

## **ENVIRONMENTAL AND SOCIAL STRATEGY**

### **A. PROJECT DESCRIPTION**

- 1.1** Fingano S.A. and Vengano S.A., the Borrowers, are seeking financing from the IDB for the construction, operation and maintenance of a 51 MW wind farm (Carape I) and a 42 MW wind farm (Carape II), respectively, and their associated facilities to be constructed in a zone of high wind potential that it is approximately 20 km south of the City of Aigua (approximate population 3,000 individuals), in the Departamento de Maldonado, Uruguay (see Figure 1). Several other small villages are located within 20 km of the project area including: Coronilla, Los Cerrillos, Valdivia, and Sauce de Aigua. The wind project areas lie on adjacent land areas in between Route 109 and Route 104, approximately four km to the east and Route 39, approximately seven km to the west. The Carape I site lies directly north of the Carape II site.
- 1.2** The Project encompasses the installation or construction of the following components: i) installation of 17 wind turbines (Vestas V112) with a nominal capacity of 3.0 MW each (Carape I - Fingano) and installation of another 14 wind turbines with a nominal capacity of 3.0 MW each (Carape II - Vengano); ii) construction of two contiguous substations, one for each facility iii) a transmission line, length and alignment to be verified during due diligence, to connect the wind farm to the national grid; iv) several smaller underground medium tension transmission lines within the wind project area; and v) construction of maintenance and service roads (total length to be determined during due diligence) within the wind project (see Figures 2 and 3).
- 1.3** Construction activities have an expected duration of 14 months with a workforce varying from 80 to 160 workers, peaking midway through construction for each facility. The wind farm will not require on-site staff during operations; however, a maintenance crew of six workers will be available. The construction timeframe and proposed workforce will be verified during Due Diligence.

### **B. INSTITUTIONAL AND REGULATORY CONTEXT**

- 2.1** Uruguay Law 16.466/94 Law of Environmental Impact Evaluation and Decree 345/2005 classify projects and define the degree of environmental impact evaluation required by projects. Under these regulations, the Carape projects have been classified as a Category B project and each requires an Environmental Impact Assessment (EIA). The Direccion Nacional de Medio Ambiente Division Administracion (DINAMA) in Montevideo, granted viability for the Carape I Project on 03 February 2011 and for the Carape II

Project on 13 August 2012 following a review of the required environmental documentation. Both projects were classified as Category B projects. The EIAs have been provided to the Bank for review.

- 2.2** The Project triggers the following directives of IDB's OP-703 Environmental and Safeguards Policy: B.2, Country Laws and Regulations; B.3, Screening and Classification; B.5, Environmental Assessment Requirements; B.6., Consultations; B.7, Supervision and Compliance; B.9 Natural Habitats and Cultural Sites; B.10 Hazardous Materials; B.11 Pollution Prevention; and B.15 Co-Financing Operations. The OP-702, Disclosure of Information Policy also applies for this Project. Based on available documentation, it is possible that OP-710 on involuntary resettlement will be triggered for this Project due to the proximity of existing home sites to planned turbine locations. It is also highly probably that land acquisition and economic displacement will occur in relation to the Project. Based on available information, the Project had been classified by the Bank as a Category B operation.

## **C. ENVIRONMENTAL AND SOCIAL SETTING**

- 3.1** According to the EIA, the Carape I wind project covers an area of 2,135 ha, of which, a total of approximately 21.5 ha (1.01%) will be permanently affected by the erection of the wind turbines, maintenance roads and the substation. The Bank has not yet received a detailed EIA for the Carape II project; however, much information regarding the project site was provided in an Environmental Viability of the Location report. More detailed information regarding the potential environmental and social impacts will be gathered during the due diligence process. Much of the wind project area has already been impacted by human activities such as agriculture, as well as cattle and sheep grazing. The previously impacted landscape appears to be mostly composed of agricultural fields, pasture lands and some eucalyptus, pine and olive orchards scattered throughout the area. Several natural areas exist within the wind project area, consisting of various biomes including: forested areas in the mountains, quebradas, arroyos, riparian areas and grassland prairies. The highest point in Uruguay, Cerro Catedral, at 513.7 meters above sea level is located within the wind project area. There is also a large Important Bird Area (IBA), Serrania del Este, which borders the Carape I Project to the north. Due Diligence will investigate the potential impacts to the areas from the placement of any nearby turbines.
- 3.2** The Project is geographically divided into two sections; a northern section (Carape I) and a southern section (Carape II). Both sections appear to have existing cultural sites in the form of dry-stack stone walls and corrals and both sites have a high potential to contain

additional archaeological items. The Archaeological Survey will be required on both sites and a Chance Find Procedure will be required to be implemented during construction.

- 3.3** The projects lie about 20 km south of the city of Aigua, the closest city. There are several existing households within the Project area. Preliminary studies indicate that noise levels during construction and potentially during operation may be a concern at several of the households. A few households may also be impacted by the Blinking Effect during operation of the wind farm. These issues will require attention during the Due Diligence and mitigation measures will be developed to address these impacts.
- 3.4** According to the EIA, the primary economic activities occurring within the wind project area, include primarily ranching (cattle, sheep and horse grazing) followed by agricultural activities (primarily forest plantations). The area is also known to attract tourists seeking outdoor adventures including hiking and mountain biking and several businesses catering to the tourist market are opening in the area.
- 3.5** The existing environmental documentation does not identify any sensitive habitats in the area, nor any sensitive or protected species of flora or fauna; however, the studies did identify several species of migratory raptors that would frequent the project area. The EIA did not provide baseline data on reptiles and it is unclear if bird surveys were conducted during the migratory season. A number of sensitive and protected species are known to inhabit territory surrounding the project site. A known migratory bird route exists well to the north of the Project area and outside the area of influence; however, a large Important Bird Area (IBA) exists along the northern border of the Carape I Project area. The Due Diligence will verify that no sensitive species exist in the Project area and that the Project will not have a significant impact on the IBA.

## **D. KEY POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS**

- 4.1** 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. Of specific importance for the Carape projects, might be visual impact, the risk of encountering archeological artifacts during construction, the risk of temporarily affecting the livelihoods of communities, noise impacts, and safety issues arising from increased traffic.
- 4.2** Once in operation, main impacts and risk associated with wind farms are: (i) bird collisions; (ii) bat collisions and barotraumas 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) Blinking Effect of the turbines during dawn and dusk hours; and (viii) visual impact.

- 4.3** The Due Diligence will determine with more certainty the extent of anticipated impacts of the Project. It is expected that the Borrower will apply mitigation measures that correspond to best industry practices for the wind power sector. An additional risk factor in Uruguay exists as UTE, the national power company, controls most aspects of energy transmission. The siting, drafting of EIAs, licensing, and consultation processes for the substations and transmission lines will be controlled and conducted by UTE.

## **E. ENVIRONMENTAL AND SOCIAL DUE DILIGENCE STRATEGY**

- 5.1** Based on the requirements outlined in IDB's OP-703 Environmental and Safeguards Compliance Policy, the Team proposes that the Carape Wind Power Project be classified as a Category B.
- 5.2** 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.
- 5.3** The ESDD will specifically address the following aspects:
- a. Review of the Noise Study to determine if any households or schools will experience excessive noise impacts during construction or operations. Should any inhabitants be negatively impacted appropriate mitigation should be developed and implemented;
  - b. Determine if additional flora and/or fauna surveys should be conducted;
  - c. Investigate the potential impacts of the transmission line, provided more details on its location;
  - d. Assess potential adverse socio-economic impacts of construction activities such as temporary, or permanent, loss of access to agricultural or grazing lands for farmers and herders;
  - e. Assess the adequacy and timely consultation and information dissemination process with affected parties of the current project. Although no public consultation is required by law or DINAMA as these projects were classified "B", two public hearings as part of the MDL process took place on December 21-22 2011 at Montevideo and Aiguá;
  - f. Ensure the implementation of a Chance Find Procedure based on the known existence of culturally valuable objects within the Project area;
  - g. Assess the adequacy of the Traffic Plan to ensure road safety is maintained despite the temporary increase in traffic, particularly heavy trucks and equipment near the community;

- h. Assess the adequacy of the health and safety procedures of the company;
- i. Review the Environmental and Social Management Plan (ESMP) to ensure the avoidance, minimization, and mitigation of any potential impacts;
- j. Meet with UTE to ensure their policies and procedures for the substation and transmission line comply with Bank policies and to request that the Bank be informed of UTE's progress regarding these aspects of the Project;
- k. Determine if the Project has been developed and implemented in compliance with the environmental laws and regulations of Uruguay;
- l. Assess the Project's compliance with IDB's Environmental and Safeguards Compliance Policy (OP-703) and develop an Action Plan in order to resolve any observed non-compliance.

**5.4** An Environmental and Social Management Report (ESMR) will be prepared by the Project Team as part of the ESDD to analyze the management of the environmental and social aspects of the project.





