ANNEX: ENVIRONMENTAL AND SOCIAL STRATEGY (ESS)

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GRAMADAL SOLAR PV POWER PROJECT – CHILE

I. SUMMARY

Project Name:	Gramadal PV Power Project
Project Number:	CH-L1075
Country:	Chile
Project Team:	Elizabeth Robberechts, Project Team Leader (INF/CCH); Rafael Matas Trillo (SCF/INF); Jan Weiss (SCF/SYN); José Luis de la Bastida (VPS/ESG); Ulrike Aulestia Vargas (SCF/PMU) and Jean-Marc Aboussouan (Chief, SCF/INF)
Borrower:	A special purpose company incorporated by the Sponsors in Chile
Sponsors:	SunEdison, Inc. and SunEdison, LLC
Funding:	IDB: up to US$XX million Co-Financing: up to US$ XX million Total Project Cost: up to US$XX million
Safeguards Policies Identified:	OP-102, OP-703, OP-704 (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 of the construction, operation and maintenance of a 99 MWp photovoltaic (PV) power project, as well as its associated facilities. The facilities (the "Project") are located 28km east of the locality of Pisagua, community of Huara, province of Tamarugal, in the region of Tarapacá, Chile. (See Figure 1). The Project, including its associate facilities, will occupy a total area of approximately 208 hectares, (see Figure 2), which will require verification during the Due Diligence process. The Project will be connected to the local operator company transmission line from a new substation using a nearby existing 220 kV transmission line.

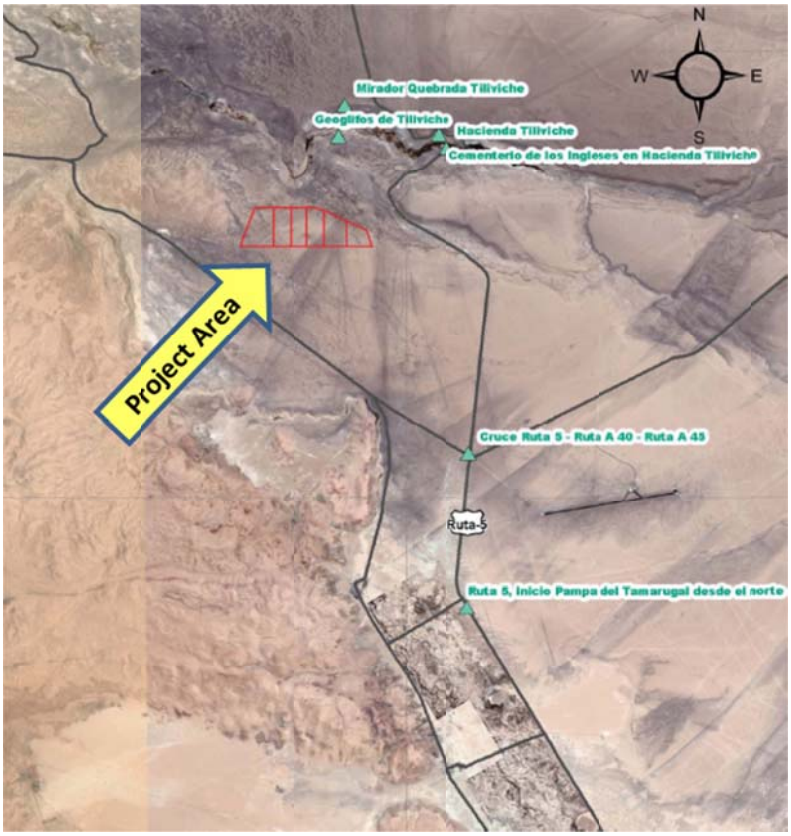
2.2 The Project encompasses the installation or construction of the following components: i) erection of approximately 299,600 solar photovoltaic panels (exact number to be verified) with a combined capacity of 99 MWp; ii) construction of a new substation iii) tie in to an existing 220 kV transmission line consisting of two electrical towers (exact number to be verified), to connect the solar facilities to the transmission line of the local operator

company; iv) installation of a new electrical tower to support the existing transmission line; v) several smaller underground electrical cables within the Project area; v) improvement and maintenance of approximately 1.1 km of access road (length and alignment to be verified during due diligence) exiting the highway (Ruta A-40 Cruce ruta 5) and within the solar facilities; vi) construction of a two meter high perimeter fence; and vii) construction of support buildings, including offices and a temporary worker camp.

2.3 The Project is estimated to have a 12 month construction period, and an operational life of 25 years. The Project will employ a maximum of 500 workers during construction, 25 workers during operations, and 100 workers during decommissioning.

Figure1. General Location Map

Figure2. Project Location Map



III. INSTITUTIONAL AND REGULATORY CONTEXT

3.1 The legal and regulatory framework of Chile for the energy sector was established by the 1982 Electric Services Law. Under that framework, electricity generation, transmission and distribution activities are carried out by the private sector. The participation of the Government is limited to regulatory, enforcement, supervisory and subsidiary roles. Tariffs must reflect real costs of generation, transmission and distribution to provide accurate market signals for optimal development of the electric system. Generating companies can commercialize energy in three markets: a) large customers at freely negotiated prices; b) distribution companies through regulated PPAs, following a bidding process and, c) in the spot market at a marginal cost per kilowatt-hour calculated by the Centro de Despacho Económico de Carga (CDEC). Priority of dispatch in the spot market is given to the lowest marginal cost energy, thereby favoring renewable energy resources which have no fuel costs.

3.2 In 2008, Chile passed a law to promote Non-Conventional Renewable Energy (NCRE). Law 20.257 provides that companies with power generation capacity of 200MW or more should use NCRE for at least 10% of their electricity use by 2024.

3.3 Law No. 19.300 Ministerio Secretaria General de la Presidencia sobre Bases Generales del Medio Ambiente (9 March 1994), Articles 5-11 (except 7) allow projects determined to have minimal environmental and social impacts to be exempt from preparing an *Estudio de Impacto Ambiental* (EIA) for the project. These projects must prepare and present a Declaración de Impacto Ambiental (DIA).

3.4 A DIA for the Project was presented to the Comisión de Evaluación on 12 July 2012. The Project is still in process of evaluation to obtain the Resolución de Calificacion Ambiental (RCA) to be issued by the Comisión de Evaluación I Región de Tarapacá.

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 Risk Factors; 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 Abatement; and B.15, Co-Financing Operations. The OP-102, Disclosure of Information Policy also applies for this Project. It does not appear that the OP-765 on indigenous peoples will be triggered for this Project; however, as known Aymara indigenous community exist in the surrounding area, the Due Diligence will examine if indigenous peoples will be affected in relation to the Project. Based on available information, the Project had been classified by the Bank as a Category B operation. The significance of other risk factors (B.4), which in this case is related to the Project's presence in an active earthquake zone, and the potential risk to the Project, will be assessed during due diligence. Based on available documentation, it does not appear that the Bank's OP-710 on involuntary resettlement would be triggered.

IV. ENVIRONMENTAL AND SOCIAL SETTING

4.1 Based on available documentation, the solar facilities will potentially occupy a total area of approximately 208 ha, including the substation, which will be permanently affected by the erection of the solar panels, substation, transmission lines, offices, maintenance road and other construction works. Based on the information included in the DIA, much of the Project area and vicinity appears to be a natural flat desert habitat –absolute desert- with no vegetation, and no water sources except for the presence of a water body in "La Quebrada de Tiliviche", which is a gulch surrounded by some vegetation and possible existence of some animals. This gulch is located 1.7km of the Project area. Due Diligence will investigate the potential impacts to this water body in la Quebrada de Tiliviche from

the placement of the solar facilities. Some human impacts can be observed including off-road vehicle traffic, existing transmission lines and desert roads in the Project area itself.

4.2 The Project area lies near three small populated areas: i) Hacienda Tiliviche (two individuals), 3km northeast of the Project site; this is a family farm that provides some livestock and crops severely affected due to lack of water resources; ii) Cruce de Pisagua, 5km south with approximately three houses and one restaurant; and iii) Pisagua that is a small town (260 people), approximately 40km south of the Project site; this small town is part of the Huara community that survives on fishing activities as their main source of income. According to the DIA, preliminary studies show that there is no presence of indigenous communities in the Project area; however, some indigenous communities related to the Aymaras are located 7km southeast (Zapiga) and 21km (Área de Desarrollo Indígena Jiwase Oraje) of the Project site. The Project area itself appears to be vacant, government-owned land.

4.3 According to the available documentation, it is unclear if affected people have been consulted on the Project. Residents in the local community will be interviewed during the Due Diligence process to gain an understanding of the local resident's perceptions of the Project. Additionally, formal public consultation will be required with the local communities before the Project could be presented to the IDB Board for approval. 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 environmental documentation does not identify any protected habitats in or near the Project area. The Due Diligence will verify that no sensitive or protected habitats exist in the Project area. Currently, no sensitive species, flora or fauna, were identified within the Project area during the surveys which occurred in June 2013. These results will be verified during the Due Diligence process; additional biological surveys may be required.

4.5 The Geoglifos de Tiliviche, a group of geoglyphs unclearly dated and preserved by the Centro de Investigaciones del Hombre en el Desierto, are located 1.6km of the closest Project´s area. Additionally, some historical structures that are part of the Hacienda Tiliviche complex are found between 1.6 and 3km of the Project site. Nonetheless, because of the nature of the Project, none of these historical sites would disturbed or threatened during construction, operation and decommissioning stages of the Project.

4.6 An archaeological survey was conducted on the Project site and no items of cultural heritage were observed. Typically, in Chile, a clearance must be issued by the Instituto

Nacional de Patrimonio Cultural in the form of a Certificado de Visto Bueno in order to proceed with construction; however, a certificate has not been presented to the Bank. The existence of such a certificate will be investigated during the Due Diligence process. It is possible that both an additional archaeological surveys of the affected areas may be required before any earthworks begin, and the implementation of a Chance Find Procedure during initial excavations, if such a procedure is recommended in the RCA that still is pending.

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) habitat disturbance; (ii) soil erosion; (iii) dust generation; (iv) increased heavy traffic; (v) loss of vegetation; and (vi) occupational health and safety hazards for the workforce.

5.2 Once in operation, main impacts and risk associated with solar facilities are: (i) loss of vegetation; (ii) accidental discharges of hazardous materials; (iii) community health and safety hazards; and (iv) water consumption. Of specific importance for the Gramadal Project might be the risk of landscape/visual impact for the Quebrada de Tiliviche since this area encompasses a water body and the geoglyphos of Tiliviche that are considered visitor attractions.

5.3 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 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 the Crucero 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 additional flora and/or fauna surveys should be conducted to gather baseline data;

b. Investigate the potential landscape/visual impacts of the Project on the Quebrada de Tiliviche;

c. 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 or any involuntary resettlement;

d. Investigate potential impacts on indigenous communities and verify that the Projects is not adversely affecting indigenous communities and territories.

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

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

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

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

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

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

k. Determine if the Project has been developed and implemented in compliance with the environmental laws and regulations of Chile;

l. 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.