Providencia Solar PV Project – El Salvador

ENVIRONMENTAL AND SOCIAL STRATEGY

I. SUMMARY

Project Name:	Providencia Solar PV Project
Project Number:	ES-L1091
Country:	El Salvador
Project Team:	Paulo Martelli, Project Team Leader (SCF/INF), Gian Franco Carassale, (SCF/INF), Jan Weiss (SCF/SYN), José Luis de la Bastida (VPS/ESG), and Andre Averbug, (SCF/PMU)
Supervisor:	Jean-Marc Aboussouan (Chief, SCF/INF)
Borrower:	A Salvadorian special purpose company
Sponsors:	Neoen ("Neoen") and Almaval S.A. ("Almaval")
Funding:	IDB: Approx. US$50 million or up to 40% of Project Cost C2F Loan: Up to US$30 million China Fund: Approx. US$25 million or up to 20% of Project Cost Total Project Cost: Approx. US$125 million
Safeguards Policies Identified:	OP-102, OP-704, OP-703 (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 project consists in the construction, operation and maintenance of a 74.4MWdc (60MWac) photovoltaic (PV) power plant, an approximately 1.5 km transmission line, and its associated facilities to be located near the international airport in Zacatecoluca – 30 kilometers (km) from San Salvador city–, La Paz Department (the "Project") (See Figure 1). The facility will occupy a total area of approximately 81 hectares (ha) that are currently being used for sugar cane growth, (see Figure 2).

2.2 The Project will supply electricity through a 20-year PPA that has been signed by the Project and seven local distribution companies (Offtakers). The Project will utilize polycrystalline approximately 240,000 photovoltaic crystalline modules mounted over fixed structures and connected to inverters to deliver the energy through a transmission line to the El Pedregal substation that is located 1.5 km from the site. Construction phase is expected to start during October 2015, and operational phase by October 2016.

2.3 The estimated total cost of the Project is US$125 million. It is anticipated that the Project's financial plan will include an IDB A Loan for up to 40% of Project costs, estimated at US$50 million. Subject to eligibility, it will also include up to US$30 million

in concessional financing from C2F, which is critical for the financial feasibility of the Project. During due diligence, the Project Team will try to identify commercial lenders to participate in the transaction and will consider incorporating up to US$25 million from the China Fund. The rest of the Project cost will be funded with base equity from the Sponsors.

Figure1. General Location Map

Figure2. Project Location Map

III. INSTITUTIONAL AND REGULATORY CONTEXT

3.1 The electricity industry in El Salvador is governed by the General Law of Electricity, contained in Legislative Decree No. 843 (10 Oct 1996) and the Regulations of the same, issued by the President of the Republic (25 Jul 1997). The Superintendent of Electricity and Telecommunications (SIGET) established by Legislative Decree No. 808 (12 Sep 1996) is responsible for compliance with the legislation and regulation of the industry. The Wholesale Electricity Market administered by the Transactions Unit (UT) began operations on November 1, 1998.

3.2 In late 2013, DELSUR, a distribution company in El Salvador, launched a public competitive tender process on behalf of the Offtakers to award the right to enter into 20-year power purchase agreement for up to 100MW of grid connected renewable energy power[1]. The capacity was split in 60MV of solar photovoltaic (PV) and 40MV of wind. The plants are to be constructed by independent power producers on sites previously secured by them and under a 20-year PPAs that will be signed between the selected parties and the Offtakers.

3.3 The environmental local regulatory framework in El Salvador is managed by the *Ministerio del Medio Ambiente y Recursos Naturales* (MARN). The MARN establishes through the Agreement No.33 –May-08-2012– that photovoltaic projects, taking into account environmental criteria, can be categorized within one of the following three groups: Group A (projects with low environmental negative impacts and risks, and electric generation capacity below 100 kW), Group B-1 (projects with minor environmental negative impacts and risk, electric generation capacity between 100 kW and 5 MW and an area no bigger than 5 ha.) and Group B-2 (projects with moderate or high environmental negative impacts and risks, electric generation capacity over the 5 MW and an area bigger than 5 ha.). The Project falls under the Group B-2 due to the electric generation capacity and area to be occupied by the photovoltaic facilities. Additionally, as a requirement to obtain the environmental permit for projects within this group, the Project will have to submit an Environmental Impact Study (EIS) that will be reviewed and approved by the MARN. This study will follow the specific Terms of Reference (ToR) for photovoltaic projects that are stated on the Agreement No. 94 issued officially on September-23-2013.

3.4 Currently, there is no information regarding the current status of the EIS. However, once the EIS is ready, it will be submitted to the Bank as one of the requirements to carry out the environmental and social Due Diligence for the Project.

3.5 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.4, Other Risks (environmental governance capacity); 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,

[1] International Public Tender No. DELSUR-CLP-RNV-001-2013 "Proceso De Libre Concurrencia Convocado Por Delsur S.A. De C.V., Para El Suministro De 100 Mw De Potencia A Instalar Y Su Energía Asociada" published on December 4, 2013.

Pollution Prevention and Abatement; and B.15, Co-financing Operations. The OP-102, Disclosure of Information Policy applies for this Project. The OP-704, Disaster Risk Management Policy, also applies since the Project's presence in an active earthquake, hurricane, and flow zone, and the potential risk to the Project will be assessed during Due Diligence. According to available documentation, it does not appear that the Bank's OP-710 on Involuntary Resettlement would be triggered neither the OP-765 on Indigenous Communities; and apparently, the Project is not located on a critical/sensitive natural habitat. The Project site is currently being used for sugar cane growth, and directive B.9 has been triggered because of land conversion issues. At the moment, there is no evidence of the presence of cultural sites on the Project site; however, all these aspects mentioned above will be verified during the environmental and social Due Diligence. Based on available information, the Project had been classified by the Bank as a Category B operation.

IV. ENVIRONMENTAL AND SOCIAL SETTING

4.1 Based on available documentation, together the solar facilities and the transmission line will potentially occupy a total area of approximately 81 ha , which will be permanently affected by the erection of the solar panels, substations offices, substations, transmission line, offices, maintenance roads and other construction works. Based on aerial imagery, much of the Project area and vicinity has been previously impacted by human activities, particularly agriculture and urbanization, including the international airport of El Salvador located 3.3 km west of the Project site. The landscape surrounding the Project appears to be mostly composed of agricultural fields and small populated areas.

4.2 The Project area is surrounded by small populated areas/towns. Currently, there is no precise information available on the scale of economic activities occurring within the Project area and surrounding communities; however, agricultural activity is clearly present in surrounding areas based on aerial imagery. The Project area appears to be agricultural land.

4.3 There is currently no available documentation to indicate that affected people have been consulted on the Project or local communities do support the Project. The Bank will require at least one public consultation to occur based on the project being classified as a Category B project. The Due Diligence will investigate whether any such consultation occurred and the effectiveness of the consultation process in order to understand the local resident's perceptions of the Project. The procedures implemented during this process, and the subsequent results, including land purchase or lease agreements, will be investigated during the Due Diligence. Social programs implemented by the Project to benefit the local community will also be investigated.

4.4 The existing documentation does not identify any protected habitats in the area and much of the land has been disturbed by previous activities including farming, ranching and urbanization. The Due Diligence will verify that no sensitive or protected habitats exist in the Project area as well as sensitive flora or fauna species.

4.5 There is currently no information regarding archaeological surveys available; the ToR of the EIS includes a socio-economic and cultural settings section which should include archeological technical analysis carried out by the agency of cultural patrimony of the

Secretaría de Cultura (SECULTURA). During the Due Diligence will be confirmed the adequate process to be implemented to manage the archeological aspects, mainly, those archaeological surveys of the affected areas before any earthworks begin. Additionally, the Project may require the implementation of a Chance Find Procedure during initial excavations.

V. KEY POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

5.1 Potential environmental impacts and risks associated with solar facilities during the construction phase are mainly linked to the installation of the solar panels, foundations, and transmission line as well as the substation and access roads. Main construction impacts are: (i) archeological and habitat disturbance; (ii) land transformation; (iii) soil erosion; (iv) dust generation; (v) increased heavy traffic; (vi) loss of vegetation; and (vii) occupational health and safety hazards for the workforce.

5.2 Once in operation, main potential impacts and risk associated with these kinds of solar facilities are: (i) loss of vegetation; (ii) connectivity of the land and land occupation; (iii) impacts to geohydrological resources including the erosion of topsoil, increase of sediment load or turbidity in local streams, and reduction of groundwater recharge or increase of flooding; (iv) accidental discharges of hazardous materials; (v) community health and safety hazards; (vi) possible use of herbicides are sometimes used instead of mowing; (vii) land dispute; (viii) landscape impacts; and (xi) water consumption for cleaning the panels.

5.3 The Project site is within the airport zone but in non-disturbance zone according to the International Civil Aviation Organization (ICAO) norms. A detailed study will be conducted with the airport based on final design of the Project.

5.4 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 solar 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 Neoen Solar PV Power 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. Determine if any additional flora and/or fauna surveys should be necessary to confirm whether the Project site is a critical/sensitive natural habitat.

b. Investigate the potential impacts of the transmission line and verify the final location of the electrical towers and posts to prevent any environmental and social impact and risk;

c. Investigate any potential landscape/visual impacts because of implementation of the Project;

d. Assess the methods to be used for cleaning the solar panels; mainly, confirm whether any of these methods will use considerable amounts of fresh water;

e. Analyze potential impacts to geohydrological resources including the erosion of topsoil, increase of sediment load or turbidity in local streams, and reduction of groundwater recharge or increase of flooding on the Project site;

f. Confirm and assess whether any method, such as use of herbicides or other chemicals, will be used instead of mowing vegetation in the solar facilities;

g. Ensure that the Project has developed and will implement the adequate Risk Disaster Assessment and Plan since the Project potentially is located on a geographical area and sector exposed to natural hazards such as earthquakes, hurricanes and floods.

h. Evaluate any specific study regarding land-use intensity that includes information about land transformation and land occupation for both the construction and operation phases;

i. Analyze any specific study to confirm the Project is located on a non-disturbance zone in the airport zone.

j. Assess potential adverse socio-economic impacts of construction activities such as temporary, or permanent, land dispute, loss of access to agricultural or grazing lands for farmers and herders or any involuntary resettlement;

k. Determine if the land purchase and/or lease agreements have been completed in line with IDB policies;

l. Assess the adequacy and timely consultation and information dissemination process with affected parties;

m. Ensure appropriate archeological surveys have been conducted and a Chance Find Procedure will be implemented during construction;

n. Assess the adequacy of the a Traffic Plan to ensure road safety is maintained despite the temporary increase in traffic, particularly heavy trucks and equipment through the community;

o. Assess the adequacy of the health and safety procedures of the company;

p. Review the Environmental and Social Management Plan (ESMP) to ensure the avoidance, minimization, and mitigation of any potential impacts;

q. Determine if the Project has been developed and implemented in compliance with the environmental laws and regulations of El Salvador;

r. Assess the Project's compliance with IDB's Environmental and Safeguards Compliance Policy (OP-703) and if needed develop an Action Plan in order to resolve any observed non-compliance.

6.4 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.