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VALENTINES WIND POWER PROJECT

(UR-L1105)

ENVIRONMENTAL AND SOCIAL MANAGEMENT REPORT
(ESMR)

February 2015

Table of Contents

ACRONYMS

AAP	Autorización Ambiental Previa
AAO	Autorización Ambiental de Operación
DINAMA	Dirección Nacional de Medio Ambiente
DINAMIGE	Dirección Nacional de Minería y Geología
DD	Due Diligence
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMR	Environmental and Social Management Report
ESG	Environmental Safeguards Group
IBA	Important Bird Area
IDB	Interamerican Development Bank
IFC	International Finance Corporation
INC	Instituto Nacional de Colonización
IUCN	International Union for Conservation of Nature
MEC	Ministerio de Educación y Cultura
MTOP	Ministerio de Transporte y Obras Públicas
MVOTMA	Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente
PGA	Plan de Gestión Ambiental
SCF	Structured and Corporate Finance Department
TL	Transmission Line
UTE	Administración Nacional de Usinas y Trasmisiones Eléctricas
VAL	Viabilidad Ambiental de Localización

VALENTINES WIND POWER PROJECT

Uruguay

UR-L1105

Environmental and Social Management Report – ESMR

I. INTRODUCTION

A. Summary Table

Project Name:	Valentines Wind Power Project
Project Number:	UR-L1105
Country:	Uruguay
Borrower:	Areaflin S.A
Sponsor:	Administración Nacional de Usinas y Trasmisiones Eléctricas (UTE)
Project Cost:	Approx. US$ 178.6 million
IDB A-Loan:	Up to US$ 71.5 million
Resp. Department:	Structured and Corporate Finance Department (SCF)
Environmental Category:	B

B. Background

1.1. IDB financing is proposed for the development, construction, operation and maintenance of a 70 MW wind farm and its associated facilities ("the Project"), including the expansion of an existing substation (Valentines) and connection to an existing 150 kV transmission line, to be located in the Departments of Florida and Treinta y Tres, Uruguay. The Project will sell the produced energy to the *Administración Nacional de Usinas y Trasmisiones* (UTE), Uruguay's state-owned energy utility, under a long term power purchase agreement.

1.2. Approximately 45 percent of the installed energy capacity in Uruguay is hydropower. As a result, during years of low rainfall, UTE is required to replace hydropower generation with fossil-fueled thermal generation and energy imports from Argentina and Brazil. In order to reduce its dependence on fossil fuels and hydraulic energy, in 2011 UTE engaged in a program to develop wind farms, in which it will retain total or partial ownership. It is expected that by 2017, Uruguay would achieve 30% of its installed capacity in non-conventional renewable energy. Under such program, UTE already built several wind farms and awarded the construction of the Valentines Wind Project.

1.3. The Borrower will be *Aeraflin S.A.*, a special purpose company (SPC) incorporated under the laws of Uruguay to develop the Project.

II. PROJECT DESCRIPTION

2.1. The Project consists of the construction, operation and maintenance of a 70 MW wind farm (Valentines) and its associated facilities, to be constructed in a zone of high wind potential located south from the city of *José Batlle y Ordoñez,* in the border between the Departaments of *Treinta y Tres* and *Florida*, Uruguay. The information provided below has been obtained from the EIA for the Valentines Wind Project and through investigations with project representatives during the due diligence site visit.

FIG. 1: PROJECT LOCATION

C. Key Project Infrastructure Components and Schedule

2.2. The Project encompasses the installation or construction of the following components: i) installation of 35 wind turbines (Gamesa G114) with a nominal capacity of 2.0 MW each; ii) expansion of an existing substation (Valentines); iii) connection to an existing 150 kV transmission line, to connect the wind farm to the national grid; iv) several smaller underground medium tension transmission lines within the wind concession area; v) construction of support buildings; vi) construction and operation of a temporary batching plant; and vii) construction of 16 km of maintenance and service roads (7.5 m wide) within the wind farm and maintenance of 6 km of existing roads.

2.3. **Wind Turbines:** Each Gamesa G114 wind turbine is composed of a rotor with 3 blades of 56 m length, gearbox, electric generator and air cooled transformer located at the upper end of a tubular conical 93 m high steel tower. The blades are made of composite carbon and glass fiber and sweep a total area of 10.207 m^2, with a nominal speed of 13.07 rpm. The rotor diameter is 114 m. The turbine has a start-up wind speed of 3 m/s and a cut-out wind speed of 25 m/s. Concrete for the foundations will be supplied from a temporary batch plant to be installed on

site. Approximately 350 m^3 of material will be excavated at each turbine site to prepare the foundation and work platform. The total area to be utilized for the installation of the wind turbines is approximately 20 ha, totalizing about 1% of the total wind farm area.

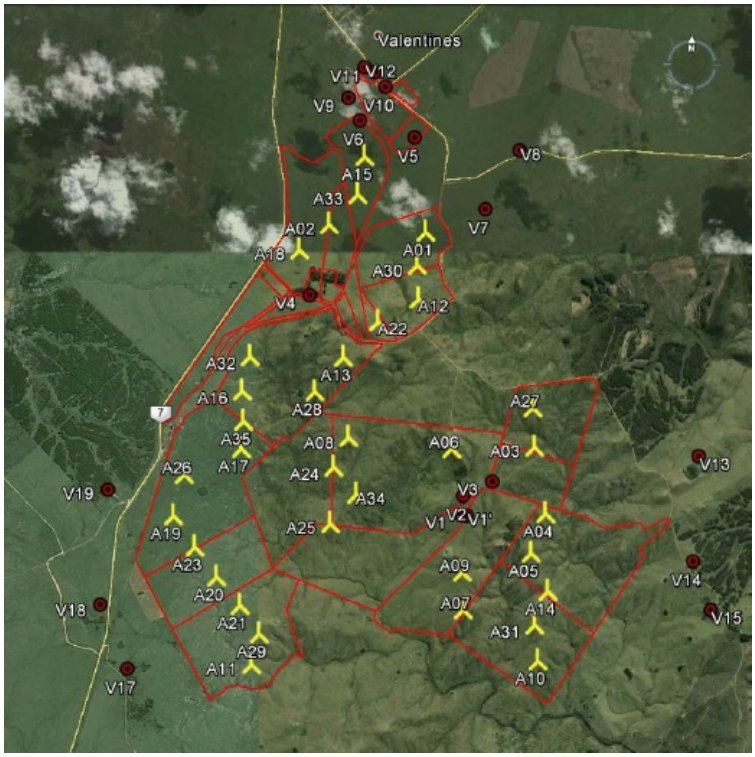

FIG. 2: LOCATION OF THE WIND TURBINES AND BORDERS OF AFFECTED PROPERTIES

2.4. **Substation and transmission line:** The project includes the expansion of an existing 30 kV/150 kV substation from UTE located right next to the wind farm and the installation of a metering station. The produced energy will be connected to the national grid through an existing 150kV transmission line from the Valentines substation.

2.5. **Low Tension Underground Transmission Lines:** Smaller, low-tension underground transmission lines, each 30 or 31.5 kV, will be installed to connect the individual generators to the substation and then into the 150 kV transmission line. These smaller transmission lines will be buried in trenches 1.2 m deep and between 0.60 m and 1.5 m wide. The alignment of the underground lines will follow the internal access and maintenance roads.

2.6. **Concrete Plant:** The concrete plant will be situated near the office buildings and will occupy an area of approximately 2,500 m^2. The plant will have a production capacity of 100 m^3/hour, functioning approximately 3 hours per day for a period of 35 days to complete the turbine foundations. The plant will consume water at an approximate rate of 22.5 m^3/hour during its operation. The plant will produce around 12,250 m^3 of concrete to supply the material needed to construct the 35 foundations, each requiring approximately 350 m^3 of concrete.

2.7. **Access Roads:** A total of approximately 22 km of access / maintenance roads, 6 km of which currently exist, will be constructed and/or maintained to allow access of heavy construction

equipment and supplies as well as long-term service and maintenance of the wind farm. The access roads will be as a minimum 7.5 m wide and will remain unpaved. Rock and other material required for the construction of the access roads will be provided by licensed quarries.

2.8. ***Budget, schedule and workforce.*** The total investment for the Project is expected to be US$178.6 million. Construction activities have an expected duration of 17 months. The required workforce needed to meet the construction schedule is estimated to be an average of 50 workers, with peaks of 100 workers. The wind farm will maintain two shifts during operations, a day shift and a night shift. The day shift will consist of four operators while the night shift will require two. An on-call maintenance crew will also be available to address maintenance and repair issues

D. Environmental and Social Setting

Environmental setting:

2.9. The Valentines Wind Project site is located in the center-east part of Uruguay, in the border between the Departaments of *Treinta y Tres* and *Florida*. The wind project will cover an area of approximately 2,000 ha, of which a total of 20 ha (1%) will be permanently affected by the construction of the wind turbines, maintenance roads, internal transmission lines, and the substation. Much of the wind concession area has already been impacted by human activities, mainly cattle and sheep grazing. The previously impacted landscape is mostly composed of pasture lands and some agricultural fields.

2.10. According to the EIA, no critical natural habitats exist within or in the surroundings of the wind farm area. There is an Important Bird Area (IBA), *Paisaje Protegido Quebrada de los Cuervos*, with 365 has, located approximately 50 km to the northeast of the Project area, which most important bird species are Cuervo de Cabeza Roja *(Cathartes aura ruficollis)*, Seriema *(Cariama cristata)* and Dragón *(Xanthopsar flavus)*. Due to the distance to the wind farm (50 km), this area will not be impacted by the project's activities.

FIG. 3: TYPICAL LANDSCAPE IN THE PROJECT AREA

2.11. Regarding birds and bats, bird surveys conducted at the Project site and described in the EIA registered a total of 69 species, representing 16% of all bird species registered in Uruguay. 12% of the encountered species were migratory (8 species). Two of the encountered species are listed on the IUCN Red List as Vulnerable (*Xolmis dominicanus* and *Rhea americana*); 7 are considered to be priority species of economic or cultural value within Uruguay. Bat surveys were also conducted in the Project area; according to the EIA four species of bats were encountered in the Project area, mostly inside buildings (*Myotis levis, Histiotus montanus, Molossus molossus* and *Desmodus rotundus*). None of the bat species encountered are protected or considered sensitive. UTE has recently contracted the implementation of a birds and bats baseline survey, which will be carried out through a one year survey, including migratory seasons, and will be finished prior to start of operation of the wind farm.

2.12. No relevant streams exist within the wind project site and the EIA did not identify any sensitive species living in or near the site. Nevertheless, some existing cattle ponds and riparian areas can be considered to be sensitive environments and are important for the survival of the cattle and wildlife and will therefore be protected. Engineering design has placed the turbines and other project related infrastructure away from these sensitive areas.

Social setting:

2.13. The project area lies about 1.5 km south of the town of Valentines, the closest human settlement, with a population of 133 inhabitants. Cerro Chato, with a population of approximately 1,694 people lies 18 km to the northeast and the largest nearby city, José Batlle y Ordoñez with a population of 2,203 inhabitants, lies approximately 16 km to the south. There are 6 existing households within the Project area. According to the EIA, the primary economic activity occurring within the wind farm area and its surroundings is ranching (cattle and sheep). A few other economic activities occur in the area on a much smaller scale, such as forest plantations (mostly exotic species). According to the EIA, 85% of the population´s income in the project area is generated from the cattle ranching.

2.14. Twenty-three properties will be affected by the project, owned by 13 private persons (see Fig. 2); owners will sign a leasing contract for 30 years with the Borrower. The EIA studies indicate that 5 households may be impacted by the Blinking Effect during operation of the wind farm over what is generally considered acceptable in Uruguay (established by DINAMA): more than 30 minutes per day and more than 30 hours per year. According to the modeling implemented during the preparation of the EIA, those 5 households will be affected by the blinking effect in ranges from 34 to 43 min/day and from 39 to 51 hours/year. The EIA also determined that noise levels during construction and operation would never surpass the upper limit established by DINAMA during operation -45 dB(A), or will not exceed more than 3 dB(A) the baseline noise if this exceeds 42 dB(A).

E. Alternative Analysis

2.15. The project EIA only analyzes the preferred alternative, or “the Project”; it does not provide a detailed alternatives analysis. The Project developer did conduct its own internal procedure to identify several alternative site locations and a selection process ensued to identify the preferred alternative. Selection criteria included geographical area which provides optimal wind conditions allowing for the use of 2 MW turbines rather than using larger numbers of smaller capacity

turbines as well as other factors including land ownership, proximity to existing infrastructure (substations and transmission lines), accessibility, and distance from major human settlements. The site selected is located in a high wind resource area with excellent accessibility for the transport of materials and will have minimal impacts to only a few property owners.

III. COMPLIANCE STATUS AND PROJECT STANDARDS

A. Appraisal process and local requirements

3.1 Uruguayan Law Nr. 16.466/94 of Environmental Impact Evaluation and Decree 345/2005 establish the requirements for obtaining environmental permits for projects. The process starts with a location-specific environmental feasibility study (*Viabilidad Ambiental de Localización*, VAL) which is needed to determine if a selected location is suitable for a project from an environmental point of view. All projects must present to the National Environmental Authority (*Dirección Nacional de Medio Ambiente* – DINAMA) the project's environmental information prior to initiating any construction activity. DINAMA reviews the project information and classifies the project in one of three classes: A, B and C. Projects or activities classified as Class A do not need to present an EIA report, but an environmental management plan, whereas projects classified as Class B or C require the preparation of an EIA report, being C the classification for the project with most significant impacts, which require public consultation.

3.2 Under these regulations, the Valentines project has been classified by DINAMA as Category B, requiring an Environmental Impact Assessment (EIA). DINAMA granted the *Viabilidad Ambiental de Localización* (VAL) for the Project in November 2013, following a review of the required environmental documentation. The environmental licenses for the project are pending. The EIA, prepared in February 2014, was submitted to DINAMA in March, 2014. In May, 2014, DINAMA required additional information, which was submitted in June, 2014. UTE has presented complementary information requested by DINAMA in August, 2014.

3.3 ***Public consultation.*** According to local regulation, consultation for this type of project is not required in Uruguay; however, the Bank does require consultation with affected parties. UTE performed a consultation process in 2014, which included the distribution of information brochures, advertisements in local radio stations, letters to stakeholders and a meeting with affected community representatives.

B. Compliance with IDB Safeguard Policies

3.4 The Project was classified as Category B by the project team according to Directive B.3 of the Environmental Safeguards Policy (OP-703), given that is likely to cause mostly local and short-term negative environmental and associated social impacts and for which effective mitigation measures are readily available. The environmental and social Due Diligence (DD) determined that the Project is compliant with the applicable policy directives of OP-703 and with the relevant provisions of other policies, specifically the Access to Information Policy (OP-102), the Disaster Risk Management Policy (OP-704) and the Policy on Gender Equality (OP-270) and the Involuntary Resettlement (OP-710). According to the findings of the DD, no impacts on indigenous people are expected; therefore the OP-765 (Indigenous People) policy does not apply.

3.5 The Project complies with the EIA requirements of Directive B.5 (see paragraphs 3.1 and 3.2 above), and the consultation requirements of Directive B.6. The Project also adheres to all applicable national laws according to Directive B.2 (see Section III.A above). The Project includes provisions for Bank monitoring of compliance with all policy requirements (see Section V.B) according to Directive B.7. The Project does not significantly convert or degrade critical natural sites, affect protected areas or damage cultural sites as prescribed by Directive B.9. Project waste management procedures and standards, and pollution and emissions limits are in compliance with Directives B.10 and B.11 (see Section IV.B). The project also complies with Directive B.12, given that compliance of the project's construction process with the relevant provisions of IDB policies was confirmed during due diligence.

Policy / Directive	**Applicable Aspect**	**Compliance Rationale**
OP-703 Environmental and Safeguards Compliance Policy		
B.1 Bank Policies	Compliance with applicable IDB policies	The project is currently fulfilling commitments made to the Bank (see ESAP) in order to be in full compliance with all IDB policies and directives. The implementation of the ESMP will ensure the Project remains in compliance once construction commences and throughout operations.
B.2 Country laws	Compliance with country laws and regulations	The project is currently in compliance with all Uruguayan laws and regulations. Land lease agreements will be made with the property owners in the wind project area. Environmental site selection permit have been obtained and the environmental license is being processed.
B.3 Screening and Classification	Application of appropriate classification	The Project has been screened for its potential environmental and social impacts and has been classified as a Category B operation.
B.4 Other Risk Factors	Third party negotiations	The project will result in minor economic displacement within the wind farm, which must comply with the Bank's policy on Involuntary Resettlement. The negotiations and compensation will be conducted by UTE. Land lease / land use contracts with impacted property owners will be provided to the Bank.
B.5 EA Requirements	Application of adequate assessment process	In accordance with both Uruguayan regulations and Bank policies for Category B projects, an Environmental Impact Assessment was prepared for the project, which fulfilled IDB EIA guidelines and requirements.
B.6 Consultations	Project has undergone appropriate public consultation	The project has conducted a public consultation process with the local community. To date, the community supports the operation. The Project plans to continue engaging local communities to identify social programs
B.7 Supervision and Compliance	Internal supervision and reporting	The Project's ESMP contains provisions for self-monitoring and supervision on a quarterly basis, as well as supervision of contractors, in order to

		maintain a high level of compliance. Additionally, Government entities, as well as the IDB Environmental Safeguards Unit will monitor the project during construction and operation. The Project will submit quarterly compliance reports during construction and annual compliance reports during operations.
B.8 Transboundary Impacts	N/A	The Project does not impact neighboring countries.
B.9 Natural Habitats and Cultural Sites	Conversion of natural habitat	The project does not lie within any protected area and no critical natural habitats exist within or in its surroundings. The Project will occupy previously disturbed lands and will not present a significant conversion or degradation of this critical natural habitat. The Project area's current land use is mainly not native grassland.
B.10 Hazardous Materials	Waste management	The project's ESMP provides a strict waste management program. Due to the nature of the operation, few hazardous materials are stored on-site during construction (minimal amounts of fuel and paint) and it is envisioned that no hazardous materials will be stored at the facility during operations. A licensed contractor will be contracted to handle the waste management. The project's Contingency Plan also describes mechanisms to control spills or other incidents.
B.11 Pollution Prevention	Pollution control and CO_2 emissions	The project's PGA provides measures to control pollution such as project waste material, cement, and sediment run-off. The project will reduce the country's CO_2 emissions by 187,726 ton CO_2/year by providing a source of green energy. The project's Contingency Plan also describes mechanisms to control spills or other incidents.
B.12 Projects Under Construction	N/A	The Project is not currently under construction.
B.13 Non-Investment and Flexible Lending Instruments	N/A	N/A
B.14 Multiple Phase Loans	N/A	N/A
B.15 Co-Financing Operations	Potential presence of other lenders	Besides the IDB A-loan, the Project will be financed through the China Fund and other potential B-lenders. The Project's ESMP complies with other international standards and will assist the Project to maintain a high level of compliance.
B.16 In-Country Systems	N/A	N/A
B.17 Procurement	N/A	N/A

OP-710 Involuntary Resettlement	Land lease agreements with the wind farm property owners	No involuntary resettlement in the form of physical displacement will occur as a result of the project; however, there will be approximately 13 property owners who will experience minor economic displacement due to the installation of the wind turbines. The negotiations for land use agreements are being conducted by UTE. The Bank will monitor the negotiation process and review land lease / land use agreements.
OP-765 Indigenous Peoples	N/A	No indigenous communities or peoples will be negatively affected by the Project and no indigenous groups have been identified in surrounding areas.
OP-704 Disaster Risk Management Policy	N/A	The area is not known to be a disaster risk area.
OP-270 Gender Equality	Avoiding gender discrimination within the Project or as a result of the Project. Providing opportunities for women.	Women will be incorporated into the labor force where feasible; no gender discrimination will occur due the project. The Project is currently attempting to identify social programs to benefit women and children in the local communities.
OP-102 Access to Information Policy	Project information disclosure	The Project has adequately disseminated information in the local community in radio advertisements and letters to stakeholders. A public consultation meeting has also occurred. IDB will also make relevant Project information available on its website.

C. Project requirements and standards

3.6 The Project has prepared a project-specific Environmental and Social Management Plan (ESMP) or *Plan de Gestión Ambiental* (PGA) for the construction phase. The PGA outlines the Borrower's environmental and social responsibilities including waste management, traffic management, health, safety and labor, monitoring and auditing. The PGA also addresses specific project location related issues such as erosion control, spill management, and road safety and describes any detailed measures required to mitigate any potential issues. The Project has also prepared a Contingency Plan to outline the actions to be taken in the event of a spill, accident, emergency, or other incident.

3.7 UTE has developed a Grievance Mechanism which will be implemented and tracked during construction and operation.

IV. KEY ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

A. Summary of key impacts and risks

4.1 The primary potentially negative environmental impacts and risks during construction phase will be mainly associated with the erection of the wind turbines, the expansion of the substation and the construction or improvement of access roads. Main construction impacts are: (i) habitat disturbance; (ii) soil erosion; (iii) dust generation; (iv) increase in heavy traffic; (v) noise; (vi) loss of vegetation; (vii) occupational health and safety hazards for the workforce; (viii)

conversion of land use with visual impacts; (ix) increased use of previously inaccessible areas, and (x) economic displacement due to the installation of the wind turbines. Most of these construction impacts and risk can be adequately mitigated through the implementation of appropriate management plans.

4.2 During operation, the main impacts and risks are: (i) bird and bat collision; (ii) barrier effects to movement of birds, both resident and migratory species; (iii) loss of vegetation; (iv) accidental discharges of hazardous materials during maintenance works; (v) community health and safety hazards; (vi) noise impacts caused by the wind turbines; and (vii) blinking effect caused by the turbine blades during dawn and dusk hours.

B. Environmental impacts and risks

4.3 One of the potential risks associated with wind power facilities is bird collision. Some migratory species were observed during the surveys; however, since the wind project area does not lie within any migratory routes or important fly-ways, the risk of collision to migratory birds is expected to be low as the numbers of individuals traversing the area will be low. The post-construction monitoring will help in determining the risk of collision during actual operations. Should collision rates be high during operations, mitigation measures such as changes in cut-in speed or mandatory temporary shutdowns during peak migrations could be implemented.

4.4 Bats also face collision risk, and other risks, associated with wind farms; in fact, the incidence of bat mortality is generally higher for bats than birds, presumably because bats seem to be attracted to wind generators. Several theories exist for this phenomenon including: the bats view the tower as a potential roost site, dead insects on and near the generator are seen as an easy food source, the bats are attracted to the heat produced by the generator, and the sound and electromagnetism produced by the generator disrupts their echolocation. Additionally, bats face barotrauma, a condition resulting from a sudden change in atmospheric pressure (such as encountered near the rotor of an operational turbine), which causes their fragile lungs to expand beyond capacity leading to death. Bat field surveys were conducted in conjunction with the EIA and no caves were observed during field visits; however, groups of bats representing four different species were observed to be roosting in abandoned houses within the Project area. None of the encountered species, or any of the 20 species known to exist in Uruguay, appears as threatened or vulnerable on the IUCN List of Red Book Species. As with birds, the mortality to bats due to collisions with generators should be closely monitored and reported during operations, particularly due to the large mosquito population surrounding the project site. Mitigation measures, such as increasing the cut-in speed of the generators, could be implements should monitoring results indicate high bat mortality.

4.5 The EIA did not identify any sensitive or protected species of amphibians or reptiles occurring within the wind project area. Routine environmental inspections described in the *Plan de Manejo Ambiental* will serve as safeguards against any potential impacts. The barrier effects are related to displacement. Displacement occurs when a species decreases or discontinues use of an area due to a human activity. The level of barrier effect depends on species, turbine layout, the species ability to compensate for losses in energy due to avoidance, and most importantly, the size of the wind facility and the presence of other wind farms in the region. The proposed project will have 35 turbines and is not located near other known planned wind farms. Although it does not appear that the wind project area is crossed by any avian migratory routes, the barrier effect will be monitored during operation.

4.6 Another impact will be the loss of vegetation within the project area and along the new access roads. As mentioned previously, much of the habitat has been previously significantly impacted by human activities. While the majority of the wind project area has been converted to pasture lands or agricultural lands, there are some stands of native vegetation and exotic tree species which may provide nesting habitat to various species of birds; these stands will be avoided during construction.

4.7 Maintenance activities during operation may cause accidental discharge of hazardous materials (e.g. from changing the oil in the generator, fuel leaks from maintenance vehicles or paint spills) or trigger occupational health and safety concerns (working at heights). These potential impacts and risks are easily managed and will be addressed in the Environmental Management Plan for operation.

C. Social impacts and risks

4.8 ***Land Acquisition and Physical Displacement.*** The Project has already identified the land required to install the turbines, substation, underground transmission lines and access roads, and negotiations with affected property owners are currently ongoing. These portions of the Project do not lead to any physical displacement or resettlement. A land contract lease agreement will be signed with the owners of the affected properties (13 persons that own 23 properties, according to the EIA) where the turbines will be located. No physical resettlement will occur; however, several of these owners may experience economic displacement as they partially lose the ability to use portions of their land. The land use restriction within the wind farm consists of a 200 m radius exclusion zone with center at the base of each wind tower, in which no infrastructure is allowed and the only permitted land use is grazing and similar agricultural uses. Land lease agreements will have to be completed with the property owners before construction begins. The Bank has requested to be updated on the negotiation process, being conducted by UTE, as it progresses.

4.9 One of the most significant impacts during construction will be the induced traffic to and within the project area, mainly due to the transportation of the materials needed for the construction of the foundations of the wind towers and the transportation of the wind turbines and towers' components from the Port of Montevideo to the wind farm. The EIA estimated that the latest will consist of approximately 280 truck travels through a distance of 250 km lasting 7 hours. The itinerary for these travels will be agreed with the Ministry of Transport (*Ministerio de Transporte y Obras Públicas* – MTOP).

4.10 Another significant impact of the operations phase of the project is the visual impact, which constitutes a permanent one. The selection of the location of the turbines took into consideration the visual analysis made during the preparation of the EIA in order to mitigate this impact, that identified the Zone of Visual Influence (ZVI) of the project (see Fig. 4 below).

4.11 Community health and safety hazards specific to wind energy facilities primarily include: aircraft navigation safety, electromagnetic interference and radiation. The potential of such hazards is not considered significant in the context of the Project since affected communities will continue their economic activities (grazing and agriculture) on the land where the Project is located. Increased community health and safety hazards related to public access may not be insignificant, and it's adequately addressed in the Project's Environmental Management Plan, including adopting appropriate risk prevention procedures and emergency planning during construction and maintenance activities.

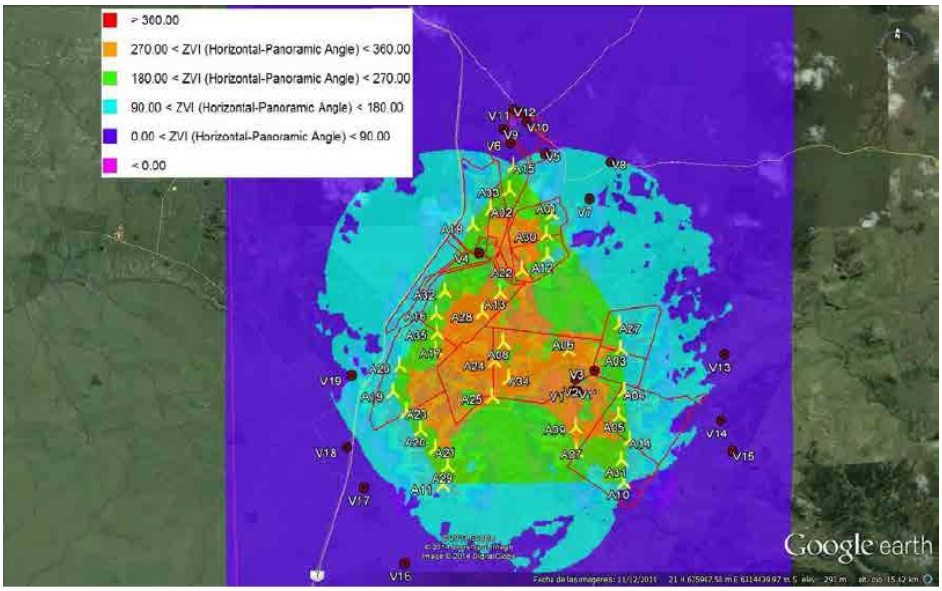

FIG. 4: PROJECT´S ZONE OF VISUAL INFLUENCE

4.12 The nearest human settlement is the village of Valentines, located at 1.4 km from the closest wind tower. 6 turbines will be located at less than 3 km from Valentines, which is the minimum distance to cities, villages and towns recommended by DINAMA to minimize visual impacts.

4.13 Potential noise impacts caused by the wind turbines during operation on adjacent communities are not expected to be significant; however, there are some existing houses within the Project area and near planned turbine locations (the closest home is approximately 700 m) which should be adequate distance and will likely not require mitigation. Based on the noise study, which represents a worst-case scenario, it does not appear that any homes or other infrastructure will experience noise levels higher than the acceptable standard for night time of 3 dBA higher than baseline levels. Noise levels for all homes are also within an acceptable range of day time hours. Noise levels will be further verified through the periodic monitoring of noise level to be carried out during the Project's operation, including at the site's boundaries. Appropriate mitigation measures will be applied should noise levels exceed accepted standards.

4.14 Regarding the Blinking Effect, the EIA determined that 5 houses will need some extent of mitigation measures, mainly consisting of vegetal barriers. The implementation of such measures and its effectiveness will be monitored during operation.

D. Cumulative impacts

4.15 Cumulative impacts may exist in areas where multiple wind projects have been, or will be, constructed in close proximity to each other and within established migratory routes and corridors, or within sensitive areas. There are no wind farms existing or planned in the vicinity of the project area.

E. Positive impacts

4.16 The Project will likely result in net positive benefits for the nearby communities as well as the country, in general. The Project, during construction phase, will provide direct employment to approximately 100 workers. A preference for workers from local communities will be provided;

an estimated 70% of the total workforce will be local laborers. The Project will be tied into the Uruguayan national grid, thus providing cleaner energy to the country and reducing the carbon footprint of energy generation in Uruguay. The Project is expected to result in an estimated savings of 182.7 tCO_2/year through the displacement of thermal power generation.

F. IDB Additionality

4.17 Through its involvement in the project, IDB provided guidance and support to complement the EIA with additional studies, baseline surveys and other inputs, as well as to ensure compliance with IDB Policies and Safeguards, IFC Environmental, Health and Safety Guidelines and other international standards.

V. MANAGEMENT AND MONITORING OF ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY AND LABOR IMPACTS AND RISKS

A. Management Systems and Plans

5.1 UTE has developed an Environmental and Social Management Plan –ESMP- for the construction phase (*Plan de Gestión Ambiental – Etapa de Construcción*) according to the requirements established by the Uruguayan legislation and in line with the Bank's policies regarding Environmental Management Systems. The ESMP includes –among other issues- plans for the following activities: workers health and safety and code of conduct; traffic management; use and maintenance of equipment and machinery; fuel and hazardous materials management; solid waste and effluents management; noise and emissions monitoring and control; environmental monitoring including water, soil, biodiversity, noise, emissions, solid waste, contractors activities, etc.; environmental training and others. A Contingency Plan for the construction phase has also been prepared by UTE, including response measures to contingencies like fires, hazardous materials and fuel spills, several types of accidents, flooding, erosion and traffic accidents.

5.2 An ESMP and a Contingency Plan for the operations phase will be prepared by UTE according to the requirements established by the Uruguayan legislation and in line with the Bank's policies previous to the start of operation of the Valentines wind farm.

5.3 The most relevant social activities implemented by UTE to develop a good relationship with the local communities include:

i. Public Consultation: the Project has already conducted a public consultation meeting with community members, that provided an opportunity for interested people to learn about the project and have their doubts and concerns addressed by company representatives. Consultation will continue through the construction and operation phases.
ii. Grievance Mechanism: The Project will implement a Grievance Mechanism to allow stakeholders an opportunity to voice their opinions, concerns, complaints, or comments outside of the public consultation meetings. These comments will be recorded, as well as the Project's responses to these comments. Issues will be tracked to determine how the Project responds to complaints and interacts with the complainant to resolve outstanding issues. The Grievance Mechanism will be accessible to individuals impacted by the wind farm and the transmission line.

B. Monitoring and Supervision

5.4 The project includes different levels of supervision. The most relevant ones include (i) internal project supervision, conducted by UTE's environmental team and defined within the PGA; (ii) Bank supervision, carried out regularly by the project team with the support of specialized consultants; and (iii) inspections from DINAMA, an entity of the Uruguayan Government responsible for enforcement of compliance with environmental laws and regulations.

5.5 UTE will conduct quarterly internal audits and send quarterly reports to the Lenders. The Bank, in coordination with other co-lenders, will conduct semi-annual supervision missions during the construction phase and annual supervision missions during operations to assess compliance with Bank policies. DINAMA has the right to conduct unannounced site audits of all projects to ensure all environmental conditions are met.

5.6 UTE is preparing a detailed monitoring plan for the operations phase which will include surveys for birds and bats to assess the impacts of collisions to these species and will work with the Lenders and DINAMA to ensure monitoring protocols are compatible with Bank policies and DINAMA requirements for wind farms in operation.

C. Indicators

5.7 In the case of environmental indicators, the projects will be assessed in terms of compliance with the IDB Safeguard Policies and compliance with local regulations. The semi-annual reports provided by the Borrower will detail vital information including calculated reduction of CO_2 emissions. Based on current energy production in Uruguay, the Colonia Arias Project is expected to create a reduction of approximately 182.7 ton CO_2/year. Carbon reductions will be directly related to the amount of energy generated, of which, an estimated 309.6 GWh/yr is anticipated.

VI. REQUIREMENTS TO BE INCLUDED IN THE LEGAL AGREEMENTS

Throughout the life of the Loan:

6.1 The IDB will require within its Loan Agreement that the Project and each Project party (Sponsors/Borrower) and other Project/Environmental parties, including any contractors and sub-contractors will, at all times during the life of the Loan Agreement, comply with the following requirements:

1. All applicable environmental, social, health and safety, and labor Uruguayan regulatory requirements.
2. All requirements associated with any environmental, social, health and safety, and labor related permits, authorizations, or licenses that apply to the Project, the Borrower or any party responsible for executing the Project or its mitigation measures.
3. All environmental, social, health and safety, and labor requirements of the Project contracts and any subsequent modifications.
4. All aspects and components of all of the Project's environmental, health and safety, social and labor documents.
5. All relevant IDB policies such as the Environment and Safeguards Compliance Policy (OP-703), the Involuntary Resettlement Policy (OP-710), the Disaster Risk Management Policy (OP-704), the Disclosure of Information Policy (OP-102) and the Gender and Equity in Development Policy (OP-270) and their respective guidelines.
6. Comply with all the requirements indicated in the Environmental, Health and Safety Action Plan.

Prior to First Disbursement:

6.2 The Project shall appoint an Environmental and Social Specialist (new hire or designate existing employee) for the duration of the construction period to prevent and manage potential impacts and supervise and monitor mitigation measures. The Borrower shall present to the Bank an updated organizational chart illustrating roles and responsibilities throughout the project cycle.

Prior to each disbursement:

6.3 The Sponsor/Borrower shall certify compliance with all environmental social, health and safety and labor requirements in the loan agreement, including any Corrective Action Plans if applicable.

Prior to construction:

6.4 The Project shall send to IDB copy of the AAP (*Autorizacion Ambiental Previa*) of the Project issued by DINAMA.

6.5 The Project shall demonstrate to the Bank that all pending land use/land lease permits have been obtained. Copies of relevant permits, contracts, and agreements shall be submitted to the Bank.

6.6 The Project shall incorporate into all contractors' contracts clear regulations and penalties for non- compliance with policies, plans and programs (including mitigation measures) adopted by the company. This will include clear procedures and timing for reporting environmental, health and safety related incidents/accidents and a specific monitoring program to assess causes of incidents/accidents and track performance of the corrective measures. The Sponsor/Borrower shall provide evidence of supervision and oversight of the contractors.

Prior to operation:

6.7 The Project shall develop and implement a project specific ESMP for Operations to assess and mitigate the negative impacts associated with the Project during the operations phase. The ESMP will include a defined monitoring and supervision regime. All project contractors will also be required to comply with the actions described in the ESMP.

6.8 The Project shall develop a Bird and Bat Monitoring Protocol to be approved by the Bank. At a minimum, the bird and bat monitoring and related activities will be initially conducted for a period of three years following the start of operations of the Project. Depending on the survey results the Bank may require to continue the bird and bat monitoring for additional years.

ANNEX I: ENVIRONMENTAL and SOCIAL ACTION PLAN (ESAP)

#	Item	Action	Deadline	Status
A. ENVIRONMENTAL AND SOCIAL PERMITS				
1	***Environmental license***	Submit to the Bank copy of the *Autorización Ambiental Previa* (AAP) issued by DINAMA for the Valentines Wind Project	Prior to start of construction´s phase	In process
B. ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS / PLANS				
2	***E&S Management Plans***	Develop and submit to the Bank the Environmental and Social Management Plan for operation	Prior to start of operation's phase	Pending
3	***E&S management scheme***	Submit to the Bank the environmental and social management scheme to be applied for the supervision of the project	Prior to first disbursement	Pending
4	***Contractors´supervision***	Develop and submit to the Bank specific environmental and social procedures for contractors (supervision and enforcement mechanism, including reporting procedures for environmental, health and safety incidents/accidents)	Prior to first disbursement	Pending
5	***Land use/lease agreements***	Submit to the Bank copies of the land use / land lease agreements signed with property owners affected by the wind farm	Prior to first disbursement	In process
C. MONITORING AND REPORTING				
6	***Birds and bats monitoring***	Submit to the Bank the Terms of Reference for the hiring of the Birds & Bats monitoring during operation	Prior to first disbursement	Completed
7		Submit to the Bank copy of the contract for the monitoring of birds and bats during operation	Prior to start of operation's phase	Pending
8	***E&S monitoring***	Results of the monitoring plans should be included in the periodical reports to be presented to the Lenders	Ongoing	To be included in reports to the Lenders

SAFEGUARD POLICY FILTER REPORT

PROJECT DETAILS	
IDB Sector	ENERGY-ENERGY EFFICIENCY AND RENEWABLE ENERGY IN END USE
Type of Operation	Investment Loan
Additional Operation Details	
Investment Checklist	Power Wind
Team Leader	Matas Trillo, Rafael (RAFAELMA@iadb.org)
Project Title	Los Valentines Wind Project
Project Number	UR-L1105
Safeguard Screening Assessor(s)	Camé Saldivar, Oscar Luis (OSCARLUISC@iadb.org)
Assessment Date	2015-02-26

SAFEGUARD POLICY FILTER RESULTS		
Type of Operation	Loan Operation	
Safeguard Policy Items Identified (Yes)	Potential disruption to people's livelihoods living in the project's area of influence (not limited to involuntary displacement, also see Resettlement Policy.)	(B.01) Resettlement Policy– OP-710
	The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
	The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)
	The operation (including associated facilities) is screened and classified according to their potential environmental impacts.	(B.03)
	An Environmental Assessment is required.	(B.05)
	Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation of women and men, (b) socio-	(B.06)

	culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.	
	The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
	The operation has the potential to impact the environment and human health and safety from the production, procurement, use, and disposal of hazardous material, including organic and inorganic toxic substances, pesticides and Persistent Organic Pollutants (POPs).	(B.10)
	The operation is already under construction by the Executing Agency or the Borrower.	(B.12)
	Any part of the investment or component(s) is being co-financed.	(B.15)
	Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.	(B.17)
Potential Safeguard Policy Items(?)	No potential issues identified	
Recommended Action:	Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.	
Additional Comments:		

ASSESSOR DETAILS	
Name of person who completed screening:	Camé Saldivar, Oscar Luis (OSCARLUISC@iadb.org)
Title:	
Date:	2015-02-26

COMMENTS
No Comments

SAFEGUARD SCREENING FORM

PROJECT DETAILS	
IDB Sector	ENERGY-ENERGY EFFICIENCY AND RENEWABLE ENERGY IN END USE
Type of Operation	Investment Loan
Additional Operation Details	
Country	URUGUAY
Project Status	ESS
Investment Checklist	Power Wind
Team Leader	Matas Trillo, Rafael (RAFAELMA@iadb.org)
Project Title	Los Valentines Wind Project
Project Number	UR-L1105
Safeguard Screening Assessor(s)	Camé Saldivar, Oscar Luis (OSCARLUISC@iadb.org)
Assessment Date	2015-02-26

PROJECT CLASSIFICATION SUMMARY		
Project Category: B	**Override Rating:**	**Override Justification:**
		Comments:
Conditions/ Recommendations	• Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements). • The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports. • These operations will normally require an environmental and/or social	

	impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary.

SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS

Identified Impacts/Risks	Potential Solutions
The project will or may require involuntary resettlement and/or economic displacement of a minor to moderate nature (i.e. it is a direct impact of the project) and does not affect indigenous peoples or other vulnerable land based groups.	**Develop Resettlement Plan (RP):**The borrower should be required to develop a simple RP that could be part of the ESMP and demonstrates the following attributes: (a) successful engagement with affected parties via a process of Community Participation; (b) mechanisms for delivery of compensation in a timely and efficient fashion; (c) budgeting and internal capacity (within borrower's organization) to monitor and manage resettlement activities as necessary over the course of the project; and (d) if needed, a grievance mechanism for resettled people. Depending on the financial product, the RP should be referenced in legal documentation (covenants, conditions of disbursement, project completion tests etc.), require regular (bi-annual or annual) reporting and independent review of implementation.
The negative impacts from production, procurement and disposal of hazardous materials (such as fuels and solvents) are minor and will comply with relevant national legislation, IDB requirements on hazardous material and international standards and guidelines such as the IFC Wind Power Guidelines (if applicable).	**Monitor hazardous materials use:** The borrower should document risks relating to use of hazardous materials and prepare a hazardous material management plan that indicates how hazardous materials will be managed (and community risks mitigated). This plan could be part of the ESMP.

DISASTER RISK SUMMARY

Disaster Risk Category: Low

Disaster/ Recommendations	
	• No specific disaster risk management measures are required.

ASSESSOR DETAILS	
Name of person who completed screening:	Camé Saldivar, Oscar Luis (OSCARLUISC@iadb.org)
Title:	
Date:	2015-02-26

COMMENTS
No Comments