



Portland Caribbean Fund II

Summary Environmental and Social Review

of IEH Penonome Holdings

Portland Private Equity conducted an environmental and social review prior to investment. The project's management team is committed to implement the identified environmental and social corrective measures and is working closely with Portland on its implementation. A summary of the environmental and social review is provided herewith.¹

Contact information

The General Manager at UEP Penonomé II S.A. is Jamilette Guerrero and the Environmental, Health and Social Supervisor is Arcadio Rivera. Please contact him if you have any suggestions, comments or concerns regarding Penonome's environmental and social performance.

Arcadio Rivera
UEP Penonomé, S.A.
Parque Eólico Laudato Sí
Penonomé Vía hacia El Coco, carretera las Lajas
Panama
Tel: +507 6317-1531
Email: arcadio@ieh-panama.com

Portland's Environmental and Social Officer is Douglas Hewson whom you can also contact concerning the project's ESG performance.

Summary

The Project consists of the construction, operation and maintenance of the second phase of the Penonome WPP, consisting of a total of 215 MW of installed wind power capacity in Coclé Province, approximately 150 km west of Panama City (the "Project"). It is a \$423M project comprised of a \$300M debt syndicate led by International Finance Corporation and a \$123M equity component comprised of a Phase I developer, Portland Caribbean Fund II, and led by InterEnergy Holdings.

¹ Disclaimer: Please see and refer to the **Terms of Use** at www.portlandpe.com.

Scope of Review

Portland's review of the project included:

- (i) meetings with technical, environmental, and social members of the InterEnergy Holdings (IEH) team;
- (ii) desktop reviews of the environmental and social impact assessments (ESIA's), government approvals (resolutions), management plans (ESMP's), operational policies and procedures, and assessments prepared by engineer and environmental and social consultants (Mott MacDonald and Prizma) against applicable IFC Performance Standards (PS);
- (iii) consideration of the environmental and social management issues and plans for the Project, and gaps between these plans and PS requirements;
- (iv) review of the corrective measures intended to close those gaps within a reasonable period of time as summarized in the Environmental and Social Action Plan (ESAP). Through the implementation of the management plans the Project is expected to be designed and operated in accordance with Performance Standards objectives; and
- (v) review of the IFC project summary.

Description

Overview

The Project consists of the construction, operation and maintenance of the second phase of the Penonome WPP, consisting of a total of 215 MW of installed wind power capacity in Coclé Province, approximately 150 km west of Panama City (the "Project"). The Project was divided by the granting authority into four different concessions, namely: Rosa de los Vientos, Portobelo, Marañon, and Nuevo Chagres, to be developed in four phases. The 1st Phase of the development consists of 55 MW of installed capacity and was built in 2013. It is owned and operated by a consortia led by Goldwind through a special purpose vehicle (SPV) under the name of UEP Penonome I. The 2nd and 3rd Phases (the "Project") of the Penonome WPP consist of 215 MW of installed capacity. The project will be built in 2014/15 and is owned and operated by UEP Penonome II S.A., an SPV controlled by InterEnergy Holdings. Finally, the 4th Phase will consist of 68 MW of installed capacity and has yet to be awarded to a designee but is planned for construction in 2015/6. When fully completed, the Penonome WPP is expected to have a total installed capacity of 337.5 MW.

Geographical

The Penonome WPP extends over approximately 18,500 ha of modified habitat comprised mostly of grasslands used for animal grazing, subsistence farming, harvesting of seasonal cash crops (e.g. rice), and commercial teak plantations. The project is located adjacent to the Pan-American Highway and the national electric grid, minimizing the need for opening new rights-of-way and land acquisition in the area. Power will be evacuated through two existing 230 kV transmission lines of the Central American Electrical Inter-Connection Transmission System (SIEPAC) managed by the Electric Transmission Company of Panama (ETESA). A total of 85 Goldwind wind turbine generators (WTG) will be installed during the phases of the wind farm development financed by this investment. Each turbine will have a generating capacity of 2.5 MW and will require 0.55 ha of land. WTGs will be spaced 200 m apart from one another in a series of rows and will have a tower height of 90 m and a rotor blade diameter of 52.2 m extending from the hub. With two exceptions where solutions have been amicably agreed with affected people, WTGs have been placed a minimum distance of 500 m from the closest dwelling to safeguard against excessive noise and other nuisances (shadow flicker and blade glint) for potentially affected people, as per Panamanian requirement and good international industry environmental and social management practices (GIIP).

Applicable Performance Standards

PS 1 – Assessment and Management of Environmental and Social Risks and Impacts

PS 2 - Labor and working conditions

PS 3 - Resource Efficiency and Pollution Prevention

PS 4 – Community Health, Safety and Security

The application of PS 6 was also taken into consideration and a bird and bat plan will be developed.

ESG Category and Why

Consistent with IFC's categorization, in accordance to IFC's Policy on Environmental and Social Sustainability, Portland has categorized the project Category B because of the limited number of specific environmental and social (E&S) impacts and risks of the project, which can be avoided or mitigated by adhering to standard practices, such as those described in the World Bank Environmental, and Health and Safety Guidelines (EHS Guidelines) and the applicable

performance standards (PS). As noted by IFC, the most critical environmental, social, and health and safety (ESHS) risks and impacts of the project include:

- (i) earth movements, vegetation cover removal, and soil erosion associated with excavation and the operation of construction equipment,
- (ii) occupational health and safety (OHS) risks to construction workers,
- (iii) OHS risks to maintenance workers,
- (iv) potential safety risks associated with blade throw (to nearby communities), and
- (v) permanent landscape modifications.

Performance Standards (PS) 5, 7 and 8 are not considered applicable to this project since it requires no physical displacement and there is limited economic displacement associated with gaining access to land through 25 year leases for the WTGs, and the acquisition of one 5-hectare plot for the sub-station. Consultation and negotiations with landowners were amicable and land acquisition was achieved on a willing buyer-willing seller basis. Finally, there are no indigenous peoples or areas of high archeological value in the project area of influence.

Environmental and Social Risks and Impacts

Four separate ESIA's were prepared, following the award of four associated concessions for a total installed capacity of 337.5 MW of wind power, and per Government of Panama environmental regulations and the explicit request from the National Environmental Authority. Additional ESIA's were prepared for the El Coco electrical substation and another for the improvement and widening of existing and new local access roads. The ESIA's for the WTG's were approved by Resolutions IA-352/353/354/355-10 in May 2010, (substation) April 2012, and (roads) September 2012. The licenses considered the installation of wind turbines in progressive phases, and are valid for a period of 40 years provided the sponsors continue to provide periodic environmental compliance reports. The WPP's were rated as Category III type projects based on their level of risk. This category of project requires the highest level of impact assessment, including formal public meetings. The El Coco Substation was categorized as a type II project (moderate risk), and the widening and improvement of access roads a Category I (low risk).

Since the government-required ESIA and licensing process was separated into four separate sub-projects to match the concession process, the sponsors hired an international firm to review the Penonome WPP as a single development and ensure its compliance with the Equator Principles and IFC Performance Standards. The review resulted in the recommendation to prepare a Non-Technical Summary and Supplementary ESIA and resulting Environmental and

Social Management Plans (ESMPs). This Supplementary ESIA considers all phases as a single development and thus includes the cumulative impacts associated with the whole Penonome WPP. The updated ESMPs have added a Transport Management Plan, a Stakeholder Engagement Plan, and a Grievance Redress Mechanism. In addition the ESMP will also include a Land Use Report and Compensation Plan and a Bird and Bat Monitoring Plan.

Projects' ESIA's identified the main ESHS risks and impacts of the project. Construction impacts and risks include:

- (i) limited land acquisition, easement, and minimal land use changes,
- (ii) earth movements, vegetation cover removal, and soil erosion associated with excavation and the operation of construction equipment,
- (iii) risks to pedestrians and vehicles due to construction equipment traffic in nearby communities as well as nuisance caused by elevated noise and dust levels, and
- (iv) occupational health and safety (OHS) risks to construction workers.

Operational impacts and risks may include:

- (i) potential collisions of birds and bats with blades and other equipment,
- (ii) increased noise from rotating wind turbines and blades,
- (iii) accidental spills and discharges (oils and lubricants) during maintenance activities,
- (iv) OHS risks to maintenance workers, and
- (v) permanent landscape modifications.

Impacts are anticipated to be moderate in nature, temporary in duration and mitigated with established pollution prevention and control technologies and by applying good international practices, such as those described in applicable World Bank Group EHS Guidelines.