

SUSTAINABILITY REPORT



CABEOLICA, YOUR CLEAN ENERGY

Cabeolica is the main producer of renewable energy within the Cabo Verdean energy matrix, producing quality and sustainably sound energy. The Company's commitment towards sustainable development is also reflected in the importance given to its environmental and social activities.

With a total country-wide average electricity penetration rate of 22%, Cabeolica clearly demonstrates the important role it has played in the sustainable energy targets reached by Cabo Verde.

COMMITMENT TO SUSTAINABILITY

At Cabeolica, the first major wind power project developed in the ECOWAS region, we believe in scrupulous and strict compliance with environmental and social obligations. In 2009 the Company assumed its commitment to produce clean energy in Cabo Verde and contribute to the sustainable development of the country. The Company has since made all endeavours to maximize its contribution by seeking to augment the positive impacts from its activities on the environment and surrounding communities, whilst seeking to minimize or eliminate the few potential negative impacts.

Cabeolica's wind farms have accounted for an average of 22% of Cabo Verde's electricity demands, making Cabo Verde one of the countries with the highest wind energy penetration rates in the world. The Company, and its performance since initiation of production in 2011, has played a major role in the implementation of the Cabo Verdean national policy of reducing the country's dependence on imported fossil fuels and contributed significantly to the objectives outlined within the national environmental policy, as the country's single highest contributor in the reduction of greenhouse gas emissions into the environment.

The Company's implementation of biodiversity conservation measures, particularly concerning endemic and threatened local species, have produced rewarding results and significant amount of data important to the local and international scientific communities.

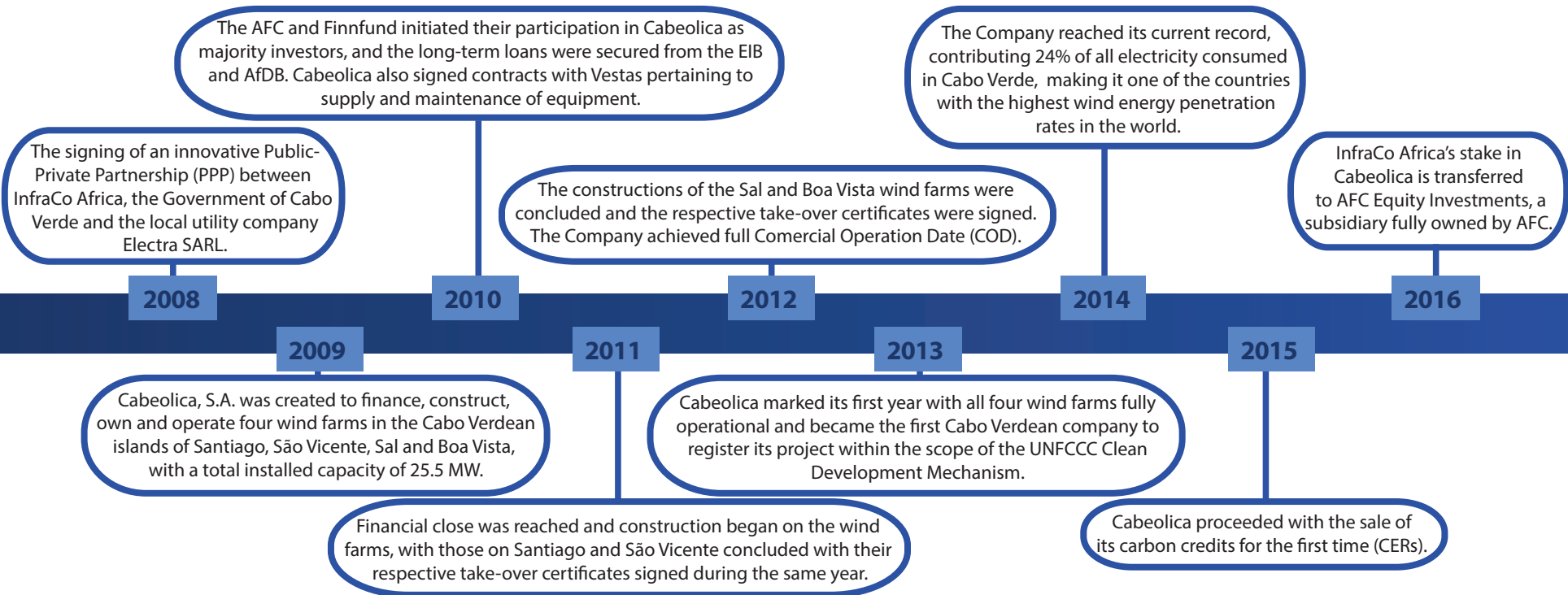
As the Chief Executive Officer of Cabeolica, I am determined to provide the leadership and resources to make sure that environmental and social sustainability continues to be a vital and integral part of our activities considering that the ambitions of the Company go hand in hand with major environmental and social causes.

Antão Manuel Fortes
Chief Executive Officer Cabeolica

- ✓ 4 wind farms in operation on four islands;
- ✓ 375,000 MWh of energy supplied to the electricity grid on the four islands;
- ✓ 15 million litres of fuel which the country avoided importing yearly;
- ✓ 260,000 tons of CO2 avoided since the entry into operation of the four wind farms;
- ✓ 24% was the record penetration rate achieved (in 2014);
- ✓ 4 prestigious awards and distinctions attributed to the Company;
- ✓ 2,132 students participated in the Company's renewable energy and energy efficiency education project (The EOLO Project);
- ✓ 5,000 CVE invested in environmental preservation;
- ✓ 0 environmental accidents registered;
- ✓ 4 bird species continue to be monitored within the Company's bird monitoring program;
- ✓ 400 hours recorded for the collection of visual data regarding the behaviour of avifauna;
- ✓ 4 comprehensive studies conducted on the endemic gecko species *Tarentola substituta*;
- ✓ 10 artificial platforms erected with the support of Cabeolica to protect the nests of the Boa Vista Osprey;
- ✓ 80 lectures on preservation of biodiversity and renewable energies, covering all schools in Boa Vista;
- ✓ 100% of the Company's employees are Cabo Verdeans.



OUR HISTORY



AN INTERNATIONALLY RECOGNIZED PROJECT

Throughout the years, Cabeólica has been recognized for its contribution towards sustainability and for promoting environmentally sound practices.

The results achieved to date have had great impact on the notoriety and recognition garnered by the Company at international and domestic levels.

Ashden, World Bank and SIDS Award

Cabeólica won the Ashden 2013 award, one of the world most prestigious awards in the green energy sector, in the category of Small Island Developing States, which was received at a ceremony in London.

Green Project Awards Cabo Verde

In 2014 Cabeólica was attributed the Green Project Award - Cabo Verde under the category of Renewable Energy and Energy Efficiency.

Best PPP of the Emergent Market

Cabeólica was considered as one of the best public-private partnerships in sub-Saharan Africa by the IFC - International Finance Corporation (member of the World Bank Group) and the IJ-Infrastructure Journal in their evaluation of the best 2012 PPPs.

Best Renewable Project in Africa Award

In 2011, Cabeólica was attributed the Best Renewable Energy Project in Africa Award during the Africa Energy Awards event held in Johannesburg.

OUR COMMITMENT

Vision

To be a company of excellence and of global reference within the renewable energy sector that creates **value** for its stakeholders and that is strongly committed to sustainability.

Sustainability promoting improvement in quality of life

Professionalism in providing our services

Ethics and integrity in doing business

Innovation of state-of-the-art technological processes

Social responsibility promoting education for a sustainable world

Passion for clean energy.



OPERATIONAL DATA

Key Factors					
	2012	2013	2014	2015	2016
Installed Capacity	25.5	25.5	25.5	25.5	25.5
Production (MWh)	61,643	75,197	80,878	77,153	75,426
Penetration Rate in Cabo Verde (%)	18	23	24	21	20
Average Win Speed (m/s)	8.3	8.6	9.1	9.0	9.1
Average Turbine Availability (%)	97.40	99.06	99.15	98.99	99.27
Sales of Electricity (mESC)	932,251	1,100,782	1,154,924	1,159,627	1,156,136
CO2 Equivalent Avoided (tons)	42,439	51,633	55,381	52,688	51,429
Training Hours	110	92	428	568	315
Non-material Work Accidents	0	0	0	0	0
Environmental Accidents	0	0	0	0	0
Gender Ratio (Female/Male)	30:70	30:70	30:70	30:70	30:70
Local Employees (%)	100	100	100	100	100

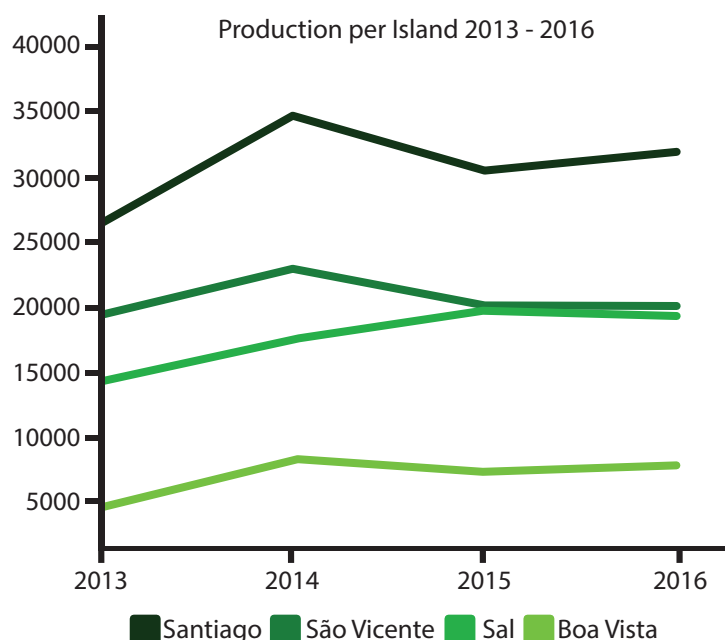
graph, with 2014 being the best year in terms of wind energy production.

The 2016 production suffered a slight reduction in comparison to the previous years due to lesser availability of wind as well as limitations imposed by the offtaker, the latter worsened by the low prices of oil products and installation of new generator sets. In 2016, Cabeolica was responsible for the production of roughly 20% of the electricity consumed in the country, maintaining Cabo Verde as one of the world leaders in wind energy penetration rates.

Cabeolica manages four farms producing electricity through wind energy and strongly contributing to the domestic policy of reducing the country's dependency on imported fossil fuels.

Throughout the years of operation, the Company has shown a clearly positive performance.

The four wind farms have had a positive evolution, to date, producing above 380 GWh distributed between Santiago – 43%; São Vicente – 28%; Sal – 21% and Boa Vista – 8%, as can be verified in the following



INVESTORS



Africa Finance Corporation (AFC), is a multilateral Pan-African development finance institution, based in Nigeria, which has central banks and commercial banks of various African countries as its main shareholders. AFC Equity Investments Limited is a subsidiary fully owned by AFC.



Finnish Fund for Industrial Cooperation (Finnfund), a development finance institution supporting industrial development, based in Finland and which has as its main shareholder the State of Finland.



Electra – Empresa de Electricidade e Água, SARL (Electra, SARL), the national electricity and water utility company, which has as its main shareholder the State of Cabo Verde.



The State of Cabo Verde.

PARTNERS



European Investment Bank (EIB), long-term lender of the project.



African Development Bank, long-term lender of the project.



VESTAS, manufacturer of wind turbines and maintenance service provider.



Electra, SARL, comercial and operational partner and the project's sole offtaker.

Santiago wind farm

The Santiago wind farm, the first of the Cabeolica wind farms to enter the operation phase and the wind farm with the highest installed capacity, was inaugurated on October 21, 2011. The farm holds 11 Vestas V-52 850 kW wind turbines, which is equivalent to 9.35 MW of installed capacity, and has produced approximately 164,000 MWh of clean electricity for the local grid system. The wind farm has received more than 600 visitors to date.



HUMANS RESOURCES DEVELOPMENT

Cabeolica’s Internal Guidelines and Performance Evaluation Manual, tools for human resource management, have afforded a high standard of professionalism at the Company, promoting ever more efficient performance as well as high levels of motivation, satisfaction and responsibility on the part of employees.

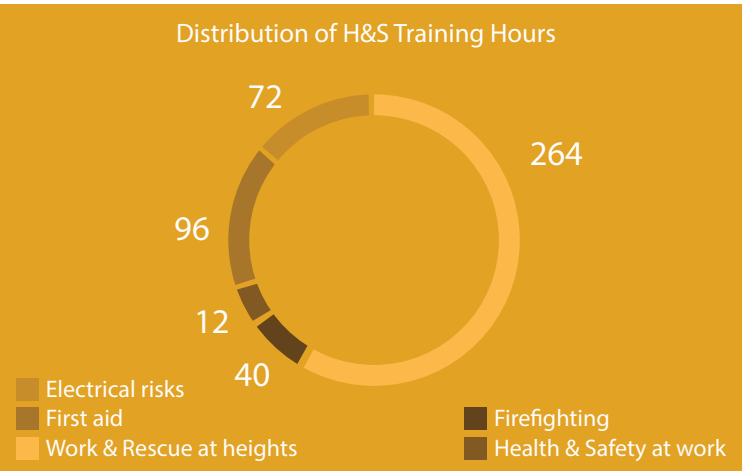
Throughout its 5 years of activity, the number of Cabeolica employees has remained at 10 (on average 30% women and 70% men), 90% of whom hold higher education qualifications.

In addition to permanent job positions, Cabeolica also contributes in generating indirect employment through various retainer contracts held with local companies for services such as legal counselling, IT, accounting, auditing, marketing, insurance, wind farm surveillance, cleaning services, among others.



PREVENT AND INVEST

Health and Safety is one of the sustainability pillars of the Company. Cabeolica has the objective of defining and main-



taining adequate standards in Health and Safety management in order to guarantee the well-being of its employees as well as others who visit the wind farms. Those with access to the wind farms are provided with all the adequate individual protection equipment. Additionally, all four wind farms are equipped with first aid and firefighting equipment, as well as adequate gear for handling machines with electrical current.

With efficient safety policies and procedures, along with a strong

focus on employee health and safety training, the Company has assured 0 employee work accidents during the 5 years of operation.

In 2015, the Company implemented a practice of providing general medical check-ups to all its employees as a preventive action to promote general health of the employees. Furthermore, 100% of the employees were covered with additional optional insurance.

TRAINING

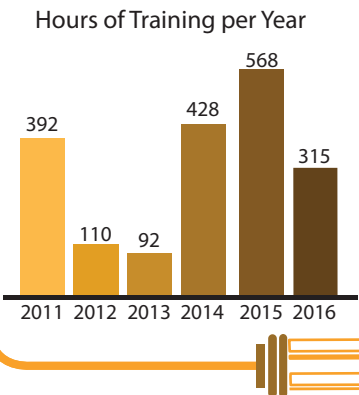
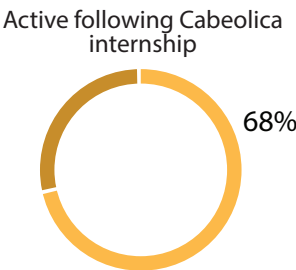
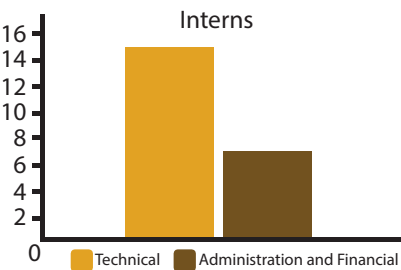
The Company continuously invests in the training of its employees in order to increase the professional qualifications, guarantee a balance of skills to maximize the performance of its employees.

During its active years, the Company has conducted 1,905 hours of training, 484 hours of these were in health and safety, 216 hours of which were within the standards of the Global Wind Organisation.

INTERNSHIP PROGRAMS

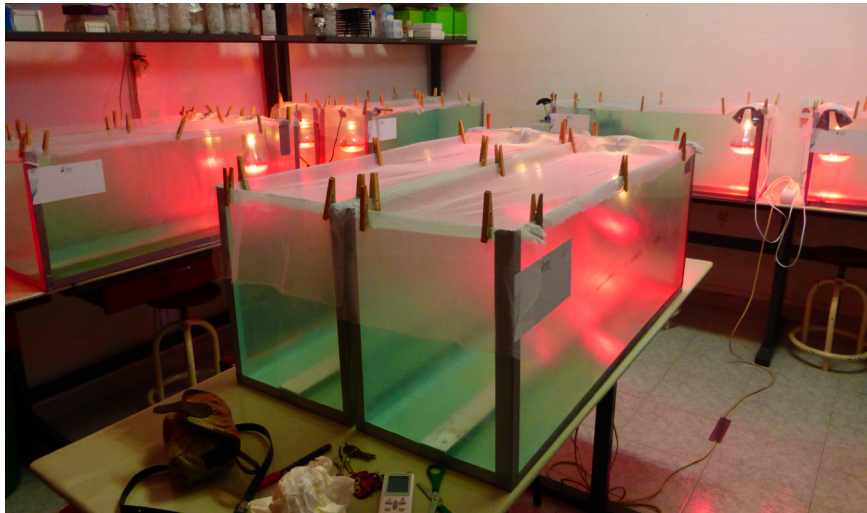
In 2014, after verifying much interest from recent graduates, Cabeolica launched Technical and Administrative and Financial internship programs. This initiative aimed to provide candidates with the opportunity of a learning experience

within a fast developing Company in the renewable energy sector, with strong international connections. To date 22 people have interned at Cabeolica.



THE FOCUS ON ENVIRONMENTAL ISSUES IS A FUNDAMENTAL PILLAR FOR CABEOLICA'S SUSTAINABILITY APPROACH

Cabeolica recognizes the importance of approaching environmental management as a pillar of sustainable business practice. In line with this principle, the Company constantly seeks to apply good environmental practices, including minimizing any potential negative impacts its activity may have on the environment. Moreover, Cabeolica supports the conservation of biodiversity and environmental education in Cabo Verde and highlights several environmental initiatives with very concrete and encouraging results.



BIODIVERSITY

As a wind energy company with a strong vision of sustainable development, Cabeolica respects and promotes the importance of biodiversity conservation, one of the main environmental objectives of the Company. The loss of biodiversity has increased dramatically in recent decades, and this has been evident also in Cabo Verde.



Cabeolica has developed efforts not only to prevent any possible adverse impacts resulting from its activities, but also to support important initiatives with a view to halting the populational decline of some species resulting from unrelated activities. The Company proved to be quite active in promoting and raising awareness of endemics as well as general ecological health.

São Vicente wind farm

The São Vicente wind farm was inaugurated on November 11, 2011. Containing 7 Vestas V-52 850 kW turbines, the wind farm has a total installed capacity of 5.95 MW and has already produced approximately 105,000 MWh of clean energy to the local grid system. As the windiest Cabeolica wind farm, the São Vicente site holds the record monthly wind speed average recorded at 12.8 m/s in February 2016.



Endemic geckos

The *Tarentola substituta*, found on the island of São Vicente and in no other place in the world, was until recently classified as Data Deficient (DD) on the IUCN Red list, meaning that the information about this gecko was insufficient to categorize its status. Since 2009 Cabeolica has collaborated with specialized biologists from the Research Center in Biodiversity and Genetic Resources (CIBIO), in Portugal, funding studies on the genetic composition, as well as behaviour and diversity of the gecko population in order to increase the knowledge regarding this very rare and important species.

As a result of this effort for the preservation of the species, in 2011 alterations were made on the IUCN Red List regarding the *Tarentola substituta*'s taxonomic status, from "subspecies" to "species", and its conservation status from "Data Deficient" to

"Low Concern". Today, the *Tarentola substituta* can be found within a healthy population, perfectly coexisting with the turbines at the Cabeolica wind farm in São Vicente.

As part of the contracted services from the specialized biologists, University of Cabo Verde biology students accompany the studies, and are trained in obtaining data, with the aim of contributing to local knowledge and creating conditions to ensure long-term sustainability in the monitoring of this species.

The initiatives surrounding the *Tarentola substituta* have concurrently given rise to 4 detailed scientific study reports regarding the species, 3 articles published in internationally recognized scientific journals and 1 documentary produced by RTP (Portuguese Radio and Television network) entitled the Wonders of Cabo Verde.

Endangered birds

During the project design phase, the Nature and Conservation governmental organizations in Cabo Verde, including the National Institute of Agrarian Research and Development (INIDA) and the Directorate General of Environment, in addition to NGOs, such as Natura 2000, were involved in supporting the bird collision risk assessment carried out by the Company. This assessment was later used for the Cabeolica wind farm micro-siting in Boa Vista, in order to ensure the lowest possible risk to the local bird species, mainly the Osprey and the Red-billed Tropic bird, during the operation phase. Currently, Cabeolica, in collaboration with the NGO BIOS.CV, has led an extensive survey work of the Boa Vista Osprey, and conducted monitoring of several other species including the Red-billed Tropic bird, the Egyptian Vulture, the Frigate bird among others, in order to

obtain important data regarding the behaviour of local avifauna - information that is now available to the scientific community and to the general public.

Cabeolica has also supported several bird protection projects including the "Osprey Project" which was awarded as the best endangered species conservation program in West Africa by the Regional 2015 Marine and Coastal Conservation Program. This project aims to build artificial nests for birds with the intent of reducing the excessive predation by humans and feral

cats. Ten artificial nests have been erected to date.

Other Initiatives

The Company has sponsored several important programs and projects including research projects in biodiversity and genetic resources, sports initiatives with strong social components, and important events that promote renewable energy and energy efficiency, socio-economic transformations as well as the development of policies for the health of the community.



BIRD MONITORING PROGRAM SINCE 2012

- ✓ 42 new Osprey nests discovered;
- ✓ 110 Osprey nests identified (17 of which were recorded as active in 2016);
- ✓ 500 Osprey nests examined (during the mating season to identify numbers of successful and unsuccessful reproduction efforts as well as causes of reproduction failures);
- ✓ 35 ringed Osprey offsprings (8 of which have been seen or recaptured);
- ✓ 32 nested offspring reaching adulthood;
- ✓ 21 nests that produced at least one offspring that survived to adulthood.

Sal wind farm

The Sal wind farm was inaugurated on February 28, 2012. Containing 9 Vestas V-52 850 kW turbines, the wind farm has a total installed capacity of 7.65 MW and has produced approximately 81,000 MWh of clean electricity to the local grid system. In January 2015, the Sal wind farm contributed with 55% of the total electricity produced in the island, which is the national record for wind energy monthly penetration rates.



Environmental Monitoring

The Company has developed an Environmental and Social Management Plan (ESMP) in line with the necessities of the chosen areas of intervention and their surroundings extending over a period of 20 years. This plan identifies the potential environmental and social impacts predicted to occur during the Project's construction, operation and decommissioning phases, and the mitigation measures to be taken in order to minimize or, ideally, prevent them.

In addition to the general fauna and flora monitoring plan in and around the wind farm areas, the ESMP also includes social and biodiversity enhancement measures, as well as a conservation management plan, all of which aim to step beyond the Company's direct obligations and provide positive benefits to the overall environmental sustainability of Cabo Verde.

The results of monitoring these indicators are presented every year in an annual monitoring report.

Waste

During the maintenance process of the wind farms, the Company produces small amounts of waste that may cause negative impacts on the environment and on health, including lubricants, oils, batte-



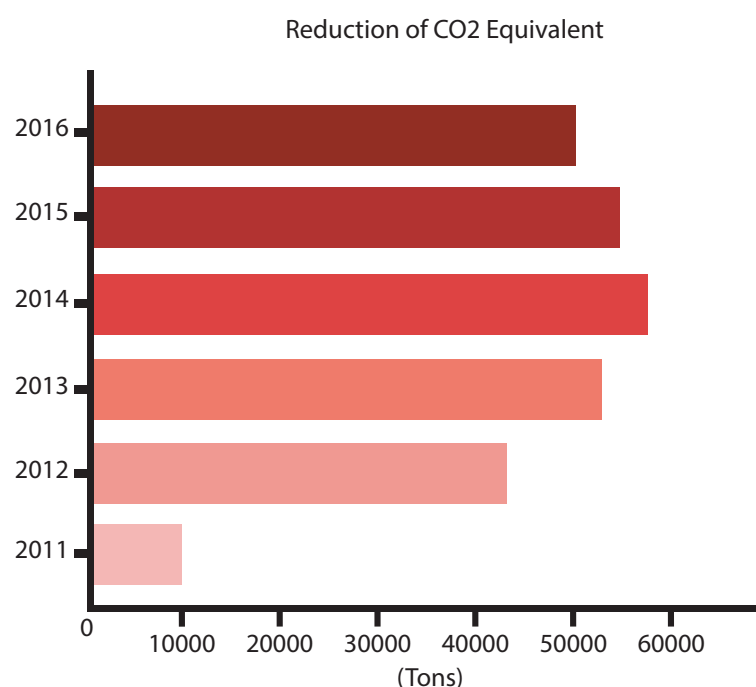
ries, and filters. In Cabeólica, these waste, considered hazardous, are redirected for recycling abroad or stored awaiting appropriate and sustainable local alternatives. In 2017, the Company intends to build ecopoints within the wind farms in its determination to keep away from the environment any hazardous waste produced as a result of its activity.

Reduction of CO2 equivalent

In 2015, worldwide negotiations relating to climate change resulted in the adoption of the Paris Agreement in which Cabo Verde committed to completely eliminate CO2 equivalent emissions in electricity production by 2025.

Cabeólica, as the main renewable energy producer in the Cabo Verdean energy matrix, already contributes significantly to this goal by producing substantial amounts of clean energy to the domestic grids. This energy reduces the need to produce the same amount of electricity using fossil fuels. Thus, the Company helps the country to align itself with the goals of the United Nations and the world in general, of combating climate change and its adverse effects on the health of our planet. Cabeólica, therefore, aims to substantially reduce greenhouse gases in the country over the course of the Project's life cycle, estimating that the emission of some 55,000 tons of CO2 will be avoided for every full year of operation. Currently,

the Company's activities have curbed more than 260,000 tonnes of CO2 emissions.



Boa Vista wind farm

The Boa Vista wind farm was inaugurated on the April 20, 2012. Containing 3 Vestas V-52 850 kW turbine and 2.55 MW installed capacity, is it the smallest of the Cabeólica wind farms. It has produced approximately 32,000 MWh of clean electricity injected in the local grid system. In December 2016, the Boa Vista wind farm reached its daily production record of 47,77 MWh.



ENVIRONMENTAL EDUCATION AND ENERGY EFFICIENCY PROGRAMS ARE A HIT AMOGST THE YOUTH

As part of the goal of supporting social development within Cabo Verde, Cabeolica has developed initiatives likely to have a direct impact on the community, with particular emphasis on activities involving school children.

EOLO

In 2015, Cabeolica began the educational program EOLO / We Are Energy, dedicated to promoting clean energy production and energy efficiency. Intended for school children aged between 9 and 10 years old, in the fourth grade, the program was created by Cabeolica and by ECREEE - Center for Renewable Energy and Energy Efficiency of ECOWAS, supported by the Ministry of Education and Sport and the General Directorate of Energy.

The EOLO program visits several schools throughout the

from a participatory intervention within the classes to the engagement of its drawing contest- all children are invited to participate directly in each activity. This action is further extended to all guardians through the issuance of specific information for overall promotion of behavioural change.

Having begun in 2015, the program has been implemented in Santiago, São Nicolau and São Vicente.

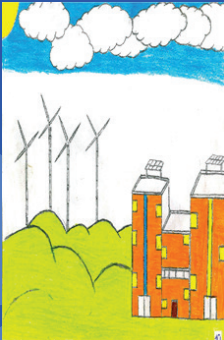


Key Factors				
		Schools	Classes	Students
Pilot Project	2015	2	5	80
National Project				
São Vicente phase 1	2015	4	12	315
São Vicente phase 2	2016	9	20	542
São Nicolau	2016	8	12	239
Santiago	2016	11	32	956
Total		34	81	2132

country, where it introduces children to the different sources of energy, while also promoting various methods of saving energy, in a didactic and fun perspective, bringing excitement and joy to the classrooms. The program follows the curriculum of the Ministry of Education and Sport in Cabo Verde, and applies a different and innovative form of teaching these subjects.

With a dynamic approach –

STUDENT DRAWINGS IN THE EOLO PROGRAM



Edilson Afonso (S.O.S)



Márcia Monteiro (S.O.S)



Elisandra Moura (Cidade Velha)

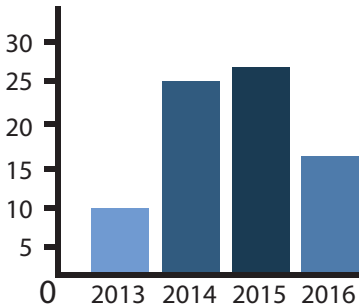
ENVIRONMENTAL PROGRAM

Since 2013, the Company maintains an environmental education program that is executed every year in Boa Vista secondary schools and which is aimed at promoting environmental awareness, specifically regarding the need for conservation of local species and the importance of renewable energy in general.

- 2013
Marine Birds
- 2014
Wetland Birds
- 2015
Conservation of Osprey in Boa Vista
- 2016
Endemic bird species in Cabo Verde

This environmental program has a different theme every year in order to encourage students and to address the different Cabeolica interventions on the island. In 2016, 519 students participated in the environmental lectures in Boa Vista high schools.

Number of lectures in Boa Vista secondary schools



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