

**INTER-AMERICAN DEVELOPMENT BANK**

**URUGUAY**

**FRV LA JACINTA SOLAR PHOTOVOLTAIC POWER PROJECT  
(UR-L1092)**

**Category B Project**

**Environmental and Social Management Report  
(ESMR)**

**APRIL 2014**

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## I. INTRODUCTION

### A. Summary Table

#### 1.1

Country	Regional / Uruguay
Sector	Renewable Energy
Project Name	FRV / La Jacinta Photovoltaic Power Project
Borrower	La Jacinta S.R.L
Sponsor	Fotowatio Renewable Ventures (FRV)
Transaction Type	Project Finance
Total Project Cost (in US Dollars)	Approximately US\$97 million
IDB A-Loan (if applicable)	Up to US\$39.6 million
Co-lenders	Canadian Climate Fund (US\$25 million) DNB (US\$14.6 million)
Environmental Category	B
Project Team	Gian Franco Carassale, Project Team Leader (SCF/INF); Jan Weiss (SCF/SYN); Steven Collins (VPS/ESG); Ulrike Aulestia Vargas (SCF/SYN) and Jean-Marc Aboussouan (Chief, SCF/INF)

### B. Background

1.2 The project consists of the construction, operation and maintenance of a solar photovoltaic (PV) power project totaling 50 MW, as well as its associated facilities, including a short transmission line. The 50 MW La Jacinta facility will be located approximately 5 km south of the City of Salto in northwestern Uruguay (See Figure 1). The facility will occupy a total area of approximately 139 hectares of cattle grazing land, (see Figure 2). The Project will be connected to the national grid via a 150 kV transmission line to an existing substation approximately three km to the north of the project site on the outskirts of the City of Salto, a city of approximately 230,000 inhabitants. There is an existing 150 kV transmission line passing

through the project site with sufficient capacity to allow the project to tie in to the existing line; however, UTE has requested the project construct an additional parallel line. The Project continues to negotiate the possibility of a tie in rather than new build.

- 1.3 La Jacinta Solar Farm S.R.L. (the “Borrower”) is an Uruguayan special purpose company that owns the 50MW plant. The company has Fotowatio Renewable Ventures (FRV), as sponsors. FRV is a joint venture company established in 2012 in the Netherlands in order to develop, build, operate and sell new solar assets. FRV owners have experience developing and operating solar facilities in the US, Spain, and Italy.
- 1.4 The Project has selected Obrascon Huarte Lain (OHL), a Spanish company, as the EPC contractor who will provide all engineering, procurement and construction services to bring the facility online. OHL has over 100 years’ experience as an international contractor on large scale infrastructure projects with over 25 years’ experience in South America with offices in Brazil, Chile, Peru, Argentina, and Uruguay. An O&M contractor to provide the operation, maintenance and asset management services for the Project has also not been selected; however, OHL is a potential candidate. OHL and the O&M contractor, upon selection, will be required to construct and operate the facility within the restrictions and requirements outlined in the Project’s ESMP and in compliance with IDB standards.
- 1.5 The estimated total cost of the Project is approximately US\$97 million, which will be funded through a combination of equity and debt, along with loans from IDB and the Canadian Climate Fund. The Project is seeking financing of up to US\$39.6 million from the IDB and approximately US\$25 million from the Canadian Climate Fund for the Private Sector in the Americas (C2F), a fund established by the Government of Canada and managed by IDB to catalyze increased private sector investment in climate change mitigation and adaptation and US\$14.6 million from DNB.
- 1.6 A due diligence mission was conducted by an ESG representative, Steven Collins, from October 29 - 30, 2013. Findings and observations gained during the mission along with information provided in the project’s environmental documentation are detailed within this report.

Figure 1. General Project Location – La Jacinta



Figure 2. Project Area Map – La Jacinta



## II. PROJECT DESCRIPTION

### A. Project Components

- 2.1 The “Project” consists of the construction, operation and maintenance of a solar photovoltaic (PV) power project, the 50 MW AC plant (“La Jacinta”), as well as its associated facilities, including offices and a transmission line. The La Jacinta facility is located five km south of the City of Salto in the Department of Salto, Uruguay. The Project will occupy an area of approximately 139 hectares of land currently used for cattle grazing. The Project will be connected to the national grid through a three km long 150 kV transmission line. The project has a minimum anticipated life span of 30 years and will sign a 25 year PPA with the Administración Nacional de Usinas y Transmisiones Eléctricas (“UTE” or the “Offtaker”), the state-owned public utility of Uruguay.
- 2.2 The La Jacinta project area, encompassing the 50 MW facility will be situated on approximately 139 ha of land, which is currently being used as a grazing pasture. The La Jacinta site has a large existing reservoir used for watering cattle. The reservoir will be left intact to use as a potential source of water for washing the solar panels. In terms of project components and site layouts, the La Jacinta facility will consist of approximately 224,000 photovoltaic solar panels. The solar array will consist of a fixed panel system with the panels installed at a 23 degree inclination towards the north to gather optimal sunlight. The Project will use polycrystalline photovoltaic panels.
- 2.3 The facility will tie into an existing substation through the construction of an approximately 3 km long 150 kV transmission line to connect the facility to the national grid. An internal network of subterranean distribution cables to connect the solar arrays to the transmission lines will also be constructed. Underground electrical cables will be buried to a minimum depth of 0.5 m.
- 2.4 The project site currently has vehicular access via existing roads. The La Jacinta property has an access along the paved Route 3, at km 480, passing near the property owner’s house as well as two other access points along an existing dirt road on the southern side of the property. The project will make improvements to the owner’s access road, as per his request; however, the majority of the construction traffic will use the other two access roads. Internal access roads will also be constructed amongst the solar panels. Internal access roads on the property will most likely be capped with a gravel material to improve drainage and reduce erosion.
- 2.5 Several small buildings and other infrastructure, such as offices, control rooms and canteen, will also be constructed in order to support activities during the construction process and throughout operations. These facilities include prefabricated or modular units to house the invertors, showers and lockers for workers, a kitchen and dining area, on-site offices, equipment storage area, waste storage area, and hazardous waste storage

areas. A large area will be dedicated to materials storage, such as solar panels, electrical cabling, and excavated soils. A perimeter security fence will be constructed around the facility to increase security. More precise information regarding various project components for the Project are detailed in Table 1 below, along with other project specific information.

**Table 1: Project Component Information**

<b>Project Aspect</b>	<b>La Jacinta</b>
<b>Capacity</b>	50 MW (approx.. 224,000 panels)
<b>Invertors (DC to AC)</b>	25 - 35
<b>Transformers</b>	25 (2.5m x 12m x 3m)
<b>Energy Generation (annual)</b>	96 GWh
<b>Total Area Disturbed</b>	139 ha
<b>150 kV Transmission Lines</b>	3 km long
<b>Access Road</b>	Internal – 1.5 km x 6 m wide improvements to existing road; minor improvements to existing property owner’s road
	External – no external road required
<b>Prefabricated units (offices storage, canteen)</b>	2 x 200m <sup>2</sup>
<b>Number of Foundations / Piles</b>	Will depend on soil stability
<b>Living quarters</b>	None required
<b>Hazardous waste storage</b>	No storage of hazardous materials envisioned on site
<b>Security fence</b>	Min. 2.2 m high
<b>Water Consumption (construction)</b>	Maximum 120 m <sup>3</sup> /day, ave 72 m <sup>3</sup> /day (20 l/person/day)
<b>Water Consumption (operations)</b>	Maximum 1.2 m <sup>3</sup> /mo – potable water
	360 m <sup>3</sup> /yr based on two cleanings per year using 0.3-0.5 l/m <sup>3</sup> )
<b>Wastes (non-hazardous)</b>	Construction – 2.0 T/month
	Operation – negligible
<b>Wastes (hazardous / sanitary)</b>	Construction – 2.6 T/mo
	Operation – 0.08 T/mo
<b>Air Emissions (CO<sub>2</sub> reduction) – Estimated</b>	18,000 ton CO <sub>2</sub> /year
<b>Number of Workers</b>	Construction – 210
	Operations – 10

**B. Environmental and Social Setting**

- 2.6 The project is located in northeastern Uruguay. La Jacinta lies approximately 5 km south of the city of Salto. Much of the terrain surrounding the Project area has already been impacted by human activities, particularly agriculture, eucalyptus plantations and cattle grazing. The project lies at an elevation of less than 50 m above sea level on a property to the east of the Rio Negro. The solar facility will occupy an area of approximately 139 ha, which will be permanently affected by the erection of the solar panels, transmission line, offices, maintenance roads and other construction works.
- 2.7 The project site, itself, can be described as modified habitat, previously impacted by human activities, cattle grazing land in the case of the La Jacinta property. There are a large number of mature exotic eucalyptus trees growing around the project area and surrounding communities providing a valuable wind break for croplands; however this is an exotic and invasive species in Uruguay. No protected areas or priority zones for conservation were identified in the EIA for the facility.
- 2.8 Baseline flora surveys in the EIA did not identify any sensitive plant species within the project area. The site visit during the due diligence mission verified the low probability of the occurrence of any sensitive species as the project area has been largely impacted by previous activities including agriculture and grazing.
- 2.9 The baseline fauna surveys in the EIA did not identify any sensitive animal species within the project area; however, a large number of bird species were identified at the La Jacinta site. The La Jacinta site lies approximately two km from the Corralitos (UY005) Important Bird Area (IBA) along the Rio Negro and two other IBAs Meseta de Artigas (UY006) 15 km away and San Antonio (UY004) 20 km away. Four species of protected birds (IUCN Red List species) are known to inhabit these IBAs including: *Sporophila cinnamomea* (Vulnerable); *S. ruficollis* (Near Threatened); *S. zelichi*, now called *S. palustris* (Endangered); and *Anthus nattereri* (Vulnerable). All four of these species are grassland species and could potentially utilize the project site; however, none were observed during the field surveys.
- 2.10 Desktop studies of the surrounding areas and archaeological surveys of the project area were conducted and the results presented in the EIA. While the surrounding areas, rivers in particular, have played a significant role in the area's history, no sites of cultural importance were identified within the project area. The EIA states that no impact to cultural resources will occur as a result of the project; however, a Chance Find Procedure must be implemented during the construction process.

## **Social Setting**

- 2.11 The project site lies near a large population center, in northeaster Uruguay. La Jacinta lies approximately 5 km south of the city of Salto.



- 2.12 The project site is owned by one individual. The owner of the La Jacinta property has approximately 220 ha, all of which is used for cattle grazing, aside from the area where his house is located. The solar array will occupy approximately 139 ha and includes a large buffer zone around the house and will maintain a large parcel for continued grazing use.
- 2.13 The project has already signed a land lease agreement with the owner based on the total number of hectares to be used. The payments offered are rather generous, representing more income per hectare than currently earned through cattle grazing, and the land owner is satisfied with the offer. The Project has also been awarded the environmental license by DINAMA. Public consultation in the local communities was not required by DINAMA. ESG has expressed the requirement to conduct a consultation meeting to the client and consultation was conducted in the communities in May 2014. Prior to the meeting the Project placed an announcement in the local newspaper inviting interested parties to attend the consultation meeting.
- 2.14 The primary economic activities in the region include agriculture (wheat, corn, alfalfa) and cattle ranching. While these are dominant economic activities, other economic activities exist in the region and include dairy farming, as well as the cultivation of forest plantations including pine and eucalyptus for fuel and construction materials. The operational Salto Hydroelectric Plant and its associated works, near the La Jacinta site, also contributes significantly to the local economy.
- 2.15 Access to services in the area is generally good with the majority of homes containing sewer, water and electricity. The area has several schools for basic and mid-level education. Residents also have access to health care facilities and other amenities in the nearby city of Salto. A bus system is also available to transit from the smaller villages to the larger cities.
- 2.16 The rate of unemployment in the area is extremely low primarily due to the proximity to large hydroelectric facility in Salto, as well as other operations run by UTE. A large section of the population is also employed in the agricultural and ranching sectors. Despite the low unemployment rate, the project will likely supply all its labor needs from the large city of Salto, located within 20 km of the project site.

### **C. Project Schedule and Workforce**

- 2.17 Based on information provided in the EIA and during the due diligence mission, construction on the project is scheduled to begin in the end of June 2014, with an anticipated 11-month construction period. Operations are scheduled to commence in late May but in any event, no later than the end of 2015. The Project is expected to have approximately 210 workers, on average during the construction period. It is currently anticipated that approximately 10 employees will be required at the facility during

operations. These individuals will be present primarily to fulfill any maintenance operations required on equipment.

#### **D. Alternatives Analysis**

- 2.18 The EIA for La Jacinta included a section detailing the analysis of alternatives as part of the study. Several alternative site locations were identified and a selection process ensued to identify the optimal location or preferred alternative. The criteria employed by the Project for the definition of the sites was to first locate the geographical area of the country which presented optimal conditions for the generation of solar energy (high solar radiation). The company identified several possible sites within Uruguay, primarily in the same vicinity. The selected potential sites were then evaluated against factors such as environmental quality of the land, ownership of the land, zoning and current land use, proximity to existing infrastructure (substations and transmission lines), accessibility, and distance from human settlements. Options were also assessed for the transmission line including different routes, medium tension versus high tension lines, and buried or aerial lines.
- 2.19 The site selected appears to be ideal as it is: i) privately-owned land with few people living on the land or otherwise utilizing the land; ii) there is an existing substation and transmission line nearby; iii) existing roads allow easy access without disrupting the lives of the community due to major civil works involving the construction of new roads and improvements to existing roads; iv) the closest settlements are 5 km and 11 km away allowing access to services but minimizing social impact and; v) the property does not lie within any sensitive or designated area and does not contain any protected species.

### **III. COMPLIANCE STATUS AND PROJECT STANDARDS**

#### **A. Appraisal Process and Local Requirements**

- 3.1 An Environmental Impact Assessment, or Estudio de Impacto Ambiental, (EIA) was prepared for the La Jacinta project in July 2013. The EIAs was presented to DINAMA. The project was categorized by DINAMA as Category A (Category C by Bank standards) and both were granted project approval. The bank classifies the Project as a Category B project.
- 3.2 In conjunction with the EIA, the project was also subject to conducting archaeological surveys within the project area. The archaeological surveys did not reveal any items of significance. The project will be required to implement a Chance Find Procedure to ensure no sites will be disturbed during construction.
- 3.3 As mentioned above, a land lease agreement has been signed with the property owner for the solar facility and the environmental license has been granted by DINAMA. The

transmission line has also been granted the environmental license and the transmission line right of way has been secured. The status of these activities will be tracked with the Borrower and UTE throughout construction. Due to the short extensions of transmission line (3 km) planned, complications in the process are not expected; however, this process is controlled by UTE; the Bank and the Borrower have little influence in the process.

**B. IDB Safeguard Policies**

3.4 The Project triggers the following directives of IDB’s OP-703 Environmental and Safeguards Policy: B.1 Bank Policies; B.2, Country Laws and Regulations; B.3, Screening and Classification; B.5, Environmental Assessment; B.6, Consultation; B.7, Supervision and Compliance; B.9, Natural Habitats and Cultural Sites; B.10, Hazardous Materials; B.11, Pollution Prevention; B.12, Projects Under Construction (possibly as this project may start construction before the Project is presented to the IDB Board); and B.15, Co-Financing Operations. The OP-102, Disclosure of Information Policy also applies for this Project. Based on available documentation and observations during the due diligence mission, the OP-710 on involuntary resettlement will not be triggered for this Project as the project area is owned by one land owner and no physical resettlement will occur. The Disasters Risks Management Policy (OP-704) will also not be triggered as the project does not occur in an active volcano, earthquake, or landslide area.

3.5 Table 1, below, illustrates the Project’s capacity to comply with IDB’s various policies and directives.

**Table 1: Compliance with IDB Policies and Directives**

<b>Policy / Directive</b>	<b>Applicable Aspect</b>	<b>Compliance Rationale</b>
<b>OP-703 Environmental and Safeguards Compliance</b>		
B.1 Bank Policies	Compliance with applicable IDB policies	The project is currently in full compliance with all IDB policies and directives. The implementation of the ESMP will ensure the Project remains in compliance once construction commences.
B.2 Country laws	Compliance with country laws and regulations	The project is in full compliance with all Uruguayan laws and regulations. Land lease agreements and other permits are complete for the solar facility. Land lease

<b>Policy / Directive</b>	<b>Applicable Aspect</b>	<b>Compliance Rationale</b>
		agreements and permits are still pending for the transmission line (UTE's responsibility) and will be monitored by the Bank
B.3 Screening and Classification	Application of appropriate classification	The Project has been screened using the Bank's toolkit and has been classified as a Category B operation.
B.4 Other Risk Factors	N/A	N/A
B.5 EA Requirements	Application of adequate assessment process	In accordance with both Uruguayan regulations and Bank policies for Category B projects, an Environmental Impact Assessment was prepared for the La Jacinta project. The EIA was reviewed by ESG.
B.6 Consultations	Project has undergone appropriate public consultation	Public consultation was conducted in the local communities in May 2014. Consultations and open dialogue will continue with the community throughout construction and operations.
B.7 Supervision and Compliance	Internal supervision and reporting and Bank supervision	Annual reports must be submitted to the Government (DINAMA) during construction. The Project will submit semi-annual compliance reports during construction and annual compliance reports during operations to the Bank. Additionally, Government entities, as well as the IDB Environmental Safeguards Unit, may conduct their own supervision of the project. The Bank will conduct annual supervision visits.
B.8 Transboundary Impacts	N/A	The Project does not impact neighboring countries.
B.9 Natural Habitats and	Conversion of natural habitat	The project site, in the northeast of Uruguay, consists of agricultural and grazing land; however, is considered natural

<b>Policy / Directive</b>	<b>Applicable Aspect</b>	<b>Compliance Rationale</b>
Cultural Sites		habitat and an area of high soil conservation value. This habitat type is abundant in the area and the site does not contain any protected areas. No sensitive species of flora or fauna were documented in the EIA. The project does not present a significant conversion of natural habitat.
B.10 Hazardous Materials	Waste management	The Project does not envision the storage of hazardous materials within the work site during construction activities. Nevertheless, the project's Plan de Gestión Ambiental (PGA) provides a strict waste management program, including waste segregation. Due to the nature of the operation, no hazardous materials need to be stored on-site during construction (fuel, oil, and lubricants for vehicles will be supplied by a contractor and vehicle maintenance will occur at nearby garages) and no hazardous materials will be stored at the facility during operations. A licensed contractor will be contracted to handle the waste management, both general waste and hazardous wastes.
B.11 Pollution Prevention	Pollution control and CO <sub>2</sub> emissions	The project's PGA provides a strict waste management program including a robust recycling program involving local waste contractors. A certified contractor will be hired to remove wastes from the project site on a regular basis. The project will reduce the country's CO <sub>2</sub> emissions by approximately 39,600 tons CO <sub>2</sub> /year (estimated) by providing a source of green energy.
B.12 Projects Under Construction	Potentially applicable	The Project is not currently in construction; however, it is possible that construction activities will commence before the Project can be presented to the IDB Board. The

<b>Policy / Directive</b>	<b>Applicable Aspect</b>	<b>Compliance Rationale</b>
		situation will be monitored and the Board will be notified during COW, or before, if the Project is under construction.
B.13 Non-Investment and Flexible Lending Instruments	N/A	N/A
B.14 Multiple Phase Loans	N/A	N/A
B.15 Co-Financing Operations	Potential presence of other lenders	Other potential lenders, including the Canadian Climate Fund, are also conducting separate due diligence exercises. The Project's ESMP will comply with other lender's policies and assist the Project to maintain a high level of compliance.
B.16 In-Country Systems	N/A	N/A
B.17 Procurement	N/A	N/A
<b>OP-710 Involuntary Resettlement</b>	N/A	No physical displacement will occur as a result of the project
<b>OP-765 Indigenous Peoples</b>	N/A	No indigenous communities or peoples will be negatively affected by the Project.
<b>OP-704 Disaster Risk Management Policy</b>	N/A	The project is not located in a disaster risk area.
<b>OP-270 Gender Equality</b>	Avoiding gender discrimination within the Project or as a result of the Project. Providing opportunities for	Women will be incorporated into the labor force when feasible; no gender discrimination will occur due the project. The Project is currently attempting to identify social programs to benefit women

<b>Policy / Directive</b>	<b>Applicable Aspect</b>	<b>Compliance Rationale</b>
	women.	in the local communities.
<b>OP-102 Access to Information Policy</b>	Project information disclosure	IDB has made all relevant project documentation available on their website. The Project has adequately disseminated information in the local community in newspaper announcements. Public consultation meetings have not yet occurred for the solar facility or the transmission line.

### **C. Project Requirements and Standards**

- 3.6 The EPC contractor, OHL, who will be in charge of all construction activities, has significant experience in Europe and South America. The company has a strong history of worker safety and maintains robust systems of quality and environment, corporate social responsibility, and corporate governance. OHL must prepare documentation for the Bank illustrating how the Project will implement the Environmental and Social Management Plan, including staff to be allocated to the Project and their specific responsibilities.
- 3.7 The EIA associated with the Project does not contain a project-specific Environmental and Social Management Plan (ESMP) or Plan de Manejo Ambiental (PMA). This is a critical document establishing plans of action and methodologies during construction to reduce and minimize potential environmental and social impacts. An ESMP must be prepared and approved by the Bank prior to presentation to the IDB Board. The ESMP outlines the Project's environmental and social responsibilities including waste management, erosion, traffic management, health, safety and labor, monitoring and auditing. The ESMP will also address specific project location related issues such as minimizing impacts to the property owner such as traffic, noise and dust.
- 3.8 The Project aims to support projects and programs directed at supporting and improving the lives of women and children in the area. Currently, the project envisions establishing an education program for school children and adults to visits the facilities, once in operation, to learn about the project and the solar energy industry in general. As this is the first large-scale solar energy project in the area, an education program which includes a field trip will be a unique experience for school children. Public consultation meetings will also help to identify other potential projects or programs which may benefit the local communities.

- 3.9 A Grievance Mechanism has been established to track and manage (respond to) any concerns or complaints levied by the community. The Grievance Mechanism was introduced to the community at the public consultation. A detailed register will be maintained to manage any complaints presented and track responses and resolutions. This system will be maintained throughout the Project lifecycle.
- 3.10 Currently the Project complies with the Bank's safeguard policies as verified during the due diligence mission and documentation review. Supervision missions conducted during the construction and operations phases will ensure continued compliance with Bank policies.

#### **IV. KEY ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS**

##### **A. Summary of Key Impacts and Risks**

- 4.1 The due diligence mission conducted in October 2013 identified the main impacts and risks as: conversion of natural habitat, air emissions related to dust and particulate matter, waste management, and traffic issues due to a large increase in vehicular traffic during construction. A project-specific ESMP must be prepared to address these issues.

##### **B. Environmental Impacts and Risks**

- 4.2 The primary impact of concern identified in the environmental documentation was the conversion of natural habitat, visual impacts associated with the change in land use, potential impacts to sensitive species of flora and fauna, dust emissions during construction activities, and water use, primarily during operations. While the Project area is considered to be natural habitat, the site exhibits evidence of several decades of human impacts and consists entirely of agricultural fields, cattle pastures and hedgerows of non-native trees. The entire surrounding community consists of similar impacted habitat primarily consisting of agricultural fields and ranching properties. The conversion of agricultural fields, pastures and rows of exotic trees would not constitute a significant degradation to the overall natural habitat which consists of native grasslands such as those located in the nearby IBAs.
- 4.3 In order to reduce the impact to water resources the Project will limit the number of cleaning events for the solar array and will use modern technologies to clean the panels. Water efficient high-pressure washers and scrubbers will be utilized during the cleaning process to reduce the amount of water consumed. It is anticipated that approximately 0.3 to 0.5 liter of water will be used per square meter of solar panel per cleaning. Water for cleaning of the panels will be supplied directly from the existing on-site ponds and stand tanks which will be maintained in their current state. The ponds are filled from rain



water and the stand tanks are well fed. In draught conditions, the project is prepared to discontinue water use from the pond and wells in order to protect the resource and reduce competition of water use with local farmers and ranchers. Under these conditions, water will be trucked in. Total water consumption during operations is anticipated to be approximately 360 m<sup>3</sup>/yr for the La Jacinta facility, based on two cleanings per year at the facility.

- 4.4 The Project area does not lie within any known hazard area including volcanic zone, earthquake zone or landslide area, nor are they at any elevated risk due to possible climate change events. The Project does not pose any Natural Hazard risk.

### **C. Social Impacts and Risks**

- 4.5 The due diligence mission to the La Jacinta site did not identify any significant social impacts to the nearby populations. This is mainly the result of factors such as (i) the low-impact nature of the technology associated with solar plants (ii) the fact that the site is not adjacent to major human settlements, and (iii) the Project site is owned by one owner and little economic activity occurs on the land making compensation to the owner an easy process. The owner has already signed a land lease agreement with the Borrower for the duration of the project life-cycle.

- 4.6 Land acquisition for the transmission lines associated with energy projects is an important issue in Uruguay. UTE, the national energy regulator, controls all transmission lines in Uruguay and maintains a separate process for the licensing, permitting, consultation, and land use agreements. Both the solar facility and the transmission line have already completed these processes.

### **D. Cumulative Impacts**

- 4.7 A cumulative impacts analysis was not conducted as part of the EIA for the project, as it lies in a fairly remote area surrounded by agricultural and cattle ranching lands. The vast majority of these lands consist of large parcels of privately owned lands. There are also several IBAs in surrounding areas in which projects requiring construction or land disturbance will be limited. Should developmental growth continue in the area, cumulative impact assessments should be evaluated in the future.

- 4.8 The Project will be constructed in a rural environment, somewhat isolated from any large settlements or other infrastructure aside from the house of the property owner. No other projects are currently known to be coming to the surrounding area in the immediate future; however, other solar projects are proposed in neighboring departments in northern Uruguay.

4.9 The success of the Project could attract more growth in the area particularly in the solar energy sector, particularly as this is the first large-scale solar facility in Uruguay. This potential growth would possibly result in net positive social impacts on the surrounding communities by providing employment to local workers and contracting local services as well as providing beneficial social programs to local schools and community based programs and other social programs such as donation of recyclable goods to the community.

#### **E. Positive Impacts**

4.10 The Project will likely result in net positive benefits for the nearby communities as well as the country, in general. The Project, during construction phase, will provide direct employment to approximately 210 workers. A preference for workers from local communities will be provided and, due to the proximity of Salto, it is anticipated that local labor will be sufficient to fulfill the Project's labor requirements. Various other enterprises located in area will benefit from contracts issued to complete the construction activities.

4.11 The Project will be tied into the Uruguayan national grid, providing green energy for the country. The energy generated at the La Jacinta facilities will reduce the country's carbon emissions by over 18,000 tons CO<sub>2</sub>/.

4.12 The Project is currently working with the community and local officials to identify potential social programs which the Project can support. Preference will be given to social programs which benefit women and children. School field trips, as well as site visitations for other visitors, are envisioned for the future when the plants are in full operation to teach school children and the community about solar energy.

### **V. MANAGEMENT AND MONITORING OF ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY AND LABOR IMPACTS AND RISKS**

#### **A. Description of Management Systems and Plans**

5.1 The La Jacinta solar plant has developed a project specific Plan de Gestión Ambiental (PGA) according to the requirements established by the Uruguayan legislation and in line with the Bank's policies. The PGA has been submitted to DINAMA; under Uruguayan legislation DINAMA does not need to approve the PGA but is entitled to send comments and require modifications to the PGA. The PGA includes regular monitoring of the facilities and annual reports will be prepared and submitted to DINAMA during construction concerning noise, air emissions, waste management, health, safety and labor performance, as well as other issues. Detailed logs will be maintained to document

worker trainings, worker health certificates, work site incidents and accidents, waste registers, and vehicle maintenance. A semi-annual report will be provided to the Bank during construction and annual reports will be provided during operations.

5.2 Much of the early preparation work for the Project, including environmental and social impact analysis, permitting, and land lease agreements, is complete. Additional social activities have also been implemented by the Project to develop and maintain a good relationship with the local communities throughout the project life cycle including:

- i. **Public Consultations.** The Project has organized and conducted public consultation meetings with community members, including women's groups, NGOs, and local authorities. The consultations provided an opportunity for interested people to learn about the project and have their doubts and concerns addressed by company representatives. A register has been maintained documenting the names of those in attendance and any concerns raised by the community. The Project should plan to continue meeting with the public throughout the construction process.
- ii. **Grievance Mechanism.** The Project has implemented a Grievance Mechanism to allow stakeholders an opportunity to voice their opinions, concerns, complaints, or comments outside of the public consultation meetings. These comments will be recorded in a database, as well as the Project's responses to these comments in order to monitor the resolution of any grievances. Issues will be tracked to determine how the Projects respond to complaints and how project teams work with the complainants to resolve outstanding issues.
- iii. **Community Relations Plan.** A detailed Community Relations / Engagement Plan has been developed. The goal of this Plan is to establish community participation mechanisms and build positive relationships with interested groups to avoid or minimize potential social conflict situations during project execution as well as to develop community based social programs that best fit the needs of the community. This plan provides both a general framework and specific procedural guidance for a continuous dialogue between the local population and representatives of the company.
- iv. **Potential Social Programs.** The consultations with local authorities and community groups should help identify potential social programs to support in the areas surrounding the project sites. Programs to benefit school children and environmental programs focusing on solar energy have been identified as potential opportunities. Communication with any local community groups would assist better identifying more projects which will specifically benefit women, children and the poor.

## **B. Monitoring and Supervision**

5.3 This project includes different levels of supervision. The most relevant ones include (i) Internal project supervision, defined within the ESMP and as required to the Government of Uruguay; (ii) Bank supervision, carried out regularly by the project team with the support of specialized consultants as needed; and (iii) inspections from DINAMA, an

entity of the Uruguayan Government responsible for enforcement of compliance with environmental laws and regulations. The Bank will conduct an annual supervision mission during the construction phase and will require semi-annual compliance reports from the Project during construction. Annual reports will be required during operations. DINAMA will require annual reporting during construction and may conduct site compliance visits.

### **C. Indicators**

- 5.4 In the case of environmental indicators, the project will be assessed in terms of compliance with the IDB Safeguard Policies and compliance with local regulations. The annual report provided by the Borrower will detail vital information including calculated reduction of CO<sub>2</sub> emissions. Based on current energy production in Uruguay, the La Jacinta Project is expected to create a reduction of over 39,600 ton CO<sub>2</sub>/year; as reflected in the development goal of a reduction of 39,600 ton CO<sub>2</sub>/year. Carbon reductions will be directly related to the amount of energy generated, of which, a goal of 96 GWh has been established.
- 5.5 In the case of the social support programs, potential projects or programs must be further developed through continued consultation with local authorities and community groups. Following project identification, a chronogram of activities will be developed which will include a list of components, specific activities for each component, and expected results. Results of the social programs will be reported in the semi-annual environmental and social monitoring reports.

## **VI. REQUIREMENTS TO BE INCLUDED IN THE LEGAL AGREEMENTS**

- 6.1 Based on the ESDD conclusions, the conditions described below are required to be fulfilled for the Project prior to loan approval/financial close and throughout the life of the loan, in form and substance satisfactory to IDB:

### *Throughout the Life of the Loan*

- 6.2 The IDB will require within its Loan Agreement that the Project and each Project party (Sponsor/Borrower/Company) and other Project/Environmental parties, including construction companies and operators, and any contractors and sub-contractors will, at all times during the life of the Loan Agreement, comply with the following requirements:
1. All applicable environmental, social, health and safety, and labor regulatory requirements of Uruguay.

2. All requirements associated with any environmental, social, health and safety, and labor related permits, authorizations, or licenses that apply to the Project, the Borrower or any party responsible for executing the Project or its mitigation measures.
3. All environmental, social, health and safety, and labor requirements of the Project contracts and any subsequent modifications.
4. All aspects and components of all of the Project's environmental, health and safety, social and labor documents.
5. All relevant IDB policies such as the Environment and Safeguards Compliance Policy (OP-703), the Disaster Risk Management Policy (OP-704) and the Disclosure of Information Policy (OP-102), the Involuntary Resettlement Policy (OP-710), the Operational Policy on Indigenous Peoples (OP-765) and the Gender and Equity in Development Policy (OP-270) and their respective guidelines.
6. Comply with all the requirements indicated in the Environmental and Social Action Plan (ESAP).

*Prior to First Disbursement*

- 6.3 The Project will implement the project specific ESMP (Plan de Manejo Ambiental) to assess and mitigate the negative impacts associated with the Project. The ESMP includes a defined monitoring and supervision regime. All project contractors will also be required to comply with the actions described in the ESMP.
- 6.4 The Project will appoint an Environmental and Social Specialist for the duration of the construction period to prevent and manage potential impacts and supervise and monitor mitigation measures. The EPC contractor, OHL, shall present to the Bank an organizational chart illustrating roles and responsibilities throughout the project cycle.
- 6.5 The Project will continue to conduct community engagement activities with local authorities and community groups to identify and implement potential social programs. The Project will look specifically to support social programs directed at benefitting women, children, and indigenous groups.
- 6.6 The Project shall demonstrate to the Bank that all pending land purchase agreements have been finalized and commitments honored throughout the Project cycle.
- 6.7 Copies of relevant permits, contracts, and agreements shall be submitted to the Bank.

*Prior to Each Disbursement*

- 6.8 The Sponsor/Borrower/Company shall certify compliance with all environmental social, health and safety and labor requirements in the loan agreement, including any Corrective Action Plans if applicable.

*Prior to Operations*

- 6.9 The Project will develop and implement a project specific ESMP for Operations to assess and mitigate the negative impacts associated with the Project during the operations phase. The ESMP will include a defined monitoring and supervision regime for Operations phase. All project contractors will also be required to comply with the actions described in the ESMP.
- 6.10 The IDB or an E&S consultant appointed by the IDB shall certify compliance with all E&S requirements of the loan agreement including any Corrective Action Plans if applicable.

**PHOTO LOG – FRV La Jacinta Solar PV Plants**



Figure 1: La Jacinta Site - grazing land, trees form project boundary



Figure 2: La Jacinta Site, view to north



**Figure 3: La Jacinta Site - cattle pond and transmission line**