performed after clearance is granted by employees in charge of the line, after a risk assessment of the conditions of the site and its safety is made. The analysis of identified risks and control measures together with their communication to those involved in these activities is intended to mitigate the hazards and risks to health and to labor safety before they are performed.

Following instructions, all employees wear the appropriate individual protection equipment (IPE's) according to the activity performed. The Safety Manual, the operational procedures, and the work instructions provide the guidelines and the general rules concerning health and safety procedures applicable to employees and collaborators including traffic rules inside our premises, the use of portable tools, manual load transportation, safety while working with electricity, while working at different heights and confined spaces, among others.

“The Cost of Silence” Campaign was resumed in 2016 through a series of educational campaigns with a focus on health and safety at work, deploying a first-aid manual and showing the risks when hazards inherent to the activities performed by collaborators and others are not identified.

During emergencies, the plan and procedures for prompt response to occurrences is followed making it possible to avoid or mitigate the circumstances focusing mainly on human life preservation, as well as on the safety of collaborators and of surrounding neighborhoods, and environment protection.



## Research and Development

Petrocoque believes that Research & Development is essential for the development of its activities, mainly those related to operational efficiency and consequently society development.

Therefore, Petrocoque is continuously investing in the improvement and technological update of its processes to maintain the level of quality and meet increasing market demand.

In addition, the Company constantly encourages and incites areas and their employees to carry on initiatives that improve quality in the calcined coke that is produced, so as to guarantee our competitive edge.

In 2016 the Continuous Improvement and Innovation Program was developed to promote the advancement of a culture of innovation and continuous improvement in Petrocoque encouraging employees to generate ideas, and creating opportunities for their participation while introducing new ways and procedures to better perform their activities, to overcome daily routine barriers.

This gives Petrocoque's employees opportunities to show their skills leveraging Petrocoque's competitive edge and recognizes all those with good ideas that add value to the Company.







**Environmental  
Performance**



## Environmental Policy

Petrocoque is committed with the reduction of impacts by its operations over the environment and society. To achieve this, it focus on:

- Adjustment of productive processes to increase energy efficiency;
- Reduction of leaks and monitoring of waste emissions and of greenhouse gas effects;
- Natural resources use management;
- Environmentally friendly generation and disposal of waste from activities, processes, and services; and
- Ecosystems protection.

The Company deploys an efficient model of monitoring and control of prospective sources for air, water, and soil pollution through the implementation of the best technology currently available in our calcining plants, so as to maintain waste emissions (after treatment and control) below the legal limits and according to the technical standards demanded by Companhia de Tecnologia de Saneamento Ambiental (CETESB), which is linked to the Secretaria do Meio Ambiente of the region.

This situation of privileged environment control demanded a great economic effort, of course, and the maintenance of a team of professionals of the highest ethical and technical standards.

The Environmental Policy is included in the Company's Action Policy ensuring its commitment with continuous improvement and with pollution prevention, abiding by the legislation, applicable environmental standards, and other requisites subscribed by the organization and related to environmental aspects.



Photo: Petrocoque Archives

## Inputs

Based on strategic actions aimed at operational efficiency, which encompasses increased plant reliability, production optimization and increased energy efficiency, we present below the amounts of inputs consumed in the period, in compliance with Environmental Body requirements.

Inputs	2016	2015
Fuel oil – shale (m <sup>3</sup> )	1,163	1,258
Mineral oil (m <sup>3</sup> )	1,546	1,837
Oxygen - 100% O <sub>2</sub> (m <sup>3</sup> )	1,646,127	3,402,690

Energy	2016	2015
Power consumption (kw.h)	28,356,572	22,286,549
Power consumption (kJ)	102,083,659,200	80,231,576,400

Petrocoque consumes in its productive process and in other areas of the industrial unit around 813,735m<sup>3</sup> of water, 2% coming from municipal water supply or from other water supply system, and 98% from surface water collected from the Perequê river.

## Greenhouse Gas Effect

The sources of emissions in Cubatão Plant were listed in 2015 and included in the list of emissions in scopes “1”(direct emissions) and “2” (indirect emissions due to the use of electricity) according to the requirements of the Environmental Agency as displayed below:

Company's Total Emissions – tCO <sub>2</sub> e		
Type	2015	2014
Escope 1	399,072.67	408,053.95
Escope 2	2,762.72	2,945.48
Total	401,835.39	410,999.44

Petroleum coke originated from stationary combustion is the most significant source of emission in Scope 1 with 99.89% in total share. Therefore, changes in emissions in this scope reflect the variation in consumption for this source of emission.

Emissions in Scope 1 showed a 2.20% decrease from 2014 to 2015. This decrease is a direct result of consumption (burning) decrease of nearly 2.24% of petroleum coke

Emissions in Scope 2 are connected to the consumption of electric power imported from the distribution grid. Emissions in Scope 2 decreased 6.20% from 2014 to 2015.



## Atmospheric Emissions

Annually, samples from chimneys are collected under the supervision of the Environmental Agency to confirm that the requirements concerning technical standards included in the Operations License are met, and they include the following standards for the control of waste emissions discarded per plant into the atmosphere:

- Particulate Material (PM): concentration 71.25 mg/Nm<sup>3</sup> (dry basis), emission rate 9.025 – 9.50 Kg/h;
- Sulphur Oxide (SOX): emission rate 123.5 – 133 Kg/h

Sulphur dioxide maximum rate emission for all Units is 400 Kg/h.

The results of samplings from the main monitored sources are listed on the table below, showing compliance to the process of environmental control in Petroleum Coke Calcination:

Main Monitored Sources	Mean concentration (mg/Nm <sup>3</sup> )		Emission rate (kg/h)		Total Emission Rate (t/year)	
	2016	2015	2016	2015	2016	2015
Particulate Material	29.55	32.25	6.97	8.60	56.39	64.47
Nox	28.45	13.18	7.08	3.39	56.19	25.50
SOx	680.27	800.96	166.30	210.87	1309.09	1583.81
SO <sub>2</sub>	661.81	794.44	163.02	209.41	1283.24	1572.88
SO <sub>3</sub>	16.82	7.88	4.17	2.05	32.80	15.47

**No penalties were applied either as notice or actual fine during 2016 after the inspections carried out by the environmental agency checked for compliance with requirements included in the Operations License.**

## Treatment and Disposal

The Domestic Effluents Treatment Plant (ETE) runs on activated sludge process deploying modified aeration right at the anaerobic reactor fluidized bed. An initial reduction on the organic load takes place in the anaerobic reactor, and it is complemented in the aerobic reactor. To meet the Environmental Agency's requirements treated water was not re-used in 2016.

The treated effluent is returned to Perequê River and its affluent according to the standards on disposals established in Article 18, Decree 8468, and Articles 16 and 21 in Conama's Resolution 430. The Quality Control Laboratory performs monthly monitoring of treated waste water to confirm the treatment results before the water is returned to the river to avoid any environmental risk. There is no re-use of waste water.

Industrial effluents and rain water collected in the industrial area are sent for treatment by gravity to the fines splitter box found far West in the plant. Industrial effluents from the Cogeneration process are launched into the Cogeneration Pond.

### Industrial and Domestic Effluents (Splitter Box and Cogeneration Pond) – 2016

Total disposal of effluents separated by quality and destination

Local	Destination	Flow 2015	Flow 2016
ETE – Domestic Effluents Treatment Plant	Perequê River	32.8m <sup>3</sup> /daily	27.0 m <sup>3</sup> /daily
Industrial Effluents Treatment Plant (Fines Splitter Box)	Perequê River Tributary	499.8 m <sup>3</sup> /daily	290 m <sup>3</sup> /daily
Effluents from the Cogeneration Pond	Perequê River Tributary	-	153 m <sup>3</sup> /daily

## Control and Disposal

Procedures to identify aspects/waste generated from activities, products, or services that can be controlled by Petrocoque are established, implemented, and maintained. After they are identified, those that might cause any significant impact over the environment are separated, receive treatment, and are properly disposed according to the right environmental procedures determined by the Environmental Agency. The results of environmentally adequate disposal of waste generated during the several activities and in compliance with the Environmental Agency's requirements are shown in the table below:

DESCRIPTION / DESTINATION		Category	Quantity 2016	2015
RE-USE	Industrial towels containing oil, grease, paint and solvent used to clean parts.	I	19,700	16,459
	TOTAL (Units)		19,700	16,459
COPROCESSING	Thermal isolation, from the replacement of isolating coating material.	I	16.34	25.59
	Bag filter from replacement of material of industrial filters system	I	0.60	4.91
	Mix of solids (many contaminated with oil, grease, paint, solvents and coke fines, generated in the maintenance shop and general cleaning of the whole industrial site.	I	38.60	37.74
	Oil sludge, from the contention and leakage box.	I	0	0
	Laboratory fluid, from scraps of analyses carried out in company's laboratory.	I	0.59	0.45
	TOTAL (Tons)		56.13	68.69
RECYCLING	Paper, cardboard, plastic.		7.42	13.58
	Electronic garbage from maintenance service and use by employees.	IA	0.32	0
	Batteries	I	0.24	0
	Fluorescent, mixed, mercury, sodium and broken light bulbs, from the replacement of equipment and burned and/or broken light bulbs from offices and industrial area.	I	0.17	0.08
	TOTAL (Tons)		8.15	13.66
LANDFILL	Earth contaminated with coke fines, concrete stones and asphaltic cement, coming from civil works.	IIA	216.05	2,466.52
	Cement, brick and refractory concrete mixed with earth and coke fines from the maintenance of kilns.	IIA	112.41	483.83
	Tiles with asbestos from the maintenance of sheds coverage.	IIA	4.53	0
	TOTAL (Tons)		332.99	2,950.35
TREATMENT	Biological sludge, from the activated sludge system and sanitary sewer.	IIA	17.81	13.08
	Grease trap effluents from the restaurant area.	IIA	12.39	8.27
	TOTAL (Tons)		30.20	21.34
RE-REFINING	Machines and equipment used lubricating oil.	I	2.47	4.35
	TOTAL (Tons)		2.47	4.35

## Non-Conforming Products Control

The control of non-conforming products goes through a documented process defining needed activities to ensure that such products are controlled to prevent accidental use or delivery. Non-conforming products are discarded according to specific procedures and records are kept about the nature of the non-conformity, about actions taken and, if applicable, about clients' concessions. Although not being applicable to the type of Petrocoque's products, if any non-conformity is detected after its delivery or even during its use by the client, documented and recorded actions are taken to warn clients, considering non-conformity actual and potential effects.

In case of corrective action after the pinpointing of the requirements for the identification of the non-conformity (including clients' complaints) and the determination of non-conformity causes, the Company evaluates the need for actions to ensure that non-conformities will not be repeated, the definition and implementation of needed corrective actions are made, records of actions results kept, review and evaluation of the effectiveness of corrective actions taken, to prevent future occurrences.

The preventive action, taken to eliminate potential non-conformity causes and to prevent them from occurring, follows a documented procedure, which defines requirements to identify potential causes. After determination and guarantee of the implementation of necessary preventive measures, results of actions taken and review of preventive actions taken are recorded. Preventive actions are always adequate to the impact of potential problems.

Petrocoque establishes, implements, and maintains such documented procedures to deal with actual and potential non-conformities and for the implementation of corrective and preventive actions, defining requirements to:

- Identify and correct non-conformities and perform actions to mitigate any environmental impact;
- Investigate non-conformities, determining their real causes and implementing actions to prevent their repetition;
- Evaluate the need for actions to prevent non-conformities and implement adequate actions to prevent their occurrence;
- Record implemented corrective and preventive actions results;
- Analyze the effectiveness of implemented corrective and preventive actions.

Any corrective or preventive action taken to eliminate causes of existing or potential non-conformities is adequate to problems magnitude and is proportional to verified environmental impacts.



## Indicators

	Company average	
ENVIRONMENT	2016	2015
Generation of harmless waste (kg/t of product)	0.03	1.89
Generation of hazardous waste ((kg/t of product)	0.20	0.06
Generation of total waste (kg/t of product)	0.23	1.94
Generation of hazardous waste (recycled, reused and/or reprocessed, in %)	85.96	94.98
Generation of hazardous waste (treated for final disposal – incineration, landfill in %)	0.00	0.00
Generation of harmless waste (recycled, reused and/or reprocessed, in %)	14.04	0.72
Generation of harmless waste (treated for final disposal – incineration, landfill in %)	91.68	99.28
Captured water (m <sup>3</sup> /t of product)	1.69	0.30
Water consumed in processes and products (m <sup>3</sup> /t of product)	1.68	0.28
Electric power consumption (internally generated (kWh/t of product)	79.75	0.00
Electric power consumption (purchased) (kWh/t of product)	20.68	13.91
Electric power consumption (total) (kWh/t of product)	60.02	13.91
Electric power generated by the company (sold energy in %)	53.21	0.00
Electric power generated by the company (internally consumed energy in %)	75.27	0.00
Consumption of natural gas as fuel (kg/t product)	0.00	0.00
Consumption of fuel oil and coal (kg/t product)	2.46	0.77
Consumption of renewable fuels (kg/t product)	0.00	0.00
Intensity of equivalent carbon dioxide emissions (CO <sup>2</sup> processes (kg CO <sup>2</sup> e/t product)	104.95	122.16
Intensity of equivalent carbon dioxide emissions (CO <sup>2</sup> combustion (kg CO <sup>2</sup> e/t product)	2.05	2.45
Intensity of equivalent carbon dioxide emissions (CO <sup>2</sup> total) (kg CO <sup>2</sup> e/t of product)	107.00	124.61



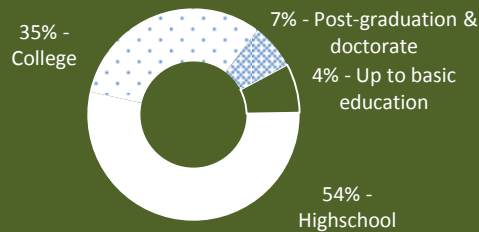
**Social Performance**

## Cooperators Profile

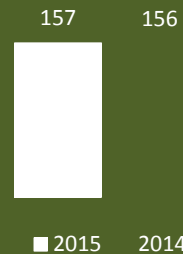
We try to attract, develop, train and retain people, investing in talents and enhancing technical and managerial competences to meet business dynamics, aiming at sustaining competitive excellence. We invest on personal and professional development, encouraging continuous improvement and always striving for our employees to have autonomy to develop their activities with quality and safety. **Petrocoque is recognized for its low turnover, below 1% and for its compensation policy and set of attractive benefits.** In total, 19 people were admitted and 16 were dismissed. With regard to return to work and retention after maternity/paternity leave, all licensed employees have returned to work.

### Headcount in numbers in 2016

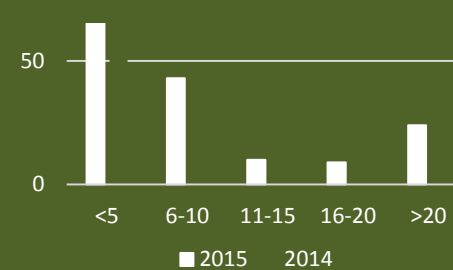
#### Division by Education Level



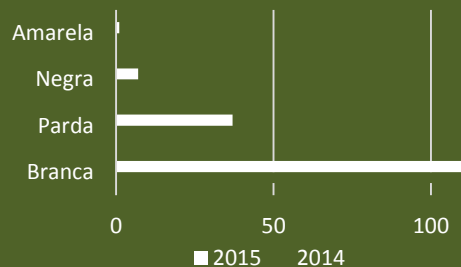
#### Headcount



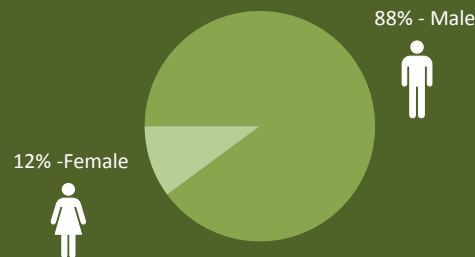
#### Division by Time with the Company



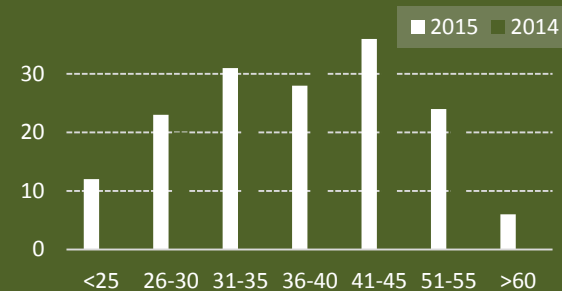
#### Division by Race/Color



#### Division by Gender



#### Division by Age



## People Management

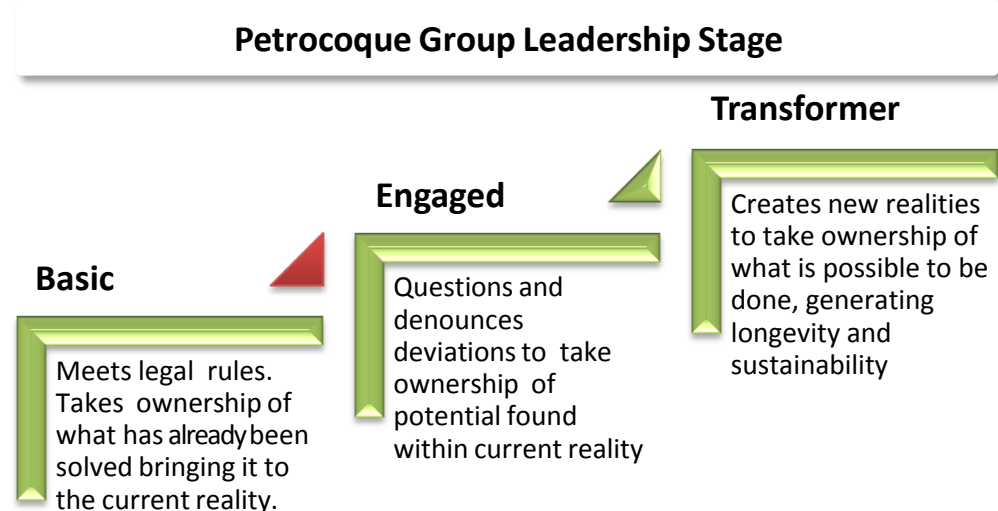
There are no salary differences with regard to gender. Existing salary differences are related just to company's jobs and salaries structure, which defines differences by seniority, qualification, skills and accumulated experience. Professionals' gender is irrelevant to salary differences.

The Company's internal procedures do not link salaries to the minimum wage; our reference is the base salary for the category of chemists and petro-chemists in the region where the Company operates. Reference base salary for 2016, established by union agreement, is R\$ 1,792.51, which is also reference for the readjustment of benefits linked to it as provided by the Collective Bargaining Labor Convention.

Priority is given to human resources qualification, acknowledging the challenges found in the Company's Business Plan, the goal of which is the engagement of employees and performance evaluation based on individual goals. Therefore, this year we have invested R\$ 134 thousand in professional development, resulting in 4.807 training hours, distributed among external, internal, graduation and language courses for the qualification of our employees.

In addition, Petrocoque keeps focus on the development of our leaders through training courses, bulletins, campaigns and workshops aimed at management and leadership, to make them leaders able to create new realities to take ownership of what is possible, generating Company's longevity and sustainability.

In 2016 the Company implemented Petrocoque model of evaluation by behavioral competencies, preliminarily adopted and to become official in 2017, aiming at aligning competencies needed for the overcoming of organization's strategic challenges.



▲ Current Petrocoque leadership stage transition between "basic" and "engaged".

Source: Mapping of Leadership Evolution Stages - UN

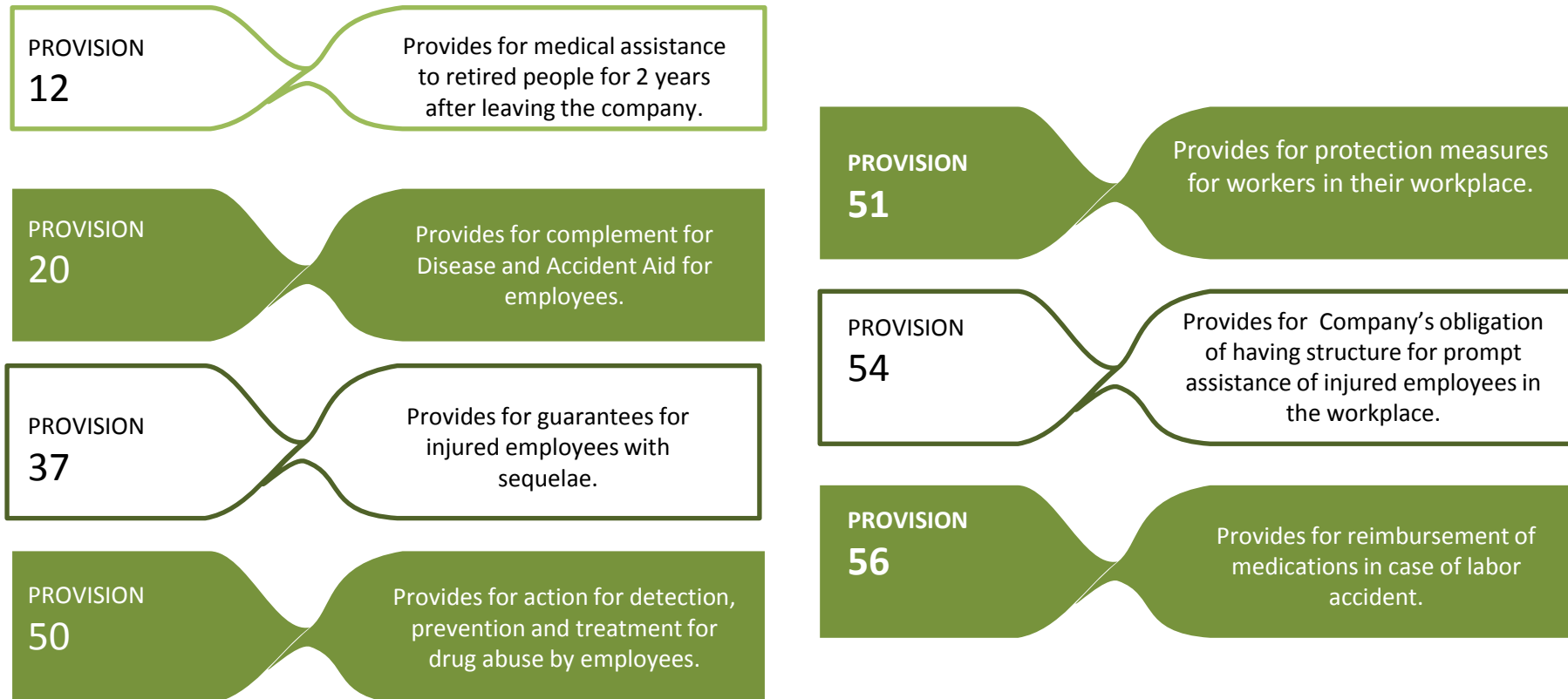


## Corporate Human Resources Practices

In our Action Policy, to assure company's commitment toward its professional team and to add all possible efforts for their development, we have established human capital appreciation as a driver for our sustainable development.

In our relationship with employees, we comply with current applicable legislation and to collective labor conventions. We count on corporate human resources, safety, environmental and health practices, in addition to social responsibility, including subjects such as "labor principles" and "workforce commitment".

From our collective labor convention, we highlight provisions covering health and safety, as shown below:



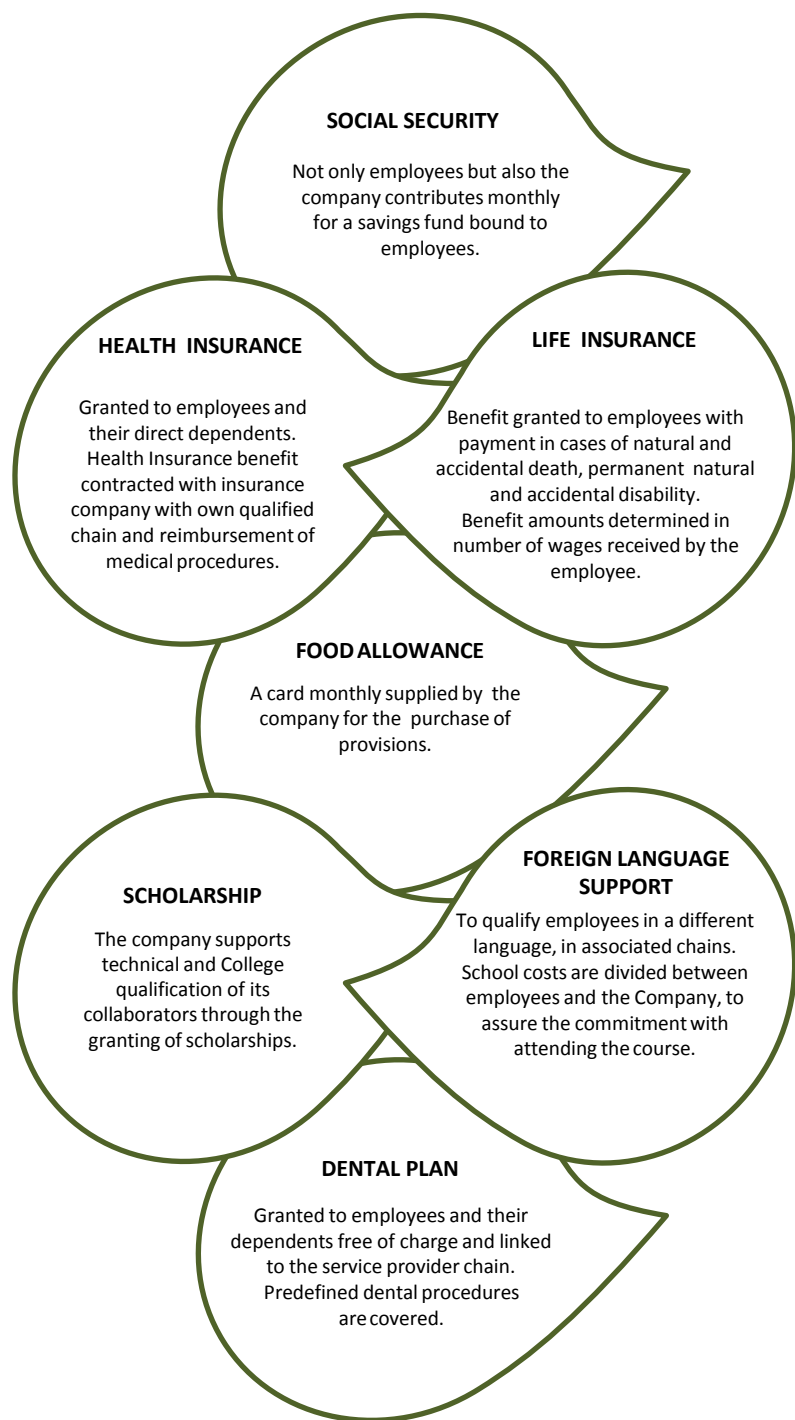
## Social Benefits

Social benefits are included in Petrocoque's employees remuneration plans and the objective is to attract and retain talents; human capital is indispensable to overcome challenges and maintain competitive edge.

Petrocoque provides a Private Social Security plan with closed portfolio, managed by private financial institution. According to this model, both employees and the Company monthly contribute to a savings fund linked to the employee.

Contributions start with 1% of employee's wage and may be readjusted from 0.5% to a maximum ceiling of 10% of employee's wage. Company's contribution is equal to that of the employee, that is, for every amount paid by the employee, the company pays equal amount. In this social security model there is no possibility of financial imbalances, once the benefit is constituted of individual savings reserve.

Employees are entitled to the benefit in three basic conditions: by age, permanent disability and collaborator's death (in this latter case, the benefit goes to the direct beneficiary). Eligibility by age is integral as from 60 years of age. It is possible to opt for proportionality as from 55 years of age. In case of disability, the access to the benefit is characterized as from employee's eligibility to such condition by the INSS.



## Strategic Knowledge Management

Understanding knowledge as the set of concepts, practices and procedures paramount for business perpetuation and for continuous company growth in all its activities, **Petrocoque Group, since 2014, is working on the Strategic Knowledge Management project of the Company. This project aims at identifying all critical organizational knowledge and at developing actions to reinforce its perpetuation and spread to executing agents, even in professional succession.**

Policy and Pillars orienting the development of the Knowledge and Innovation Program:

- Excellence in Knowledge Management
- Professional succession
- Talents capturing
- Talents development
- Talents retention

In addition, in 2016, job plan Career Y was implemented as a possibility to qualify professionals in the technical area directly involved in essential activities for the Company. It is a sound tool to help retain technical talents in the Organization according to the needs of qualification of the Company's professionals and to recognize the existence and the effective application of operational and behavioral competencies by team members in response to the demands in each area.

In addition an Assessment Program was created to identify future leaders and encourage current leaders to develop their skills to match the Company's needed behavioral competencies.



## Labor Safety and Health

Petrocoque makes every effort in the development of programs for Occupational Health Medical Control, Environmental Risks Prevention and Health Promotion to ensure more adequate health, safety, ergonomics and labor hygiene conditions. Based on the diagnoses of such programs it is possible to eliminate or control occupational risks, to adopt labor organization processes and healthier lifestyles, fight sedentary life and encourage a balanced diet to employees.

The following programs were developed in 2016:

- Awareness and performance of periodic exams;
- Diabetes control;
- Visits to Dietician and control according to periodic/upon admission;
- Established routine of breakfast and lunch follow-up with Dietician to evaluate and explain the IDEAL DISH;
- Internal week of labor accidents prevention: Open the doors of safety, you are the key;
- Daily Safety Dialogs;
- Process Safety – Implementation of the Hazards and Operability (HAZOP) Study aiming at improving awareness about Hazards and Risks in services, and processes;
- Implementation of the Hazards and Operability (HAZOP) Study aiming at identifying hazards and operability problems of a process installation;
- Quality, Health, Safety and Environment performance improvement, adding to the Integrated Management System (IMS) applicable requirements of the Abiquim Responsible Care Program.

Measures for the safety area have been established to enhance accidents communication and recording, in addition to encouraging the corporate culture aimed at risks prevention and elimination. The Company prioritizes the importance that all, including those performing it, should previously evaluate risks involved in each activity as condition to carry it out. Commitment and proactive performance of areas and contractors with regard to accidents and incidents prevention are evaluated monthly.



## Labor Safety and Health

Major indicators, projects and actions carried out in 2016 are listed below:

### Indicators

- Proactivity Index (IPRO)
- Rate of frequency of accidentes with leave (TFCA)
- Severity Rate
- Occupational Health Indicator (ISOP)

### Completed Projects

- Carry out Safety Campaigns with participation of external entities involving SEH subjects
- Industrial/Occupational Safety – Facilities Improvement (Safety)
- Fire Brigade – Adjustment of interventions plan
- Occupational Health and Quality of Life
- Process Safety Management
- Pre-task control of employees and collaborators for work at height/confined
- Evaluation of body composition by bioelectrical impedance analysis

### Completed Actions

#### Healthy Diet Program

- Maintenance of campaign to encourage collaborators, including their families, to have a healthier diet, with development and publication of periodic information addressing health, diseases, diets and recipes themes.

#### Quality of Life Program

- Health evaluation of all Petrocoque Group collaborators, with periodic exams and analysis, part of the Occupational Health Medical Control Program (PCMSO). In addition, awareness warnings are published and lectures are given.
- Implementation of the following programs: Diabetes Control and Prevention, BMI control, fighting against drug use (legal and illegal), Orientation and referral to specialized service of each and every alteration in liver function Periodic analysis of Petrocoque's catering menu, periodic health campaigns, presentations with the Narcotic Anonymous Group, presentations with urologists about prostate cancer.
- Management of medical assistance expenditures.
- Development of a First-Aid Manual

## SEH Indicators

### Safety for the Worker

The actions developed to reduce the rates from accidents with leave compared to those in 2015 show better results with a TFCA reduction of 67%, i.e. a 75% reduction in the number of accidents.

Among the actions developed to cope with the Company Strategic Objectives of “Meeting the standards of excellence in Health, Safety, Quality, and Environment”, it is worth mentioning:

- The implementation of the Management of Changes process that introduces a systematic sequence for the analysis of possible risks associated to changes to be implemented and that might need Management of Changes, so that they do not cause changes in the level of risks or impacts in Quality, Environment, Safety, and Occupational Health and improve the modified managed systems.
- Improvements in the Preliminary Analysis of Hazards and Risks procedures, as well as those for Survey on Environmental Aspects and Impacts, and access to their records, so as to promote progress in OHS performance.
- Educational campaigns such as the “Cost of Silence” to bring awareness to employees and collaborators related to the safe performance of activities to avoid/minimize risks of accidents. The topics presented on the manuals introduced the greatest drifts recorded in Behavioral Observations.
- Adjustment/revision of operational procedures and work instructions including the identification and respective Preliminary Analysis of Hazards and Risks (PAHs) applicable to each and every document.
- Implementation of Qualis document control system for recording readings/training of all those involved in activities, processes, and services of documents used in Integrated Management system including those that go through any changes in their status of revision.



## SEH Indicators

Petrocoque maintains Safety, Environment and Health indicators consistent with its commitment with continuously improving the efficacy of the Integrated Management System. Indicators on Employees Safety, Processes Safety, Transportation, Social, Environment and Health Safety receive constant follow-up.

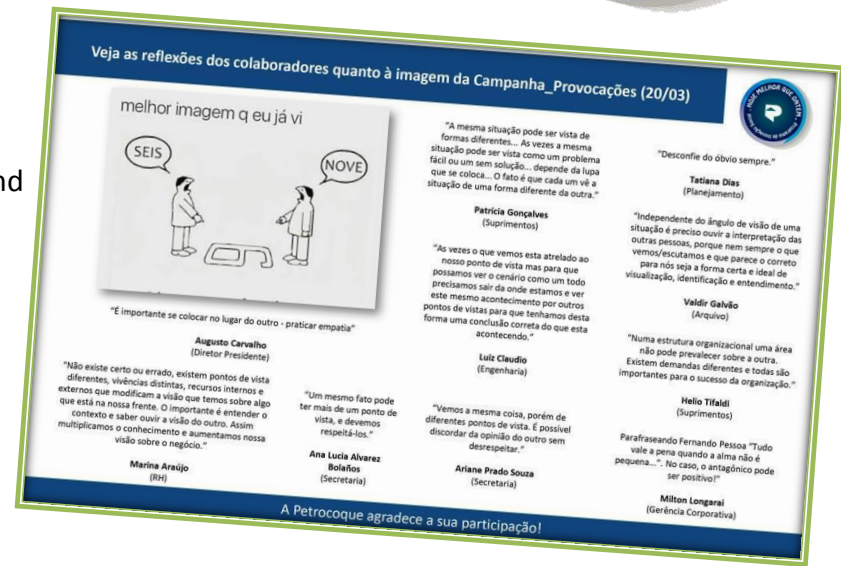
	Company's average	
EMPLOYEES SAFETY	2016	2015
Frequency of accidents with leave (own personnel)	3.08	8.92
Frequency of accidents with leave (outsourced personnel)	0.00	0.55
Frequency of accidents with leave (total)	0.81	1.85
Severity of accidents (total) (lost days and charged to risk exposure hours)	37.46	296.43
PROCESS SAFETY		
Process safety events (with fire or explosion)	0.00	0.00
Process safety events (causing injuries with leave or death)	0.00	0.00
Process safety events (leakage above 2300 kgs)	0.00	0.00
TRANSPORT SAFETY		
Transport accidents by 10,000 trips (severe)	0.00	0.00
Transport accidents by 10,000 trips (without leakage)	0.00	0.00
Transport accidents by 10,000 trips (with minor leakages)	0.47	0.45
Transport accidents by 10,000 trips (total)	0.47	0.45
Quantity transported by trip (t/trip)	29.73	29.31
SOCIAL		
Number of complaints of neighbor community	0.00	0.00



## Communication and Transparency

Petrocoque prioritizes human capital developing programs of continuous improvement for collaborators with focus on truth, ensuring transparency to management practices involving social, economic, and environmental aspects with regards to its employees. To fulfill its Action Policy and to overcome strategic challenges, the Company developed the following activities in 2016:

- Social Innovation Program | Better Today Than Yesterday** – Petrocoque believes that the possibility of turning each day into an opportunity for growth and continuous improvement is essential to the culture of a Company that prioritizes innovation and sustainability.
- Weekly Newsletter** – a bulletin where each and every improvement or innovation is welcome, and that is used to communicate improvement in different areas and encourage the consolidation of a culture focused on the possibility of being better each time, day after day. In 2016 more than 130 improvement actions were communicated to the whole task force through these bulletins sent via email.
- Incentives providing a Good Start for the Week** – Weekly messages on different topics sent by email to all employees to encourage reflection and sharing of opinions, fostering continuous improvement, empowerment, and promotion of citizenship.
- Special Breakfast** – Firmly believing that Social Innovation leads to social transformation, and to promote a better future for next generations, Petrocoque brought in 2016 to the table of discussions among its employees the subject “Ethics, Citizenship, and Loss of Sensitivity”.



## Communication and Transparency

- **Annual Meeting for Strategic Planning and Management** – Developed to disclose the Company's strategy through the presentation of its strategic objectives and action plans established for the period to all collaborators in Petrocoque Group.
- **Breakfast with the Board** – All collaborators are invited to join the board for breakfast once every quarter, when they have the opportunity to ask questions, get acquainted with the Company's KPI's and with other institutional topics.
- **In-house Communication Survey** – In 2016 a survey was carried out including all collaborators that belong to the Group and the results showed that employees are satisfied with Petrocoque's performance methods.
- **Strategic Planning Campaign** – Every fortnight Petrocoque discloses to its employees relevant information that can help in the understanding and application of the Strategic Planning and management routine best practices.
- **Monthly Results Board** – Every month the Company discloses KPI's results to all employees through e-mails and Bulletin Boards.
- **Ethics, Compliance, and Anti-corruption Program** – After establishing its Compliance Committee in 2015, the company became involved in the implementation of the Ethics, Compliance, and Anti-corruption Program. During 2016, all employees were informed about the progress of this work either through news letters or during the activity Breakfasts with the Board. Also in this period, a training workshop with managers and multipliers was conducted on the importance of Compliance, In-house Controls, and Corruption fighting as a generation of value to Petrocoque.
- **Compliance Newsletter** – The Company publishes a monthly Newsletter with the presentation of articles that emphasize the importance of compliance and that provides transparency to the Ethics, Compliance, and Anti-corruption Program that is being implemented by the Compliance Committee.
- **Channel of Denunciation** - The implementation of a Channel of Denunciation was approved in 2016 and implemented in 2017 first semester as an action identified as necessary for compliance risk mitigation.

## Communication and Transparency

- **Petrocoque Ombudsman** - Since 2013 Petrocoque has an Ombudsman, a legitimate last resort channel that is neutral and impartial, and that receives complaints and reports about recurring situations that have not been solved satisfactorily through the normal proper channels within the organization, guaranteeing freedom of expression as well as strengthening Petrocoque's image and culture.
- **Market Bulletin** - Petrocoque started with the distribution of a Market Bulletin to provide information about the industry in which the task force is included, and to share with the employees relevant information about each segment where the Company operates: Aluminum, Green Coke, Calcined Coke, and Similar Products and Power Systems (both Thermal and Electrical). This Bulletin is issued quarterly and distributed through all channels of communication.
- **Cogeneration Project** - Communication pieces created to raise awareness about the importance to Petrocoque of the Cogeneration Project, and to keep all employees informed about the progress of the endeavour.



## Supplies Management

The supplies and service providers management procedures establish criteria for the approval, selection and development, ensuring co- responsibility, the meeting of applicable legal requirements, of best practices and of required quality standards, especially respecting environment and issues related to collaborators' safety and health, so that they are adequately dealt with, according to the most modern business management standards, in addition to positively externalizing the social effects that job and income generation promotes in regions close to the Company.

An effective hiring process is practiced based on our corporate registries, which make available information about current and future suppliers. In-house procedures meet the compliance standards found in our Code of Ethics and Conduct maintaining transparency and the integrity of relationships towards our suppliers, so that in turn they act accordingly and in compliance with the principles herein. In addition, it evaluates the possibilities of meeting the specifications and needs of the Company, suppliers actions and performance are analyzed, including forced and demeaning work rejection and prohibition of the use of slave and infant labor.

Legal and financial analysis of all suppliers are performed at negotiation time, during services rendering and at the end of the agreement, aiming at mitigating possible risks, supervising procedures with regards to the fulfillment of tax and labor obligations by the outsourced companies.





## Management Process and Client Satisfaction

The Company evaluates, annually, clients' satisfaction index, following the methodology established by the operational procedure, aiming at measuring their perception about Petrocoque, its products and processes, so as to identify improvement opportunities to improve the level of clients' satisfaction.

Clients' satisfaction percentage index evaluation considers the following criteria: 90% to 100% - Excellent; 80% to 90% - Very Good; 65% to 79% - Good; and up to 64% - Unacceptable.

Clients' satisfaction monitoring results are also presented to the Board of Directors during Integrated Management System Review, carried out annually.



## Social Responsibility

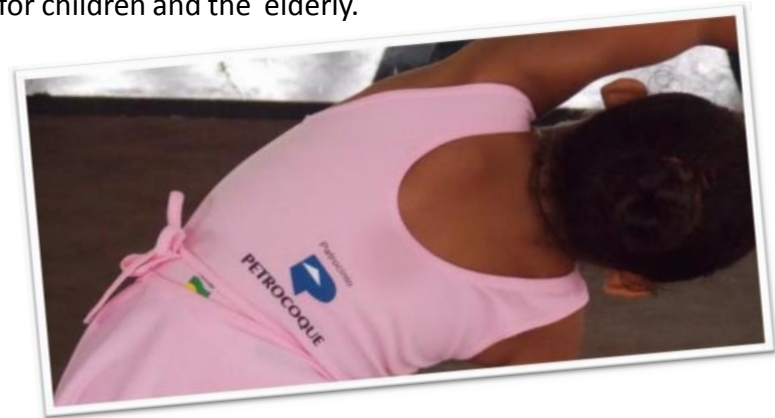
One of Petrocoque's commitments with society is to maintain ethic and transparent relationships, critical to the promotion of development in the regions where it operates. The Company evaluates the impacts of operations in communities in the beginning of the activities, creating mitigating and compensating actions and trying to establish a relationship with respect and transparency minimizing negative impacts in local development and always meeting local legislation in effect. The objective is to generate social, environmental and economic benefits, thus contributing to sustainable development.

Petrocoque relationship with the surrounding community is carried into effect by the Centro das Indústrias do Estado de São Paulo (CIESP) in Cubatão. There is a Community Committee that analyzes the needs and defines actions to be established between local entities and the plants installed in the industrial park.

Petrocoque aligned with its guidelines for investments in Social Projects and focus on promoting a better future for next generations, participates and invests in Social Projects taking into consideration the use of tax benefits annually to promote and foster education, citizenship, sport activities, life quality, environment and culture applied mainly in the city of Cubatão but that can include other coastal cities with the participation of the general public and also specific applications for children and the elderly.

In 2016, Petrocoque participated in the implementation of the Social Project "Por um Mundo Mais Verde" (for a greener world) broken down into two branches – Workshops of Classic Ballet and Jazz Dance, and Workshops on Recycling sponsored by Petrocoque according to law Rouanet providing learning opportunity and culture for more than 60 children.

The Company invested more than R\$600 thousand in 2016 through tax benefits for the implementation of Social Projects that will be performed throughout 2017 bringing benefits to the city of Cubatão.



**Project "Ensinar"**- Petrocoque relying in its human capital is ready to provide presentations and qualify dwellers that have little or no resource available living in less privileged regions in the municipality of Cubatão with courses about Health and Well-Being, Domestic Safety, Fire Fighting and First-Aid, Men and their Role in Society, Workshop on Excel Basics, Workshop on Writing and Composition for teenagers, Workshop to teach how to prepare a resumè, and IT for Beginners.



# Operational Performance



## Green Petroleum Coke Calcining and Steam

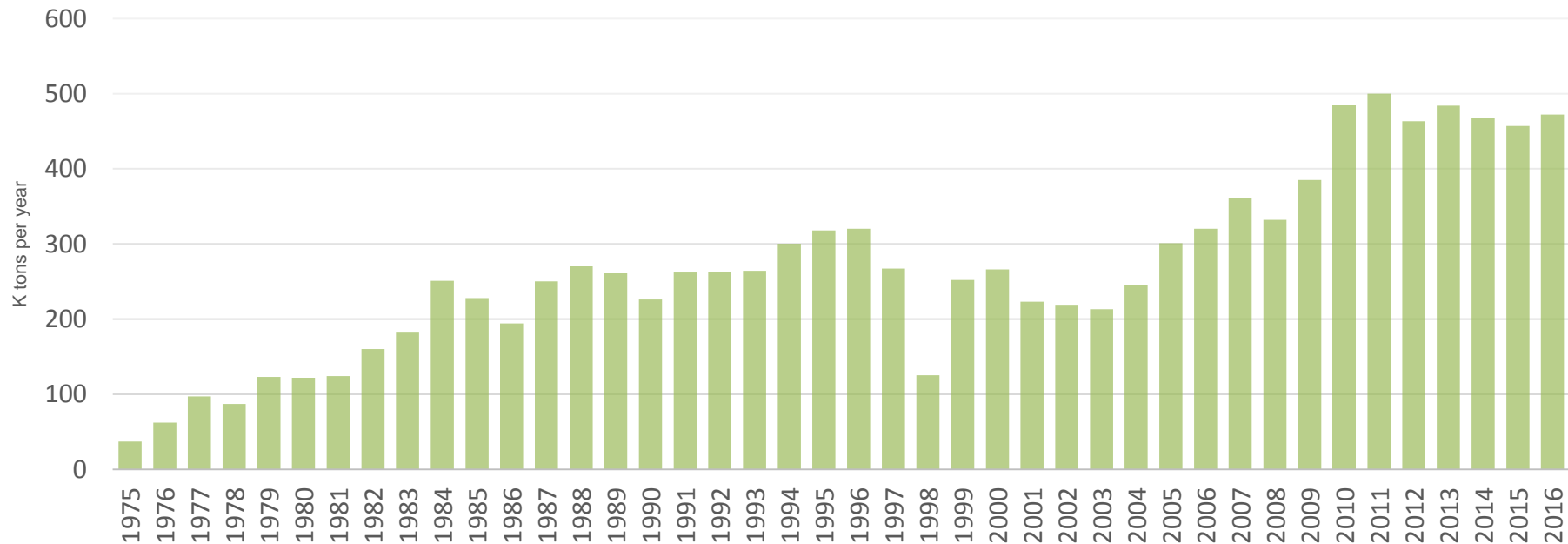
Petrocoque produced 472 tons of calcined petroleum coke (CPC), 1,283 thousand tons of steam, and 38 Mwh of electric power in 2016.

CPC sales increased compared to 2015 even in face of all the challenges throughout 2016, such as price decrease because of the negative influence of China in the market, availability of raw material, and devaluation of the Dollar compared to the Real. Steam sales on the other hand decreased compared to the previous year because of the start-up of the Cogeneration Plant in 2016 leading to the beginning of the generation and sales of electric power.

In ('000 tons)	2016	2015
CPC ProductionP	472	457
CPC Volume of Sales	487	449
Sales of Steam	1,100	1,125

In (MWh)	2016	2015
Electric Power Production	38	-
Sales of Electric Power	22	-

### Historic Production of CPC





## Completed Actions

Total investment in 2016 reached R\$12.4 million as a result of improvements in operational efficiency and also with the adoption of standards of excellence in Quality, Safety, Environment, and Health, and a focus on sustainability and profitability for the Company. R\$10.6 million out of the total were invested to maximize plant reliability and energy efficiency in all productive sectors that provided a use factor of 90.9% for operations and 93.6% for the whole unit during this period.

Also during this period, Petrocoque's Power Cogeneration Unit implementation Project was completed with its start-up during the month of May; a total investment of R\$100 million that increased the flexibility of its operations. The works started in 2013 and the Project had the objective of using steam in the production of electric power, increasing the effectiveness of Petrocoque's operational performance. This unit exceeded expectations when compared to similar projects. Installed capacity has an expectancy of electric power generation of approximately 18 MWh (similar to the supply for approximately 26,000 households/month).

The Cogeneration Project is also an answer to concerns about environmental issues, and it is considered ecologically correct according to the principles of sustainability recommended by the UN and by Cubatão Agenda 21.

This was a factor that was extremely relevant for the accomplishment of the Environmental Merit Award of 2013 granted annually by the Municipality of Cubatão to companies that excel in the performance of production programs that protect quality of life and the environment.

It is also important to highlight that in 2016 the project was included with other participants in the group to represent Brazil in the United Nations Global Compact Leaders Summit in the category "Objective with Sustainable Development 7 – Renewable Energy – to provide access to cheap, reliable, sustainable, and renewable energy for all".



# Economic Performance



## Economic-Financial Results

2016 appears in Brazil's history as a year of greatest recession but for Petrocoque it was a year when many challenges were surpassed.

Calcined petroleum coke market was in crisis for most of the period because of the aluminum global market scenario, nevertheless Petrocoque's main clients maintained their volume of purchase as forecasted for the year.

	2016*	2015
Revenue (R\$ thousand)	620,798	645,006
Operational costs (R\$ thousand)	445,050	450,230
Employees' salaries and benefits (R\$ thousand)	22,765	22,129
Dividends (R\$ thousand)	39,838	30,461

\*Values still not audited, subject to change.

In 2016, Group's businesses have moved taxes and fees of approximately R\$ 83 million.

In spite of macroeconomic fluctuations and uncertainties this year in several regions of the world, the recognition of the quality of our credit by banks has assured costs and deadlines for payments which were favorable to the financing of our activities. This has maintained the level of liquidity needed to implement our investments plan.

Financial funding totaled R\$ 355 million, being R\$ 338 million from public and private banks, from exports incentive lines, and R\$ 17 million from investments financing with the National Economic and Social Development Bank (BNDES).

Last but not least, as result of our efforts, we have obtained EVA (economic value added) of R\$1.4 million.



### **Please cooperate with our report**

Your opinion about our report is paramount  
for our commitment with Sustainability.

Comments shall be reviewed by our management  
and shall, in many cases, be incorporated to our future reports.

Please send comments, questions, suggestions or criticisms to  
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