

**1. Overview of Scope of IIC E&S Review:** The environmental and social review of the Project was carried out between December 2016 and February 2017. The review included information provided by the Sponsor, mainly including the environmental and social impact assessments; environmental permits and authorizations; environmental and social policies, plans and procedures developed by the Sponsor and its Contractor; and various specialists' studies. A site visit was carried out by IIC (January 9-11, 2017) including meetings with the Sponsor and Contractor; interviews with relevant stakeholders (i.e., local authorities, landowners, local communities) and a site reconnaissance of the project site, transmission line corridor, access roads and environmental and social areas of interest (e.g., water bodies, neighbor properties, etc.). An external factors review was conducted based on publicly available information. The environmental and social due diligence was conducted simultaneously and in coordination with the International Finance Corporation ("**IFC**") and both institutions agreed on a common Environmental and Social Action Plan ("**ESAP**") to support the Borrower's efforts to comply with the required standards.

**2. Environmental and Social Categorization and Rationale:** According to the IIC Environmental and Social Sustainability Policy, the Project has been classified as Category B, as the Project presents potential limited adverse environmental or social risks and/or impacts that are few in number, site-specific, reversible, and readily addressed through mitigation measures.

**3. Environmental and Social Context:** The Project is located southeast of the State of Aguascalientes in central Mexico, within the Municipality of El Llano. The Project site has a total of 963.7 hectares (has), (Solem I 527.4has and Solem II 436.3has), with an actual Project footprint of 644.7has (Solem I 333.6has and Solem II 311.1has), representing 67% of the area. The remaining land will not be intervened. The area is a flatland of semi-arid climate corresponding to a xerophytic shrub represented by secondary herbaceous, medium shrubs and various cacti species. However, the Project site is a modified habitat of seasonal rainfed agricultural activity (e.g., corn, beans, alfalfa and dry pepper) and livestock grazing of low production yields. Small patches of native vegetation forest are located within the project site; however, none of the plant species is endemic or protected under Mexican regulations. There are 10 fauna species listed under some level of protection by Mexican norm that are known to occur in the region, but were not observed at the site. These fauna species are widely distributed and classified as Least Concern under the IUCN Red List. Within the Project site, there are 16 small waterbodies, 3 of which were categorized by the National Water Commission as natural, and which will be avoided by the Project footprint. The remaining 13 waterbodies are man-made excavations used to collect rainfall for irrigation and livestock on a seasonal basis.

El Llano is a rural and sparsely populated area with approximately 1,200 people living in 7 surrounding communities in a 4km radius of the Project site. Most have access to basic services such as roads and electricity, but not to sewer systems. Most community members work on agricultural/livestock activities or in nearby Aguascalientes City, others have emigrated to the United States of America. The site is easily accessible by existing highways and municipal roads.

## **4. Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures**

### **4.1 Assessment and Management of Environmental and Social Risks and Impacts**

Permits: Originally the Project was not conceived as a single power plant, but rather as five (5) 30-MW solar concessions (Alten 1-5), later adding a sixth 140-MW solar concession (Alten 6). Therefore, six individual environmental impact assessments (*Manifiesto de Impacto Ambiental*, "**MIA**") were prepared for each project. Alten 6 was prepared under more recent national regulation that required a separate social impact assessment ("**SIA**") in addition to the MIA and included assessment of the transmission line and substation located within the Project site. A SIA

was not required for Alten 1-5. Environmental authorizations were obtained from SEMARNAT (*Secretaría de Medio Ambiente y Recursos Naturales*). The SIA was submitted to the SENER (*Secretaría de Energía*) and is pending approval.

Environmental and Social Assessment and Management System: The Sponsor has an Environmental and Social Management System (“**ESMS**”) consisting of relevant environmental and social (“**E&S**”) policies, programs and procedures. However, these programs were developed at different times and by different contractors with varying degrees of detail (e.g. health and safety, reforestation program, contractor supervision, water management, stakeholder engagement). The sponsor will review and update a consolidated ESMS to ensure that the plans and programs included in the various MIAs and the SIA as well as the corporate plans and programs are developed at the Project-level and have sufficient detail and greater consistency.

Policy: The Sponsor has an E&S policy that includes commitments to identify and address E&S impacts and risks, allocate sufficient resources for achieving the policy objectives, implement an emergency preparedness and response system, as well as for communicating these objectives to relevant stakeholders. Current policy statements will be harmonized and made Project-specific as part of the updated ESMS.

Identification of Risks and Impacts: According to the MIAs, anticipated impacts during project preparation and construction include: deterioration of air quality, increased noise and vibration, vegetation removal, increased risks of traffic accidents, occupational health and safety (OHS) incidents, and the influx of workers and job-seekers. During operations, impacts are expected to include: minor noise and vibrations nuances caused by maintenance, limited impacts on groundwater for panel cleaning operations and traffic safety. Positive impacts during both phases of the project include employment opportunities, public infrastructures and services, electricity production, development of new businesses, and displacement of GHG emissions that would have otherwise been generated by fossil-based power plants. Cumulative impacts were not identified.

Regarding social impacts, some landowners provided access to portions of the project site through sharecropping arrangements with *medieros* (i.e., farmers who obtain a landowner’s permission to plant crops in return for a share of the harvest). Preliminary investigations confirmed that the livelihood impacts on *medieros* are unlikely to be significant due to: (i) the low productivity of land; (ii) the limited dependency of the *medieros*’ livelihoods on these crops; (iii) farming activities not being the main source of income of the *medieros* and (iv) the availability of comparable lands nearby. The Borrower is conducting a social risk assessment through a specialized consulting firm to assess any possible livelihood impacts of “*medieros*”. If this assessment identifies any significant economic displacement, the sponsor will, in consultation with affected people, adopt mitigation measures.

Regarding biodiversity impacts, native vegetation removal will be limited to Solem I (Alten 5) and reforestation will be done at Alten 1 with native species, including transplantation of *Opuntias* (cacti). Fauna species known to occur in the region are widely distributed and of Least Concern under IUCN Red List, although listed under Mexican norm NOM-059-SEMARNAT-2010 (i.e., *Lithobates montezumae*; *Scleoporus grammicus*; *Crotalus molossus*; *Pituophis deppei*; *Thamnophis eques*; *Kinosternon hirtipes*; *K. integrum*; *Anas platyrhynchos diazi*; *Accipiter cooperii* and *Parabuteo unicinctus*). Displacement of fauna could occur but does not represent a significant impact given the availability of habitat nearby and wide distribution of species. Specific management measures for each group are described in the Fauna Protection Program. In addition, the Birds of Prey Protection Program addresses potential impacts from collision and electrocution with transmission lines and substation. This Plan includes measures for the Golden Eagle (*Aquila chrysaetos*), an IUCN Least Concern species which is not expected to occur in the project area, but

which is protected in a voluntary conservation area *Área de Protección del Águila Real de la Serranía de Juan el Grande*, located ~16 km east of the Project site.

Regarding ecosystem services, three water bodies or '*bados*' within the Project site were determined by the National Water Commission ("**CONAGUA**") to be natural. These *bados* are used by the landowners as water collection reservoirs for irrigation and cattle, but will no longer be used given that their land will be vacated and no other water users for those *bados* exist. In addition, the layout of the solar panels was adjusted to avoid the three *bados*, leaving them un-intervened.

Management Programs: Management plans and programs were developed to address the environmental and social impacts and risks, as part of the MIA process and subsequent permitting requirements. The various management plans and programs were prepared by the Sponsor and the Contractor at different times and vary in level of detail. The management programs developed by the Sponsor include: Environmental Surveillance; Opuntia Transplantation; Reforestation; Fauna Management; Protection of Birds of Prey; Communication; Stakeholder Engagement; Social Investment; Grievance Mechanism and Decommissioning. The management programs developed by Grupo Ortiz are consistent with the Project requirements under the environmental permits and include: Environmental Management; Waste Management; Water Management; Health and Safety; Emergency Response; Panel Recycling; Traffic Management and Archaeological Chance Finds. These programs are being updated and further detailed by the Sponsor and Contractor and integrated into the ESMS for consistent implementation once the Project starts. The following plans will be developed and implemented: Local Recruitment Plan and Security Management Plan.

Organizational Capacity and Competency: The Sponsor is currently recruiting an EHS and Community Liaison Manager, who will be supported by the Sponsor's existing EHS Corporate structure and the EPC Contractor's EHS staff. The EHS and Community Liaison Manager will be responsible for implementing the ESMS, the Stakeholder Engagement Plan and supervising the EPC Contractor's adherence to EHS requirements, in close coordination with the EPC Contractor's EHS Officer, who will in turn implement and supervise ESHS requirements of its activities and those of its subcontractors. The EHS and Community Relations Manager will be in charge of document management and record keeping, supervising that the social management programs are properly implemented and adequately documented, coordinating closely with the EPC Contractor's local hiring, and managing the grievance mechanism.

Emergency Preparedness and Response: The Sponsor has developed a Civil Protection and Evacuation Plan that identifies potential safety and security risks and describes the processes to follow in case of an emergency. It includes a risk analysis; an emergency action plan; self-protection plan and emergency contacts. In addition, a Hydrologic and Flooding study was conducted to assess floodplains in consideration of the panel layout. The Contractor has also developed as part of the H&S Plan a fire evacuation plan and emergency contacts. The Sponsor will revise these plans and consolidate them to ensure proper communication between Sponsor and Contractor while on site. The plan will be supplemented to include specific risks to communities and will communicate said risks and any actions to be followed by communities, including proper support, as applicable.

Monitoring and Review: The Sponsor has established Key Performance Indicators (KPI) for the Project's E&S performance, for example: (i) safety: lost time injury frequency rate, accident free days; (ii) resource efficiency: water usage, energy usage; (iii) staff: retention and training days. The Sponsor will report bi-annually during construction and annually during operations and will provide feedback to affected communities on at least an annual basis in relation to any impacts affecting them and associated mitigation measures. The Sponsor will revise and complement its KPIs as part of the updated ESMS to ensure that all the management plans and programs are adequately monitored, reported and reviewed.

Stakeholder Engagement: As part of the due diligence process completed in 2015 and complemented by Solem II's Social Impact Assessment ("SIA") in 2016, the sponsor identified a range of project stakeholders, including: community members, government representatives at the local and state levels, contractors, and landowners. In February 2017, the sponsor hired a specialized consulting firm to review existing stakeholder analysis and update the Stakeholder Engagement Plan ("SEP"). Through this process, any additional project impacts such as the livelihood impacts on "medieros" will be determined and mitigation measures implemented, as needed. The Project will establish ongoing reporting to affected communities. Disclosure of information has primarily occurred through face to face meetings between stakeholders and sponsor representatives. The sponsors also provide public access to basic project information on their corporate websites. Additional information disclosure will be done through the SEP and the Project website.

Consultation: Consultation activities were undertaken since 2014 and meetings were documented with the Federal Electricity Commission, Aguascalientes State Environmental Secretariat, Aguascalientes State Health Institute, National Commission of Water (CONAGUA), National Institute of Archaeology and History (INAH), the Ministry of Transport and Communication and the Territorial Ministry of Urbanism and farmers of neighbouring communities (*ejidatarios*). The Borrower reported more frequent meetings with community members that were not documented, although they were verbally confirmed by local authority and community members during the site visit. Meetings included information on the project activities and timeframe, impacts and risks, mitigation and management measures. The Borrower currently has an employee dedicated to community relations and who is validated by local stakeholders. This position will be supported by a EHS Manager and Community Liaison. Additional consultation efforts took place in February 2017 through a formal consultation event with local communities and on-on-one meetings with relevant stakeholders. Feedback received during these consultations will be evaluated to determine if any additional measures are needed.

Grievance Mechanism: The Sponsor has a general Grievance Mechanism that describes how the mechanism will be communicated to stakeholders to access it and how grievances stakeholders will be received and managed, including response times. This mechanism will be further detailed and explained to stakeholders through the updated SEP and its implementation.

## **4.2 Labor and Working Conditions**

Human Resources Policies and Procedures: The Sponsor will maintain a limited site presence during construction and operations. As a result, the majority of labor-related matters will involve the Contractor, Grupo Ortiz. The Sponsor will provide oversight of Grupo Ortiz. The Project estimates that, on average, it will employ 60 direct and 600 indirect workers. Construction peak may reach 1,500 workers for two months. During operation, up to 60 workers could be hired on a constant basis. Grupo Ortiz, has a corporate local hiring policy as well as an Ethics Code and is a signatory of the Global Compact since 2010. It also has a Workplace Internal Regulation, which covers human resources aspects also required by Mexican law. Local workforce will be prioritized, but no specific minimum percentage was established. Specific Local Recruitment Plan and Human Resources Policy will be developed for the Project.

Working Conditions and Terms of Employment: Mexican law protects the right for collective bargaining. In compliance with Mexican labor legislation, workers wishing to join a labor union will be free to do so and agreements will be signed. Given the Project's proximity to the city of Aguascalientes, no on-site accommodation quarters are expected. Workers will be provided transportation and a canteen will be located on site. The Project will abide by Mexican Law that protects child and forced labor. As signatories of the United Nations' (UN) Global Compact, Grupo

Ortiz is committed to eliminating and eradicating any form of forced labour (UN Global Compact Principle 4) and child labour (UN Global Compact Principle 5).

Non-discrimination and Equal Opportunity: The Project will abide by Mexican Law that requires non-discrimination and equal opportunity. Grupo Ortiz has a corporate Plan for Equal Access to Opportunities (2009), which includes prevention of harassment. The Project will establish procedures for equal employment for men and women at different grade levels (skilled and unskilled).

Grievance Mechanism: The Project will develop, disclose and implement a worker's grievance mechanism that will be clear, accessible, and free, include anonymity, and reviewed on a regular basis. Workers will be trained on the use of such mechanism with no risk of retaliation.

Occupational Health and Safety: The Project has developed a Labour Risks Prevention Policy and a Health and Safety (H&S) Plan, which includes potential H&S risks and preventive measures (e.g., training program; use of personal protective equipment; preventive maintenance; and emergency response). It also includes the rules and processes for work permits; safety and security monitoring on site; safety instruction to access the site and first aids. The Workplace Internal Regulation establishes the rights and responsibilities of workers regarding occupational health and safety and the employer's preventive management approach to risks. The Plans will be further developed to include details for its implementation.

### **4.3 Resource Efficiency and Pollution Prevention**

Greenhouse Gases: The Projects will generate an estimated 3,050 tons CO<sub>2eq</sub> during the construction phase, including direct consumption (i.e., Phase I, heavy equipment and vehicles). During operation, the Project is estimated to displace 378,600 tons CO<sub>2eq</sub> per year (i.e., 195,191 tons CO<sub>2eq</sub> per year for Solem I and 183,409 tons CO<sub>2eq</sub> per year for Solem II) for the first year, with an estimated annual degradation of 0.5 - 0.7% for years 2 to 25. This estimation was calculated using an emission factor of 447 grams of CO<sub>2</sub> per KWh for Mexico using an index provided by a publication of the International Energy Agency (IEA) dated 2012.

Water Consumption: A Water Management Plan was prepared for the Project and includes water use estimates. During construction, 10 m<sup>3</sup> will be used for dust suppression on roads and 1,200 m<sup>3</sup> during earth moving works. Water will be supplied by cistern trucks from Aguascalientes. During operation, the plan estimates 90 m<sup>3</sup> of water to clean panels annually. The Borrower will update its Water Management Plan for operations and will communicate the water volumes and sources to local stakeholders, given the scarcity of water in the project area.

Wastes: The Project has a Waste Management Plan that estimates types of wastes, actions to minimize generation and management from generation to disposal. Hazardous wastes will be handled and disposed of by authorized companies. Equipment maintenance will be done off-site. A Solar Panel Recycling Plan was prepared and will be updated prior to start of operations once a select recycling company is selected in Mexico or it is decided that the panels will be sent to Europe. During operation, the Project will not generate any type of solid, liquid or gaseous byproducts and will not emit noise or use non-renewable resources.

### **4.4 Community Health, Safety and Security**

Community Health and Safety: Traffic risks will be higher during construction, especially at the entrance to the Project site. The transportation routes for the equipment from the port of entry to the Project site will use federal and state highways that are currently in good condition and with proper maintenance. The Traffic Management Plan identifies the risks and management measures

(i.e., routes, signalling, speed control, GPS control, etc.) and will be shared with local authorities and neighbouring communities to promote awareness and minimize risks, and to communicate clearly when peaks of heavy traffic are expected.

**Security Personnel:** A private security company will be hired to safeguard the Projects' assets. Grupo Ortiz has not yet defined whether security personnel will be armed or not. The presence of security personnel was reported by interviewed community members as a disturbing factor that could make them feel unsafe. The Project area is not considered of high risk of security; nevertheless, a security risk assessment will be conducted and a strategy will be designed and implemented in the event that private armed security is selected.

#### **4.5 Land Acquisition and Involuntary Resettlement**

The Project will not generate involuntary physical displacement. All land required for the project will be purchased or rented through voluntary transactions between the Sponsor and 15 private landowners. The sponsor cannot resort to expropriation if negotiations with sellers fail. Some landowners has previously provided access to portions of their land through sharecropping arrangements with *medieros*, however *medieros* are not expected to be significantly affected or economically displaced (see impacts and risks section above). If further assessment of *medieros'* livelihoods identified significant economic impacts, the Sponsor, in consultation with the affected people, will adopt appropriate mitigation measures.

#### **4.6 Biodiversity Conservation and Sustainable Management of Living Natural Resources**

No impacts to biodiversity conservation or ecosystem services is expected. The site is a modified agricultural and pasture habitat with dispersed patches of natural secondary vegetation and no endemic or protected species. Vegetation removal will be minimized to an area at Solem I (Alten 5) that will be compensated with reforestation of native species at Alten 1 (see impacts and risks section). The 10 fauna species listed under Mexican norm that are known to occur in the region have a wide distribution range and available habitat of better conditions nearby. The Project has specific programs for fauna protection, including a specific program for birds of prey (see impacts and risks section). There are no Natural Protected Areas, Areas of Importance for Conservation of Birds, RAMSAR sites or Priority Areas for Biodiversity Conservation impacted by the Project. There is a Voluntary Conservation Area 16 km east of the Project unaffected by the Project. There are no ecosystem services affected by the Project.

#### **4.7 Indigenous Peoples**

According to information from the National Commission for the Development of Indigenous Peoples (CDI), there are no Indigenous Peoples (IP) present in the Projects' area of influence. Absence of IP's was also confirmed in the EIAs and during the due diligence.

#### **4.8 Cultural Heritage**

The EIAs found no indication of cultural heritage resources in the project area. As part of the EIA, the Project has developed and will implement a Chance Finds Procedure to manage any potential findings during construction (see impacts and risks, above).

### **5. Local Access of Project Documentation**

The Project information can be accessed locally at: <http://alten-energy.com/developing/espanol-mexico/>

## 6. Environmental and Social Action Plan (“ESAP”)

Item	Topic	Action	Deliverable	Completion Date
<b>PS 1: Assessment and Management of Environmental and Social Risks and Impacts</b>				
1	Permits	Provide the pending social permit issued by SENER for Solem II.	Social permit for Solem II	Prior to starting construction at Solem II
2	Environmental and Social Management System	Review and update the Environmental and Social Management System (ESMS) to ensure consistency among the existing plans and programs with Good International Industry Practice. The ESMS shall include: (i) a Project-specific E&S policy; (ii) organizational capacity; (iii) identification of risks and impacts; (iv) management plans/programs for environmental, social, health and safety and labor aspects; (v) emergency preparedness and response; (vi) monitoring and review; and (vii) stakeholder engagement.	Revised ESMS with management plans and programs developed and evidence of implementation	Prior to First Disbursement and thereafter in the Environmental and Social Compliance Report (ESCR)
3	Organizational Capacity	Appoint a dedicated EHS and Community Liaison Manager to lead the implementation of the ESMS, the Stakeholder Engagement process and supervise the Contractor’s EHS performance.	Evidence of EHS and Community Liaison Manager in place.	Prior to First Disbursement

Item	Topic	Action	Deliverable	Completion Date
<b>PS 1: Assessment and Management of Environmental and Social Risks and Impacts</b>				
4	Stakeholder Engagement	Review and update the Stakeholder Engagement Plan (SEP) based on the recent fieldwork conducted. The Plan should include: (i) an updated stakeholder mapping; (ii) a procedure to provide affected communities with project progress reports and implementation of action plans; (iii) description of the communication strategies and frequency with stakeholder groups; (iv) KPIs and record keeping; (v) details of Contractor responsibilities on communication and relationship with communities; (vi) disclosure to communities of the impacts and risks of the Project including summaries of the Local Recruitment Plan; Traffic Management Plan; Emergency Response Plan; Water Management Plan and Grievance Mechanism. The Grievance mechanism should (i) be clearly described and disclosed to communities; (ii) be culturally appropriate for the Project context; (iii) ensure anonymity; (iv) be documented and (v) auditable.	Revised and updated Stakeholder Engagement Plan and Grievance Mechanism and evidence of implementation	Prior to First Disbursement and thereafter in the ESCR

Item	Topic	Action	Deliverable	Completion Date
<b>PS 1: Assessment and Management of Environmental and Social Risks and Impacts</b>				
5	Impacts and risks	Finalize the consultation with neighboring <i>medieros</i> (i.e., neighbors that have been using the land at no cost for agricultural and livestock activities) and risk assessment to confirm that their livelihoods are not dependent on such activities. If impacts are identified, adopt adequate mitigation measures.	Risk assessment of <i>medieros</i> and mitigation measures (if any)	Prior to Financial Closing
<b>PS 2: Labor and Working Conditions</b>				
6	Grievance Mechanism	Review and update the Grievance Mechanism for workers. The Grievance mechanism should (i) be clearly described and communicated to workers; (ii) ensure anonymity; (iii) be documented and (iv) auditable.	Updated Grievance Mechanism and evidence of implementation	Prior to First Disbursement and thereafter in the ESCR
<b>PS 3: Resource Efficiency and Pollution Prevention</b>				
7	Solar Panel Recycling	Update the Solar Panel Recycling Plan to confirm if panels can be recycled in Mexico, and if so, include the details for it. If panels will be sent to Europe, indicate the specific permits needed for this activity in alignment with local regulations and international treaties.	Updated Solar Panel Recycling Plan	90 days prior to start of operations
<b>PS 4: Community, Health, Safety, and Security</b>				

Item	Topic	Action	Deliverable	Completion Date
<b>PS 1: Assessment and Management of Environmental and Social Risks and Impacts</b>				
8	Security	Assess the security risks and develop appropriate policies and procedures for managing the project's use and relationship with security personnel, whether public or private (including either an in-house or third-party guard force).	Security risk assessment completed and evidence of implementation	Prior to deployment of security forces to project site
9	Community Health and Safety	Further develop the Traffic Management Plan so it has sufficient detail for implementation and in consideration of local communities and households along the route.	Updated Traffic Management Plan and evidence of implementation	Prior to start of construction and thereafter in the ESCR