IDBInvest Hychico

Environmental and Labor Issues:

This is a category III project according to the IIC's environmental and labor review procedure because it could produce certain effects that may be avoided or mitigated by following generally recognized performance standards, guidelines, and design criteria. The main environmental and labor considerations related to the project are: impact on wildlife, atmospheric emissions, noise and visual impact, solid and liquid waste management, occupational health and safety, and labor and social issues.

The wind farm has already been built and currently in the final stages of preparations prior to the launch of its operations. The project has a significant positive environmental impact given that it will generate electricity from a renewable resource and will result in a reduction in greenhouse gas emissions. The pertinent environmental impact assessment was performed by Ecotécnica América Latina S.A. in December 2008.

Topography and Environment: Hychico's wind farm is surrounded by petroleum industry facilities and located completely within the confines of the Diadema oil field operated by CAPSA. The wind farm sits on land owned by CAPSA under a commodatum agreement. The wind farm is located near Provincial Highway No. 39, some 3 km from the nearest town, Diadema Argentina, with an estimated population of 1,100 inhabitants. This tiny settlement was established by Shell Oil Company, which used to own and operate the surrounding oil fields. Today, the oil fields continue to be the biggest employer of Diadema inhabitants. The wind farm is located on a high plateau, some 500 meters above sea level and approximately 250 meters above the town of Diadema. The area around the wind farm includes a number of oil fields operated by different companies, as well as a number of sheep and cattle ranches with a very low rate of per-hectare productivity, owing to soil and climate conditions.

The project also involves the installation of two (2) segments of overhead medium-voltage (33 kV) power lines, measuring approximately .5 km each. These form an internal circuit to collect the energy generated by the farm's seven (7) wind turbines. The turbines are in turn connected to a switching substation, from which another 33 kV overhead line measuring some 5.7 km in length transports the energy out to Diadem's 132/33 kV transformer station, which is interconnected with SADI. The lines were strung alongside internal roads so as not to disturb new areas of land. In order to prevent erosion, care was taken to string transmission lines along routes with the fewest areas of steep terrain.

Impact on Wildlife: The local wildlife is naturally sparse and has been diminished further still by the active human presence in the oil fields. The assessments conducted detected the presence of some small mammal species, all of which have been evaluated to have a low risk of extinction in accordance with the International Union for the Conservation of Nature. No bats have been detected in the project area.

Hychico management asked the Argentine conservation organization, Aves Argentinas, to conduct an impact assessment of the wind farm on the local bird population (assessment report completed in September 2008). The assessment determined that there was a low concentration of birds in the vicinity of Diadema. The wind farm is not on the migration route of any bird species and no nesting colonies have been discovered within a 15 km radius. None of the specimens detected are globally threatened species. The assessment assigned the lowest risk category (category 1) to the site, pursuant to the classification system established by Environment Canada's Canadian Wildlife Service based on the sensitivity of the site and the project's scale. Some raptor species are the only birds at risk for colliding with the wind turbines. However, the scant presence of fauna and lack of water sources diminish this risk. One of the assessment's recommendations was to perform ongoing

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monitoring so as to evaluate the real impact of the turbines once in operation. To avoid attracting birds, nighttime illumination will not be used, except for the intermittent flashing safety lights required by aviation regulations. The distal ends of the rotor blades were painted red to improve their visibility in fog or overcast conditions.

Flora: The vegetation cover of the area is sparse and steppe-like, and includes some pasture lands of low nutritional value, owing to arid climate and average annual rainfall of less than 300 millimeters. The assessments performed did not detect protected, threatened, or commercially viable plant species.

Air Emissions: Overall, the project has a positive impact on air emissions given that it will generate electricity from a renewable source, offsetting on the order of 12,170 tCO2e annually of greenhouse gas emissions. Because the wind farm's assembly and installation work is already complete, vehicle traffic associated with the project has diminished markedly, and there is no related impact on neighboring populations.

Noise, Visual Impact, and Electromagnetic Interference: There are no inhabitants residing in the project area owing to its location within the confines of an oil field and, additionally, within a rural area of negligible population density. Wind farm noise levels are not anticipated to exceed 32 dB (A) at a distance of 1,000 meters, and have no impact on the nearest receptor. Furthermore, the rotor blade tip design has been modified to reduce the level of noise generated. Similarly, no shadow effect or negative visual impacts are anticipated.

The generation of electromagnetic fields and radio interference are seen as negligible, as there are no potential receptors within the area of influence. The wind farm is located approximately 27 km outside the city of Comodoro Rivadavia and some 18 km from the closest airport. In addition, the wind farm is not located on aircraft approach or departure routes.

Solid and Liquid Waste: Waste generated by the wind farm is managed in accordance with CAPSA's waste management plan. Domestic type waste is warehoused at CAPSA's headquarters in Diadema and subsequently trucked to the municipal dump, while recyclables are collected along with those generated by CAPSA for donation. The wind farm generates no liquid waste and uses grease exclusively as a lubricant, as its equipment does not contain a gearbox. Waste generated (e.g., grease residues, containers, packing materials, and rags) are disposed of in accordance with CAPSA guidelines.

Occupational Health and Safety: The routine operation of the wind farm does not require workers to be present on site; its operations are instead monitored remotely. Hychico engaged the firm Wobben Windpower, a subsidiary of ENERCON, to run and maintain the wind farm. Its operation requires two persons, and monitoring is performed within the CAPSA oil field, a short distance from the wind farm. All persons entering the oil field—whether employees, contractors, or visitors—must abide by CAPSA safety regulations. CAPSA's integrated environmental and workplace management program is based on the ISO 14001 and OHSAS 18001 standards, and includes regular training programs. The company has also identified some special risks inherent in operating and maintaining the wind farm. Accordingly, it is currently developing a set of set of specific rules and procedures for implementation. One such rule would limit wind turbine tower access to persons who meet the company's requirements and only when accompanied by a wind farm operator that has completed the necessary rescue training.

The wind turbines were designed to withstand extreme wind conditions and are equipped with automatic braking mechanisms in the event rotor blades reach excessive speeds; towers experience excessive vibrations or sway; ice forms on rotor blades; or a power outage occurs. The wind turbines

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are likewise equipped with lightening protection systems.

Labor and Social Issues: Hychico is in compliance with domestic labor laws and International Labour Organization (ILO) standards. Mandatory core labor standards include: legally-mandated benefits, freedom of association, organization of workers' unions, and nondiscrimination in the workplace. In accordance with Argentinean law, all workers have health and occupational accident insurance coverage (ART).

The sponsors maintain close ties with the community in the area of influence of their companies, and work to improve the living conditions of the population through the Fundación Diadema. The sponsors also participate in various countrywide NGOs focusing on environmental protection and topics with social impact, such as combating childhood malnutrition, assisting abandoned minors, and a variety of charitable works for the community.

Monitoring and Reporting: Hychico will implement an Environmental and Social Action Plan (ESAP) to ensure compliance with IIC environmental and workplace safety and health requirements. Activities under the ESAP are to include implementation of contingency and environmental monitoring plans. The company will present the IIC with annual progress reports on implementation of the ESAP.