

ENVIRONMENTAL AND SOCIAL STRATEGY (ESS)

Colonia Arias Wind Project URUGUAY

I. SUMMARY

1.1 Project Summary

Country:	Uruguay
Sector:	Renewable Energy
Project name:	Colonia Arias Wind Project
Borrower:	Fideicomiso Financiero Arias, a trust incorporated under the laws of Uruguay
Sponsor:	Administración Nacional de Usinas y Trasmisiones Eléctricas (UTE)
Total project cost:	Approx. US\$168 million
IDB A-loan:	Up to US\$67 million
Resp.	
Department:	Structured and Corporate Finance (SCF/INF)
Env. Safeguards & Policies:	OP-102; OP-703 (B.1; B.2; B.3; B.4; B.5; B.6; B.7; B.9; B.10; B.11; B.15)
Environmental Category:	B

II. PROJECT DESCRIPTION

- 2.1 The proposed Project consists of the construction, operation and maintenance of i) a 70 MW wind farm; ii) an 26.6km transmission line; iii) a substation, and iv) 17km of service roads, to be located in the Department of Flores, 140km from Montevideo, Uruguay. The Project will have 35 Gamesa turbines (G114-III A-93 meter) of 2 MW each, and will inject energy to the national grid to the substation of Cerro Colorado to be built. The Project is estimated to have a 17-month construction period, with construction starting by the first quarter of 2015
- 2.2 The Borrower will be a special purpose company (SPC) to be incorporated under the laws of Uruguay for the purpose of the development of the Project. UTE (*Administración Nacional de Usinas y Trasmisiones Eléctricas*) –a state-owned electricity company of Uruguay- is expected to ultimately hold 20% of the shareholding structure of the Project, while the remaining 80% is expected to be sold to institutional and minority investors, once the financing of the Project is in place. UTE will be the sole guarantor of the obligations of the Borrower under the loan documents.
- 2.3 The Borrower will enter into an EPC contract with Gamesa Eólica SL y Gamesa Uruguay SRL. Operation and maintenance will be also provided by Gamesa Uruguay SRL, under a contract satisfactory to the Bank. Gamesa S.A., the parent company in Spain, will

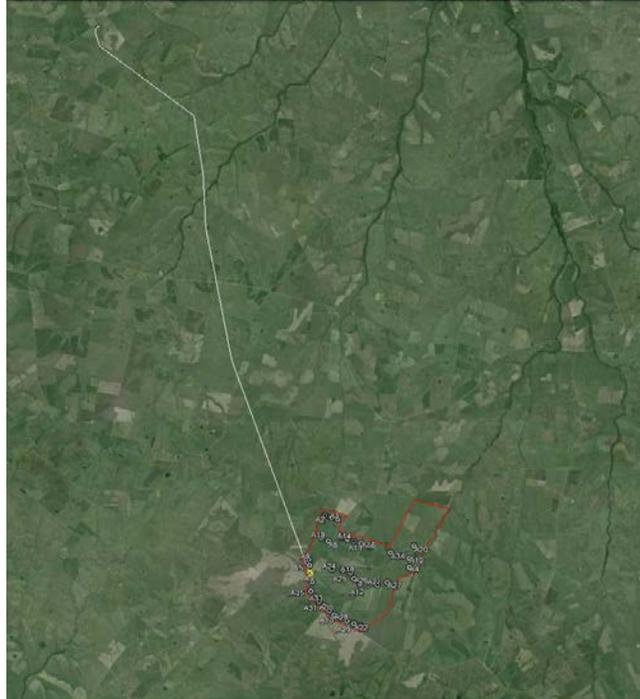


Fig. 2: Boundaries of the wind farm and transmission line

III. INSTITUTIONAL AND REGULATORY CONTEXT

- 3.1 National Law Nr. 16.466 of Environmental Impact Evaluation and Decree 345/2005 establishes 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. DINAMA's classification scheme of projects is the reverse of IDB's classification system, in which A is the category with most impacts.
- 3.2 Under these regulations, the Colonia Arias project has been classified by the DINAMA as Category B and requires an Environmental Impact Assessment (EIA). DINAMA granted the *Viabilidad Ambiental de Localización (VAL)* for the Project in July 2012 following a review of the required environmental documentation. Due to a delay in the submission of the EIA and to changes in the transmission line alignment, a new VAL was submitted to DINAMA in September 2014. The environmental licenses for the project are pending. The EIA, finalized in June 2014, has been provided to the Bank for review. The

compliance with national regulations and with IDB standards will be verified during due diligence.

- 3.3 The Project triggers the following directives of IDB's OP-703 Environmental and Safeguards Policy: B.1, Bank Policies; B.2, Country Laws and Regulations; B.3, Screening and Classification; B.4 Other Risks (due to low institutional capacity from executing agency); B.5, Environmental Assessment; B.6, Consultation; B.7, Supervision and Compliance; B.9 Natural Habitats; B.10, Hazardous Materials; B.11, Pollution Prevention. The OP-102, Disclosure of Information Policy, and Policy OP-710 on Involuntary Resettlement also apply for this Project, due to the need of a right of way for the installation of the transmission line. Any land lease/land use agreements or negotiations with land owners will be reviewed to determine compliance with the OP-710. Based on available information, the Project has been classified by the Bank as a Category B operation.

IV. ENVIRONMENTAL AND SOCIAL SETTING

- 4.1 The *Parque Eolico Colonia Arias* covers an area of approximately 2,000 ha, located in the *Colonia Jose Arias*, in the Flores Department, a rural area where the main activity is cattle breeding. Most of the wind concession area has already been impacted by human activities, mainly cattle and sheep grazing. The previously impacted landscape appears to be mostly composed of pasture lands and some agricultural crops. The closest house to the site is located 784m from a wind turbine. During due diligence the area that will be permanently affected by the erection of the wind turbines and other facilities will be evaluated.

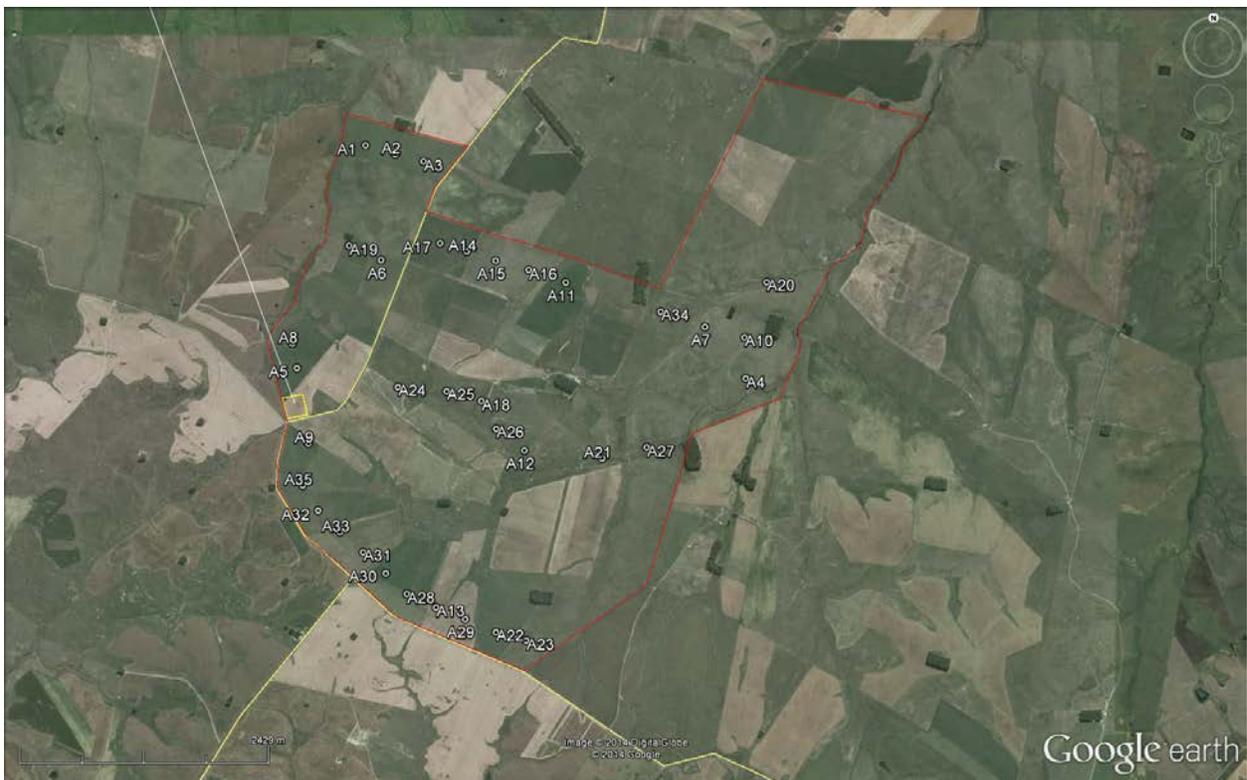


Fig. 3: Tentative location of the turbines

- 4.2 According to the EIA, no critical natural habitats exist within or in the surroundings of the wind farm area. There is an archeological site 18 km north from the project site, the Chamangá Rock Painting Place (*Localidad Rupestre de Chamangá*), a concentration of rock paintings located to the east of Trinidad, Uruguay. This site is part of the Uruguayan National Protected Areas System (*Sistema Nacional de Áreas Protegidas - SNAP*) and its inclusion in the UNESCO World Heritage list has been proposed; it contains 43 rock paintings located in the open air.
- 4.3 Initial bird surveys conducted at the Project site during the preparation of the EIA registered a total of 18 species; 3 of them migratory. Two of these species are listed in the IUCN Red List as Vulnerable (*Geranoaetus melanoleucus* and *Rhea americana*). No bat surveys were conducted in the Project area; according to the EIA –based on bibliographic information- eleven species of bats could potentially exist in the Project area, none of them considered protected or sensitive. The closest IBAs to the Project site (see Fig. 4) are *Serranias del Este* (UY015, 70 km east from the wind farm) and the IBA *Playa Penino y Humedales de Santa Lucia* (UY012, 60 km south)

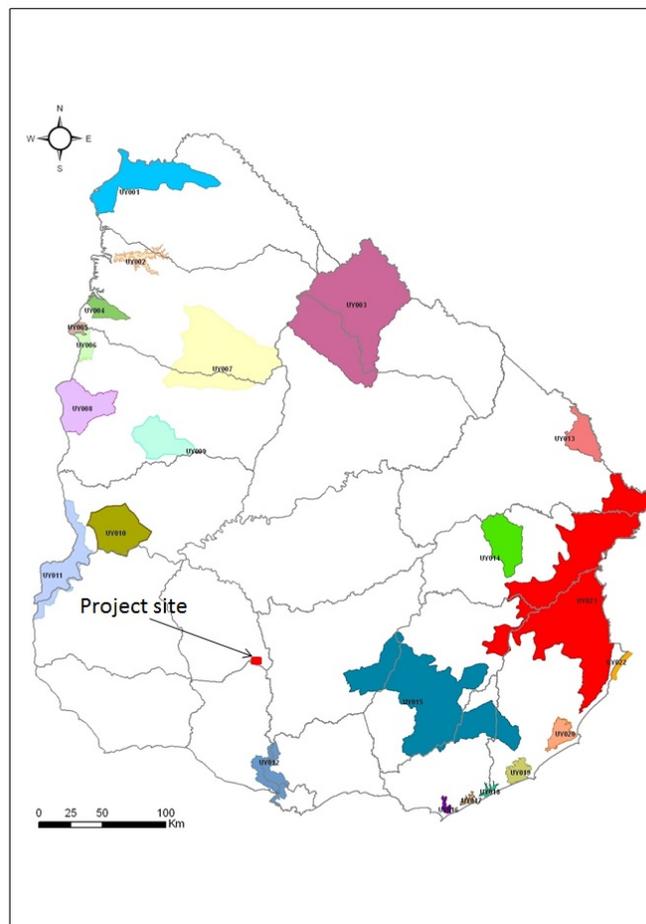


Fig. 4: Uruguayan IBAs

- 4.4 The site will be located approximately 22 km from Route Nr. 3. The closest urban settlements are the city of *Sarandi Grande* (6,130 inhabitants) and the villages of *Pintado* (170 inhabitants) and Cerro Colorado (96 inhabitants), all of them located about 20 km from the site in a rural area mainly dedicated to the dairy and cattle raising.
- 4.5 According to the EIA, it was confirmed that households located close to the wind park will not 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 same source, noise levels during construction and operation would never surpassed 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). These issues will require attention during the Due Diligence and mitigation measures will be developed to address these impacts, such as relocation of turbines or planting a bioscreen using native species.



i) Pradera



ii) Cultivo agrícola-forrajero



iii) Espejo de agua



iv) Bosque de eucaliptos para abrigo

Fig. 5: Typical landscape in the project area

Source: EIA

V. KEY POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

- 5.1 Potential environmental impacts and risks associated with wind farms during the construction phase are mainly linked with the erection of the wind turbines, the installation of the transmission line, the substation and access roads. Main construction impacts are: (i) habitat disturbance; (ii) soil erosion; (iii) dust generation; (iv) increased heavy traffic; (v) noise; (vi) loss of vegetation and; (vii) occupational health and safety hazards for the workforce. Potential impacts of specific importance for the Colonia Arias project include: the risk of impacting habitat for two identified vulnerable species, the risk of impacting archeological sites or encountering undiscovered archeological artifacts during construction, the risk of temporarily affecting the livelihoods of communities and those derived from the expropriation process as well as the absence of proper national legislation and/or practices, such as limited consultation process and lack of alternatives analysis.
- 5.2 During operation, main impacts and risk associated with wind farms are: (i) bird collision; (ii) bat collision and barotrauma incidents; (iii) loss of vegetation; (iv) accidental discharges of hazardous materials; (v) community health and safety hazards; (vi) noise impacts caused by the wind turbines; (vii) the blinking effect caused by sunlight passing through the rotating blades, and (viii) the impact on the visual landscape.
- 5.3 The due diligence will determine with more certainty the extent of anticipated impacts of the Project. Based on available documentation, the significance of impacts should be minor to moderate. It is expected that the Borrower will apply mitigation measures that corresponds to best industry practices for the wind power sector.

VI. ENVIRONMENTAL AND SOCIAL DUE DILIGENCE STRATEGY

- 6.1 Based on the requirements outlined in IDB's OP-703 Environmental and Safeguards Compliance Policy, the Team proposes that the Colonia Arias Wind Farm Project be classified as a Category B.
- 6.2 The Bank will perform an Environmental and Social Due Diligence ("ESDD") in order to confirm that all of the Project's relevant impacts and risks have been, or will be, properly and adequately evaluated, and mitigated.
- 6.3 The ESDD will specifically address the following aspects:
- a. Review of the final layout of the wind farm, transmission line and substation, as well as land acquisition needs to determine potential impacts on households present in the area and current land use;
 - b. Determine the significance of impacts of the project on birds, bats and terrestrial fauna and their respective habitats, with a specific attention to already identified vulnerable species and other potentially species with a conservation status of interest per the IUCN Red List;
 - c. Evaluate any potential adverse impacts on terrestrial ecosystems as a result of construction activities i.e. wind turbines, transmission line, substation and service roads;

- d. Investigate the potential impacts to the Chamangá Rock Painting Place (*Localidad Rupestre de Chamangá*) from the placement and operation of the turbines and to the closes IBAs;
 - e. Assess potential adverse socio-economic impacts of construction activities such as temporary loss of access or use of lands for cattle herders and farmers and impacts of the right of way for the transmission line;
 - f. Evaluate the impact of noise and blinking effect on the surrounding population and potential mitigation measures;
 - g. Examine if land acquisition is required, if some houses will need to be resettled and if economic displacement will be caused by the Project;
 - h. Assess on the adequacy and timely consultation and information dissemination process with affected parties of the current project;
 - i. Evaluate potential impact of construction activities on archeological sites in the area as well as the implementation of a chance-find procedure;
 - j. Evaluate the construction timeframe and required workforce, including the availability of local workforce, as well as its impact on the local communities;
 - k. Review the Environmental and Social Management Plan (ESMP), to avoid, minimize, and mitigate any potential impacts especially on terrestrial areas that could be considered a natural habitat for endangered species;
 - l. Determine if the Project has been designed and carried out in compliance with environmental law and regulations of Uruguay. Written evidence of the acceptance of the EIA and issuance of the environmental license will be sought;
 - m. Review of the EIA to verify its compliance with IDB standards and requirements and identify eventual gaps;
 - n. An evaluation, and further development as necessary, of Project execution monitoring and supervision procedures to ensure proper implementation of environmental, social, health, safety and labor actions and requirements;
 - o. Assessment of the Project's compliance with all relevant safeguards directives of the IDB's Environment and Safeguards Compliance Policy, and development of an Action Plan for the timely resolution of non-compliances;
 - p. Review of the Bird and Bat Monitoring Protocols during operation of the wind farm.
- 6.4 An Environmental and Social Management Report (ESMR) will be prepared by the Project Team as part of the environmental and social due diligence to analyze the management of the environmental and social aspects of the project.

ANNEX I: Households located close to the wind park



ANNEX II: Location of the transmission line



SAFEGUARD SCREENING FORM

PROJECT DETAILS	
IDB Sector	[Not Set]
Type of Operation	Other Lending or Financing Instrument
Additional Operation Details	
Country	
Project Status	
Investment Checklist	Power Wind
Team Leader	[Not Set]
Project Title	Toolkit: Colonia Arias Wind Project
Project Number	[Temporary Project]
Safeguard Screening Assessor(s)	Camé Saldivar, Oscar Luis (OSCARLUIISC@iadb.org)
Assessment Date	2014-07-30

PROJECT CLASSIFICATION SUMMARY		
Project Category: B	Override Rating:	Override Justification:
		Comments:
Conditions/ Recommendations	<ul style="list-style-type: none"> • 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	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

nature (i.e. it is a direct impact of the project) and does not affect indigenous peoples or other vulnerable land based groups.	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.
Minor or moderate conversion or degradation impacts to natural habitats (such as seabed's, forests or traditional farms).	Ensure Proper Management and Monitoring of the Impacts of Natural Habitat Loss: A Biodiversity Management Plan (BMP) should be prepared that defines how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and could be incorporated in the ESMP. Depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.). Confirmation should be obtained from competent experts that they are confident that the plan can mitigate impacts and also that the relevant authorities have approved the BMP.

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 (OSCARLUIISC@iadb.org)

Title:

Date:

2014-07-30

SAFEGUARD POLICY FILTER REPORT

PROJECT DETAILS	
IDB Sector	[Not Set]
Type of Operation	Other Lending or Financing Instrument
Additional Operation Details	
Investment Checklist	Power Wind
Team Leader	[Not Set]
Project Title	Toolkit: Colonia Arias Wind Project
Project Number	[Temporary Project]
Safeguard Screening Assessor(s)	Camé Saldivar, Oscar Luis (OSCARLUIISC@iadb.org)
Assessment Date	2014-07-30

SAFEGUARD POLICY FILTER RESULTS		
Type of Operation	[Not Set]	
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
	Activities to be financed by the project are in a geographical area and sector exposed to natural hazards* (Type 1 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
	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)
	The Borrower/Executing Agency exhibits weak institutional capacity for managing environmental and social issues.	(B.04)

	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-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.	(B.06)
	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)
	Environmental or culturally sensitive areas, defined in the Policy as critical natural habitats or critical cultural sites in project area of influence (please refer to the Decision Support System for more information).	(B.09)
	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:	<p>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.</p> <p>The project triggered the Disaster Risk Management policy (OP-704). A Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704) in case of high risk, a limited DRA in case of moderate risk. Next, please complete a Disaster Risk Classification along with Impact Classification.</p>	

Additional Comments:	
-----------------------------	--

ASSESSOR DETAILS	
Name of person who completed screening:	Camé Saldivar, Oscar Luis (OSCARLUIISC@iadb.org)
Title:	
Date:	2014-07-30