

ESRS of the Wind Power Project Lagoa do Barro, Piauí

Original version in Portuguese

1. Overview of scope of IIC E&S Review

The Lagoa do Barro Wind Power Project is located in the mid-east region of the state of Piauí in the municipality of Lagoa do Barro. The undertaking (the “Project”) will comprise 85 Acciona wind generators, model AW3000 -125m – HH120m, each of which with a capacity of 3.0 MW, which will total 255 MW of installed capacity to be split among 10 wind farms, as well as an 83 km-long transmission line up to the São João do Piauí (230/500kV) substation, owned by the São Francisco hydro power plant (CHESF), which is located in the municipality of São João do Piauí, in the state Piauí.

The Lagoa do Barro Wind Project is currently undergoing the licensing process before the Department of Environment and Water Resources (SEMAR), the agency in charge of granting the environmental permit for the Project in the state of Piauí. An Environmental Impact Assessment (EIA) and the related Environmental Impact Report (EIR) were filed with the abovementioned agency in order to obtain the preliminary and installation licenses. A Basic Environmental Plan (BEP) including 24 management programs was prepared in order to obtain the preliminary license; the BEP will be carried out by a specialized company to be hired.

2. Environmental and Social Classification and Justification

Under the IIC's Environmental and Social Sustainability Policies, this project has been classified as a Category B project. Such classification is applicable because: i) the potential environmental impacts set forth are not deemed significant in protected or sensitive areas and/or for vulnerable populations; ii) the impacts are restricted to the site of the Project; iii) no migratory or widely displaced species were found in the area of influence; and iv) the impacts generated may be reverted and mitigated using widely recognized methodologies and technical applications.

The mitigating measures proposed in the EIA and the environmental programs in the Basic Environmental Plan show that they are mostly appropriate and sufficient for the size and impacts of the Project.

3. Environmental and Social Context

The region under study has an arid climate with rains in the summer and fall, winds blowing at 3 to 4 m/s on average, and a landscape characterized by elongated arrangements of ridges running NNE/SSW at heights of 550 to 750 meters. The Project is completely located in the hydrographic basin of the Parnaíba River, specifically in the hydrographic sub-basin of Canindé in the state of Piauí. The waterways present tributaries influenced by the semiarid climate, with intermittent rivers and contributions from rain water.

The Project, which does not cover any conservation units or buffer zones, is located in a region within the Caatinga biome where at present there is significant native vegetation cover mainly formed by bush caatinga, which is usually dense, with scattered emerging trees; bush and tree caatinga; and rocky outcrops with bromelia and cactus.

Birds are the terrestrial vertebrates most widely represented in the region, with over 347 species, at least 10 of which are endemic to the biome. The caatinga is one of the morphoclimatic zones most widely known for its herpetofauna, with 44 species of lizards, 9 species of amphisbaenia, 47 species of snakes, 4 species of turtles, 3 species of crocodiles, 47 species of frogs and 2 species of gymnophiona.

According to the EIA, the direct influence area of the social and economic environment is the municipality of Lagoa do Barro do Piauí, while the indirect influence area is formed by the communities in the area of implementation of the Project and its surroundings as follows: Conceição, Mocambo, Malhadinha, Cacimba do Mato, Olho d'Água, Manguinha, Serra da Manguinha, Poço da Emburana, Mimoso, and Sítio Brejinho.

The population affected by the Project is formed by the owners of leased lands within the area of the Wind Power Project and its related facilities, as well as the houses in the communities close to the Project.

The communities in the area of influence of the Project, which are located in a rural area, are dependent upon agriculture as livelihood and do not present any violence or social conflict, are vulnerable to any changes that could occur in the region.

4. Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

4.1 Assessment and management of environmental and social risks and impacts

In April 2016, the Corporate Environmental Management area of Atlantic concluded the "Sustainability Management System Manual" (review 4 of November 17, 2016) following the Performance Standards (PS) of the IFC. The Manual is currently under implementation and it sets forth environmental, health, safety and security and stakeholder engagement management policies and procedures, in addition to establishing the guidelines of Atlantic's Sustainability Policy. Even though the Manual is not sufficiently detailed, it is consistent with the requirements of the IFC Performance Standards.

The companies subhired to build, operate and maintain the facilities are subject to Environmental, and Health, Safety and Security Contractual Guidelines, which are included in the agreements as exhibits and subsequently supervised by the Company. However, there are no social contractual guidelines in place.

The Environmental Guideline includes the following major requirements: natural resource use; solid waste management; liquid effluent management; management of actions affecting flora and fauna; environmental controls for civil engineering works and electromechanics; environmental incident training and record. Therefore, it presents the following gaps as compared to the General EHS Guidelines of the IFC: i) specific criteria to manage hazardous materials; ii) criteria for the efficient use of resources, especially water and power; iii) footprint management ; iv) requirements to monitor effluents, noise and particulate matter; v) requirements for decommissioning the facilities and construction site, and to recover any degraded areas; vi) requirements to evaluate any environmental and social impacts and risks; vii) requirements to treat noncompliances and corrective and preventive actions; viii) environmental KPIs; and ix) requirements to issue periodic reports.

The Health, Safety and Security Contractual Guideline is consistent with the requirements of the IFC's PS 1; however, the following minimum requirements were established: i) Atlantic requires the legal documentation regarding labor health, safety and security to allow access to the Project site; ii) all the workers need to attend mandatory on-boarding training, where the environmental and safety and security requirements provided for in the agreement are presented; iii) before the services are rendered, Atlantic

requires that its contractors prepare a Preliminary Hazard and Risk Assessment (PHRA) evaluating any health, safety and security risks, and the preventive and control measures to be implemented upon executing each of the activities set forth in the agreement.

Atlantic's Sustainability Policy is comprehensive and consistent enough with the requirements in the IFC's Performance Standards applicable to the Project.

The Project risk and impact assessment process is disclosed in the scope of the EIA/EIR: 218 impacts were identified, out of which 140 (64.22%) show low importance, 58 (26.61%) have medium importance and 20 (9.17%), high importance.

The main adverse effects expected to occur in the physical and biotic environments include vegetation removal and the strain imposed on the water resources owing to the major demand for water for the works, considering –especially in connection with the latter– the accumulation of the impact with the implementation of the wind power facilities already authorized in the region. The positive impacts include larger number of employment opportunities, professional qualification, increase in trade and tax collection. Such effects will act as multiplying agents of the economic and social growth in the area of influence of the Project.

The location and technological alternatives presented in the EIA consider only the aspects of the available wind power resource, region infrastructure and availability of land. Alternative access routes considering the houses on the sides of the roads were not taken into account; the environmental characteristics of the future Project-related actions were not taken into account either. Considering the sensitive location for the construction of the towers and the difficult access to them, an assessment of tower location alternatives should be included, as recommended in the Environmental and Social Action Plan (ESAP).

The road survey prepared for the Project provides two accesses, one from the Aeris factory in Caucaia, state of Ceará, and the other one from the Bardella Acciona factory located in Simões Filho, state of Bahia. Neither of these presents an assessment considering the houses or infrastructure located on the sides of the roads, evaluating the impact of the heavy vehicle traffic.

In addition, no alternative location assessment for the tower factory was presented. The road surveys show that the possibility of using an existing factory located outside the Wind Power Project had been previously analyzed, but it was reported that the factory will be built next to the Project site. The construction site has also been planned, but there is no assessment of alternative locations either. It should be noted that even if the tower factory is not located within the Project site and it is provided by a third party, it is deemed to be a related facility since it will be set up to be used by the Project. The factory is inserted in the Project supply chain and, therefore, it shall be supervised as a direct supplier.

It was not necessary to prepare a cumulative impact assessment for the Project due to the following reasons: i) there are no other projects in an imminent construction phase in the Project's area; ii) there are no projects to be built in the area in the foreseeable and reasonable future; and iii) no other project was executed in the site of the Project in the past.

The Project's Basic Environmental Plan (BEP) sets forth 3 groups of environmental programs: i) Construction Environmental Program (CEP); ii) management programs; and iii) special programs, including a) Construction Environmental Program; b) Social Communication Program; c) Fauna Monitoring Program; and d) Roadkill Monitoring Program.

Medium- and large-sized mammals are monitored using four trap cameras; in the case of bats, the methodology used to search for carcasses during the operation phase is insufficient. The reduction and mitigation measures for wildlife protection were also deemed insufficient and no actions were described to mitigate collisions with wind generators during the operation phase.

In addition, the following special plans were developed: i) Archaeological Identification, Rescue and Monitoring Plan; ii) Vibration Monitoring Plan; iii) Electromagnetic Field Monitoring Program; iv) Project Deactivation and Decommissioning Plan.

It will be possible to assess the actual effectiveness of the actions proposed in these plans throughout their execution period during the Project implementation (construction) phase.

The Construction and Maintenance activities of the Wind Power Project will be led by subhired qualified companies (EPC). Only the construction and operation management tasks are carried out using Atlantic's personnel. The corporate personnel structure includes mainly the management areas, legal, human resources and the labor safety and security and environmental areas reporting directly to the Construction and Operation Management. The project management team is directly located in the project site during the implementation phase. The project management tools are aligned with the requirements of the Project Management Body of Knowledge (PMBOK).

The Health, Safety and Security Contractual Guideline for construction and operation includes the general requirements for the companies hired by Atlantic to submit emergency response and management plans specific to their activities. However, the document does not define the risk scenarios, responsibilities and emergency response equipment. Atlantic shall establish a benchmark emergency response plan for the Project (wind farms and transmission lines) considering all potential risk scenarios. Special consideration shall be granted to the forest fire scenario engaging the vegetation in the area close to the wind farm and the transmission lines during both the implementation and the operation phases of the Project. Likewise, the potential emergency scenarios related to work at height and building of towers in steep slopes should be considered especially.

At present the companies hired to execute the environmental programs are supervised by Atlantic's Corporate Environmental Management area to whom the results of the implementation of these programs are reported on a bimonthly basis. Environmental and labor health, safety and security noncompliances are discussed during Project management meetings once a week. Corrective and preventive action plans are recorded in a document and advised to the subhired companies. However, there is no process memorialized in writing regarding a follow-up process in the Management System (ESG) of Atlantic that allows for assessing the consideration and effectiveness of these actions.

The following procedures were not evidenced during the due diligence process performed by the IIC: i) Procedure memorialized in writing for the internal audits that are currently being performed periodically by the Corporate Health, Safety and Security and Environment managers; and ii) existence of a procedure that is memorialized in writing and may be audited regarding the control of noncompliances and corrective actions applicable to both the construction and operation phases. Only the Health, Safety and Security Contractual Guideline includes appropriate performance indicators.

The Sustainability Management System Manual described the stakeholder engagement policy. Such text defines the scope and goals of the policy, the way to identify the stakeholders, the engagement principle

and methods, the feedback and grievance mechanisms, the process and accountability management, and the way of monitoring and relating to them.

So far, the stakeholders were not mapped for the Lagoa do Barro Wind Power Project, but the representative of Atlantic reported that a social record will be prepared including all the population in the area of influence of the site.

It should be noted that the social issues management team of Atlantic is very small and it is formed by a single individual from the Environmental area of the Company.

Owing to the risks identified, a Social and Relations with Community Plan should be developed before the beginning of the construction phase including the team to implement it. The Plan should include: i) a management plan for the specific social aspects of the construction and operation phases of the Project; ii) an internal and external communication plan seeking to report the actions aimed at minimizing the impacts on the communities and workers; iii) mapping of prior issues and management of any issues which could arise; iv) a training plan for the community stakeholders to be employed in the Project (improving the Technical Training and Labor Force Use Plan); v) a program on traffic safety and alternatives (improving the Works Signaling Program) jointly with the Municipality regarding the transportation of residents in the communities within the area of influence, securing the safety of passers-by and motor vehicles.

As to the commitment to the affected communities and the stakeholders to disseminating Project-related information, the Company has failed to present any communication activities.

As reported, a public hearing was held regarding the Project in August 2015. There were no other meetings with the communities after the public hearing and the population had the expectation that the Project would start in late 2016. Atlantic met this commitment and launched an Engagement and Informed Inquiry (EII) with the related documentation. However, apart from the public hearing, there was no other form of communication with the stakeholders of the Project.

Atlantic's communication channels are its website and a 0800 number. Another communication channel of Atlantic is "*Ao som do vento*", a dissemination plan of the Project's information on the radio and with a sound car.

4.2 Labor and Working Conditions

Atlantic's Human Resources procedures observe labor legislation and are aligned with the policies of the International Labour Organisation (ILO) and the guidelines in the IFC's PS 2. However, a Human Resources Policy (or equivalent instrument) is necessary to formalize the commitment to the Fundamental Principles of the ILO and to establish procedures guaranteeing that they are complied with.

Employee compensation is defined by a procedure called "Fixed Compensation Policy and Procedure," which establishes salary management criteria (fixed compensation) to ensure meritocracy-based management under current legislation and a strategic model defined by the Company.

The Company's employees are members of a trade union which negotiates the workers' benefits and rights with the Company freely. A collective bargaining agreement executed with the Sindicato das Empresas Concessionárias de Geração, Transmissão e Distribuição de Energia Elétrica (trade union of the electric power generation, transmission and distribution concession holder companies) of Curitiba was found during the due diligence.

Atlantic does not allow any form of discrimination related to race, age, sex, color, nationality, religion, sexual orientation, physical or mental disability and/or any other form of discrimination as well as harassment, whether moral or sexual, or any other behavior which may be characterized as offensive or forced and resulting in any form of pain and suffering of any worker.

Atlantic made available to its employees the Ethics and Conduct Channel which aims at ensuring the confidentiality and safety of the information in the event of whistleblowing or suggestion. This channel allows accessing and disclosing suggestions and/or reports of behaviors not consistent with the Code of Ethics and Conduct and it is a portal managed by the company called "Contato Seguro". In addition, the Company recently created a new whistleblowing channel available 24/7 through the following means of communication: i) telephone: 0800-6018659; ii) web sites: www.contatoseguro.com.br or www.atlanticenergias.com.br, by clicking on "Denúncias" the individual is directed to the Contato Seguro web site, iii) downloading the Contato Seguro application to the employee's tablet or smartphone. Under the Company's Code of Ethics and Conduct, the members of the Company's Ethics and Conduct Committee have the competences, experience and skill to occupy such position and they are mainly considered as individuals with a good reputation and credibility within the organization.

Atlantic does not allow using child labor or any other form of exploitation harming human dignity inside or outside the Company.

The Project is still undergoing the phase prior to construction. However, even though the Construction Site Description Memorandum submitted does not mention the construction site, during the due diligence, we verified that there will be one with accommodation for the workers and a factory support area, which will be set up at the site. The construction site project expects to hold 300 workers during peak season and it includes 9 facilities: security booth, emergency room, soil laboratory, offices, warehouse, locker rooms and rest-rooms, canteen and leisure area, water tank, wastewater collection tank, and solid waste area. The accommodation should be consistent with the IFC's manual "Workers' Accommodation: processes and standards".

Atlantic hires companies to provide most of the services related to the construction of the wind farm. The construction phase has not started yet; however, the companies CORTES and WEG will be hired to build the facilities. There was no evidence of the existence of any procedures preestablished by Atlantic in relation to the monitoring of the outsourced companies to be hired, although some of them are globally recognized companies, thus ensuring that they are respectable and real companies. There is no evidence of the existence of a control and supervision procedure of the inquiry mechanisms and mechanism for the workers from service providers, which is a requirement of PS 2.

4.3 Resource Efficiency and Pollution Prevention

For the construction phase, Atlantic shall submit a list of greenhouse effect gases considering only its primary sources (scope 1). Emission quantification shall consider all the major greenhouse gas sources, including those unrelated to power, such as methane and nitrous oxide, among others.

Even though the Project will not utilize major quantities of water, it is located in a region with low water availability. Thus, the population within the area of implementation of the Project will be provided with water through tank trucks to supply their home tanks. Water will also be collected using a deep tubewell.

The Solid Waste Management Program (SWMP) was developed for the Project within the realm of the BEP and it provides the guidelines to segregate, prepare, identify, handle, store, transport and dispose of the solid waste appropriately during the Project's implementation and operation phases so as to minimize any potential damages to the environment and health, apart from complying with the applicable technical standards and legal requirements. The procedures proposed in the program are consistent with the requirements in PS 3.

The main hazardous products to be used during the Project are fuels (diesel oil, gasoline, ethanol), paint and concrete additives. However, at present there are no guidelines in place establishing the procedures to manage and store them correctly.

An Effluent Control Program providing for control and monitoring actions such as the care of the land where the sewage systems will be built, monitoring the system by checking its efficiency, the use of chemical toilets in movable work sites, the adequate disposal of effluents, personnel training, and system licensing, among others.

As per the Project's vegetation removal authorization, the extension of the area where ligneous vegetation may be removed is significant (252.09 hectares for the wind farms and 319.06 for the transmission line).

The Erosion Monitoring and Prevention Program presents the procedures and criteria to be adopted in order to protect and stabilize accesses and other works in the site from erosion in the unstable areas aiming at maintaining a harmonious coexistence with the surrounding areas.

After the conclusion of the works, the Company expects to implement the Degraded Areas Recovery Program aimed at implementing the measures necessary to recover the areas where interventions are necessary to carry out the Project. The main actions of the Program are: i) identification of target areas; ii) definition and form of recovery of the degraded areas; iii) definition of activities to carry out the Program; iv) activities for the affected areas; and v) activities for the natural regeneration and enrichment of vegetation. The Program includes actions to decommission the works and perform vegetation and topographic recovery tasks, as the case may be, but it does not consider the research activities of potentially polluted areas (from the fuel plant, storage of hazardous products, workshops, etc.) generated during the construction phase.

Noise monitoring is provided for in the BEP and it establishes actions for the implementation and operation phases of the Project. Likewise, vibration and electromagnetic field monitoring tasks were proposed for the operation phase of the Project. The stroboscopic effect (shadow flicker) is mentioned in the Surrounding Population Health Monitoring Program, but no specific program is set forth in this regard. An assessment should be carried out using computer-based models of shadow flickering on potential receptors; the results should guide the need for and development of a specific program. The emitting sources (effluents, noise, quality of the water and air, vibrations and electromagnetic fields) should be monitored considering the caps established by Brazilian legislation and those set forth in the standards of the IFC's EHS Guidelines; the most restrictive ones shall be adopted as benchmark for the Project.

4.4 Community Health, Safety, and Security

The Lagoa do Barro Wind Power Project, together with its transmission line, will be the first project to land in the municipality of Lagoa do Barro, thus giving rise to major expectations among the population mainly in connection with labor force hiring.

A concern found in the field relates to the houses located on the access to the site. The above is not only in connection with the works and improvements on accesses –which already generates noise and dust–, but also regarding the flow of a large number of trucks with heavy loads. We also verified that the local residents are not careful or safe drivers, which gives rise to potential accidents. This should be included in the Materials and Persons Transportation Plan or in the Work Signaling Program presently included in the BEP.

There is no impact arising from the stroboscopic effect (shadow flicker) because houses are located over 500 meters away from the towers; the landscape is not impacted either since it is not a tourist or leisure area, and the towers will be set up on hills far away from the nearby houses.

The impact related to conflicts from the use of water in the EIA was identified since the region of the Project is a hinterland (*sertão*) with scarce rain, and the houses are supplied from their own tanks or with tank trucks. We should take into account the importance of considering responsible supply and use of water for the construction and operation of the Project, considering the sensitive environment where the Project will be implemented.

Owing to the very characteristics of the area (droughts, vegetation and climate), there could be an increase in the risk of occurrence of natural disasters, such as fires –an impact not identified in the EIA submitted. However, the Construction Environmental Program (CEP) sets forth procedures to prevent forest fires.

The improvement of roads on the access way may have a positive and a negative impact for the communities as they will have easier access to urban centers. A negative impact which may occur during the construction phase, which will be somewhat mitigated by the Surrounding Population Health Monitoring Program and the CEP, is the potential occurrence of prostitution in the communities located in the area of influence. Mainly because these communities are far away from the city and have a vulnerable social level, the risk increases during the construction period (peak time) when there will be 300 workers traveling along the accesses.

Atlantic reported that security services are hired by the construction company and that Atlantic will only manage its agreement; the security guards will not carry weapons.

4.5 Land Acquisition and Involuntary Resettlement

There was no involuntary resettlement in this Project. The assignment of rights *in rem* was used to acquire the rights on the land and individual agreements were drafted.

After the beginning Atlantic entered into agreements with the owners of the lands to be occupied by the Project. The towers will be set up over 500 meters away from any home in the region. The same is applicable to the transmission line. However, all the negotiations with owners were not as yet concluded.

There are no major agricultural activities in the areas of both projects. The estates are medium-sized and they engage in small cultivation activities. The final amount of land to be used will be established once the assignee has the technical information related to power generation, which will only take place once the wind measurements conclude, as well as after the potential real property topography and land regularization (*regularização fundiária*) processes are performed.

If material damages occur within the limits of the assigned area which source may be proven as being the wind farm implementation and construction phases, such as damaged fences, accesses, pasture lands, and other areas of the properties during the implementation phase of the Project, Atlantic Energias Renováveis S.A. shall bear any expenses incurred in repairing such damages as from the time when the owner reports the event under penalty of filing a legal action. During the operation period, which shall be understood as the date of beginning of the commercial electric power generation by the wind generators, Atlantic Energias Renováveis S.A. shall pay to the landlord an annual amount per hectare considering the total assigned area.

The compensation process of the affected properties is performed by a team of five: two local individuals, two employees of the Legal department and another person who reviews the agreements. The local employees visit the property, they introduce themselves, explain the Project, inquire about the legal status of the land, regularize the property and close the agreement. In addition to this agreement executed with the compensated landowners, there was no other form of communication, engagement or dissemination with the affected community.

4.6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

The Project area does not cover any conservation units or buffer zones. There are no internationally recognized Key Biodiversity Areas (KBA), Important Bird Areas (IBA), Important Plant Areas (IPA), Alliance for Zero Extinction sites (AZE) or Ramsar sites located within 50 km of the site.

The main impact during the construction phase of the Project will be a reduction in vegetation cover over an estimated area of 260.19 hectares. For the TL, the requested and authorized removal area was 331.20 hectares. The authorizations issued by the environmental agency (SEMAR) include the total area requested by the company.

As to the wildlife, during the implementation phase, the main impacts are also related to the loss and fragmentation of the habitat caused by vegetation removal to set up the site. The movement of individuals and machinery during this phase is intense and it also helps avoid the wildlife. During the operation phase, collisions with wind generators and transmission lines are the major impacts on the wildlife, especially in the case of birds and bats, which also suffer from barotrauma.

The region where the Project will be installed covers mainly natural habitats (native Caatinga vegetation), apart from modified habitats (anthropized areas). Anthropized areas include agricultural areas, fallow land, poultry farms and grazing lands. The natural habitats relate to the bush caatinga and the bush and tree caatinga.

The assessments performed do not mention endangered vegetation species. However, the EIA for the TL reports a sample of cactus (*Cereus mirabella*), which is included in the “endangered” (EN) species category by the IUCN.

As to the wildlife, even though certain endangered and endemic species were identified in the Project site, no critically endangered species were listed. The only endangered species included in the EIA was recorded through interviews and there was no indication of its presence in the field. Also, there is no evidence that the Project region has any major importance for this species or for any other that is endemic or of restricted distribution. No habitats favoring significant concentrations of migratory and/or congregatory species were

found. A single migratory species was mentioned in this regard, the eared dove (*Zenaida auriculata*), with a few individuals found but without verification of the formation of nests.

It is thus recommended that during the operation phase the species be monitored to assess their presence in the Wind Power Project area. It should be noted that the Wind Power Project is not located in any priority biodiversity conservation areas.

Invasive exotic species are not expected to be introduced.

When Project-related impacts were assessed, the one related to conflicts from the use of water was identified since the region of the Project is a hinterland (*sertão*) with scarce rain and the houses are supplied with water from their own tanks or with tank trucks.

4.7 Cultural Heritage

An archaeological team already completed prospection activities at the Lagoa do Barro Wind Power Project, but their work was not approved by Atlantic; consequently, another team from the Biometria company has just performed another prospection and no archaeological sites were found.

In September 2016, memorandums were issued by the National Artistic and Historical Heritage Institute (IPHAN) for each wind farm advising that it would be necessary to perform supplementary prospection tasks owing to the alterations to the Project. The IPHAN has provided its technical opinion authorizing the construction of the Wind Power Project. It was reported on the field that two sites and a location with remains were found in the transmission line and they were duly rescued and followed up on. In any case, for the construction phase, the company will need to prepare a procedure to deal with chance finds, which at least provides for the interruption of the activities, demarcation of restricted areas, notification to the IPHAN, rescue, documentation and resume of activities.

5. Local Access to Project Documentation

Atlantic has furnished all the documentation on the Project to the government agencies related to the environmental licensing. These are: State Environmental Protection Foundation (FEPAM), National Artistic and Historical Heritage Institute (IPHAN), State Environmental Department - Forests and Protected Areas Office (DEFAP/SEMA). However, it does not make any information available to the public in general and the population affected by the Project. It should be noted that the Sustainability Policy and the information on its Environmental, Social and Corporate Governance (ESG) System are available in the website: <http://atlanticenergias.com.br/esg/>

6. Environmental and Social Action Plan (ESAP)

The Environmental and Social Action Plan is presented as an Annex to this report.

**Lagoa do Barro Wind Power Project
Environmental and Social Action Plan (ESAP)**

ID	ACTION	DELIVERABLE	DEADLINE
PS 1. Assessment and Management of Environmental and Social Risks and Impacts			
1.1	Develop and implement an <i>internal audit procedure</i> within the scope of Atlantic's Management System (ESG).	1 Approved copy of the procedure 2 Memorandum of the critical analysis performed by the internal audits as approved and reviewed by Atlantic's top Management	1 Before the execution of the agreement (closing) 2 Apply the procedure every 6 months
1.2	Develop and implement a <i>works decommissioning procedure</i> as per the Sustainability Policy and the Atlantic's ESG.	1 Approved copy of the Works Decommissioning Procedure 2 Decommissioning Report and Terms of Acceptance of the owners of the areas	1 Before the execution of the agreement (closing) 2 Apply the procedure upon decommissioning the work site
1.3	Develop an <i>environmental and social supervision and monitoring manual</i> applicable to the activities related to environmental and social programs of the construction and operation phases and formalize it in the present Management System.	1 Approved Environmental and Social Supervision and Monitoring Manual 2 Implementation Report	1 Before the execution of the agreement (closing) 2 Before the execution of the agreement (closing)
1.4	Review the <i>Environmental Contractual Guideline</i> to include to following requirements: i) procedure to identify and assess the environmental and social risks and impacts; ii) footprint management; iii) procedure to monitor effluents, noise, particulate matter, electromagnetic radiation, etc.; iv) procedure to manage hazardous products, including the criteria to install and run a fuel plant, workshop, storage of hazardous products, etc.; v) criteria for the efficient use of resources, especially water and power; vi) requirements for decommissioning facilities and work sites, and recovery of degraded areas; vii) requirements to treat noncompliances and corrective and preventive actions; viii) environmental performance indicators (KPI); ix) requirements for the issuance of periodic reports; and x) review by Atlantic.	1 Reviewed guideline	1 Before the execution of the agreement (closing)
1.5	Submit a <i>procedure to define and evaluate suppliers</i> deemed critical for labor health, safety and security, environmental, and social issues.	1 Procedure	1 Before the execution of the agreement (closing)
1.6	Within the realm of Atlantic's Sustainability Policy and ESG, submit a <i>management of change (MOC) procedure</i> securing that all the modifications to the Project or any changes in programs and environmental and social measures are systematically assessed, are established through an alternatives analysis and incorporate an assessment of environmental and social impacts upon making decisions.	1 Procedure 2 Evidence of the application of the procedure	1 Before the execution of the agreement (closing) 2 When applicable
1.7	Within the realm of the Atlantic's ESG, implement a system for identifying the legal and other requirements applicable to the planning, construction and operation phases.	1 Procedure and evidence of the application thereof	1 Before the execution of the agreement (closing)
1.8	Submit a management plan applicable to the works and locations related to the support areas.	1 Management Plan	1 Before the beginning of the works

1.9	Submit analyses on location alternatives taking environmental and social aspects into consideration.	1 Assessments of location alternatives for the Project components	1 Before the first disbursement
1.10	Engage in a new wildlife study campaign so as to determine the seasonality, taking samples that are consistent with the size of the Project area.	1 Campaign Work Plan 2 Results obtained during the campaign	1 Before the execution of the agreement (closing) 2 Based on the necessary seasonality
1.11	Engage in a supplementary campaign to study the caatinga bush and caatinga bush and tree vegetation.	1 Campaign Work Plan 2 Results obtained during the campaign	1 Before the execution of the agreement (closing) 2 Before the beginning of the works
1.12	Indicate the human resources allocated to managing health, environment and safety and security issues as well as to dealing with the social and communication engagements with the stakeholders during each stage of the Project implementation process.	1 Organizational chart Responsibilities matrix detailing roles	1 Before the execution of the agreement (closing)
1.13	Define a social team of Atlantic in charge of the Stakeholder Engagement Policy and all its actions, supervision and documentation of processes and follow-up of results.	1 Organizational chart of the social team	1 Before the execution of the agreement (closing)
1.14	Submit an emergency response plan for the construction and operation phase of the Project (wind farms and transmission lines)	1 Emergency Response Plan	1 Before the first disbursement
1.15	Submit Periodic Environmental and Social Reports (PESR) with minimum contents and a frequency to be defined by the IIC, Atlantic and the Independent Environmental and Social Consultant (IESC).	1 Periodic Environmental and Social Reports (PESR)	1 Frequency defined by the IIC, Consultoria and Atlantic
1.16	Submit mapping of the stakeholders including appropriate analysis and planning of their engagement.	1 Mapping of the interested parties	1 Before the first disbursement
1.17	Include the following amendments in the Engagement Policy: i) ongoing follow-up of and inquiry of the affected landowners to verify the correct understanding of the negotiation procedures for land use and payment of compensation, recording the claims and replies; ii) forms of documenting the stakeholder engagement activities and process so as to verify the tenor of the relationships and concerns, engagement changes, and follow-up of the indicators proposed in the Stakeholders Matrix; iii) follow-up procedure for social projects and documentation of the assessment of their indicators; and iv) a social team from Atlantic in charge of the Stakeholder Engagement Policy and all its actions, supervision and documentation of the procedures and follow-up of the results.	1 Reviewed Engagement Policy	1 Before the execution of the agreement (closing)
1.18	Submit a social communication and relations with the communities plan including the team necessary to perform it, including the construction and operation phases.	1 Social Communication and Relations with the Communities Plan for the construction and operation phases	1 Before the first disbursement
1.20	Promote, jointly with the communities, the transparent dissemination of information before the beginning of the construction phase of the Project, presenting all the components of the Project, their impact, mitigating measures, including clarification on the labor force needs and their hiring terms.	1 Evidence of prior-to-construction dissemination of information	1 Before the beginning of the works

1.21	Implement an assistance mechanism for the operation phase defining the procedures to formalize the grievance management and record system for the Project's stakeholders.	1 Evidence of implementation of an assistance mechanism 2 Evidence of dissemination of an assistance mechanism	1 Before the first disbursement 2 Before the first disbursement
1.22	Submit a document formalizing the system to be used to record and manage the inquiries and grievances from the Project's stakeholders.	1 Inquiries and grievances management procedure 2 PESRs with evidence of the implementation and critical analysis thereof	1 Before the first disbursement
1.23	Develop procedure to communicate with the landowners of the leased areas describing the main doubts arising from the contact with them and the related answers, so that they may be included in a Q&A list to be used by the professionals acting with the directly affected population, and widely provide the affected population with information about the mechanism implemented during the course of the social communication process during the operation.	1 Communication procedure 2 Dissemination evidence	1 Before the first disbursement 2 Before the first disbursement
PS 2. Labor and Working Conditions			
2.1	Formalize procedures related to the work conditions of the subhired companies securing that the Human Resources Policies and Sustainability Management System of Atlantic are considered in the form of a contractual guideline to be attached to the agreements executed with outsourced companies consolidating the social requirements in conformity with Brazilian regulatory standards: Regulatory Standard 24, Regulatory Standard 18 and Regulatory Standard 12, as well as the guidelines in the "Workers' Accommodation: Processes and Standards" of the IFC.	1 Contractual guideline to be attached to the agreements with outsourced companies	1 Before the execution of the agreement (closing)
2.2	Develop a procedure including: i) identification of the potential risks for the workers, especially those that could put their lives at risk; ii) adoption of preventive and protective measures, including the modification, substitution or elimination of hazardous substances or conditions; iii) workers' training; iv) documentation and notification of occupational incidences, accidents or sicknesses; and v) agreements on emergency prevention, readiness and response.	1 Procedure	1 Before the execution of the agreement (closing)
2.3	Develop a control and follow-up process for suppliers and outsourced companies located in the area of the Project and outside it.	1 Procedure	1 Before the execution of the agreement (closing)
2.4	Present safe work procedures to build and use accesses within the Lagoa do Barro Wind Power Project. Special care should be given to the areas with steep slopes.	1 Safe Work Procedure	1 Before the beginning of the works
2.4	Submit safe work procedures to build towers located on steep slopes when it were impossible to relocate such towers.	1 Safe Work Procedure	1 Before the beginning of the works
2.6	Prepare a labor force demobilization plan for the end of the construction phase of the Project.	1 Labor Force Decommissioning Plan	1 Before the beginning of the decommissioning actions
PS 3. Resource Efficiency and Pollution Prevention			
3.1	Submit a plan for monitoring emission sources (effluents, noise, air quality, vibrations and electromagnetic fields).	1 PESRs including the results of the monitoring activities compared to the rules in the IFC's Performance Standards	1 Based on the seasonality required for the construction and operation phases of the Project
3.2	Submit a plan to minimize the native vegetation removal area to carry out the Project.	1 Studies proving the adoption of the best efforts	1 Submit evidence in periodic PESR
3.3	Submit an inventory of greenhouse gases for the construction phase considering the primary sources (scope 1).	1 GHG studies	2 Until the first disbursement
PS 4. Community Health, Safety and Security			
4.1	Prepare a persons and materials transportation plan with procedures in the event of accidents or incidents during the transportation of materials, heavy materials or persons.	1 Transportation Plan 2 Present evidence of the Plan dissemination	1 Before the beginning of the works
PS 6. Biodiversity Conservation and Sustainable Management of Living Natural Resources			

6.1	Submit a monitoring plan for the construction and operation phases of the migratory/endemic bird species so as to assess their occupation in the Project areas, draw the potential routes used by them and the feeding areas.	1 2	Work Plan PESR with the results of the monitoring activities	1	Before the beginning of the works
6.2	Submit a bioacoustic monitoring plan of bats assessing the species observed in the area and their use of the Project areas.	1 2	Monitoring Work Plan Results of periodic monitoring	1 2	Before the first disbursement Based on the frequency defined in the Work Plan and approved by the IIC
6.3	Submit a monitoring plan for bird and bat carcasses resulting from potential collisions with wind generators and transmission lines as per document "Environmental, Health, and Safety Guidelines Wind Energy" of the World Bank Group	1	PESRs of the operation phase monitoring results	1	Periodically, based on the frequency defined in the Work Plan and approved by the IIC
6.4	Submit mitigation/compensation measures for the vegetation species <i>Cereus mirabella</i> (Cactaceae) and <i>Thyrsacanthus microphyllus</i> (Acanthaceae).	1	Proposal on mitigation measures	1	Before the beginning of the works
PS 8. Cultural Heritage					
8.1	Prepare a procedure for chance finds during the works considering at least the interruption of the activities, demarcation of restricted areas, notification to the IPHAN, rescue, documentation and resume of activities.	1	Chance Finds Procedure	1	Before the beginning of the works