

La Jacinta and San Javier Solar PV Project – Uruguay
ENVIRONMENTAL AND SOCIAL STRATEGY – FINAL

I. SUMMARY

Project Name:	La Jacinta and San Javier Solar PV Project
Project Number:	UR-L1092
Country:	Uruguay
Project Team:	Gian Franco Carassale, Project Team Leader (SCF/INF); Paulo Martelli, Team Member (SCF/INF); Jan Weiss (SCF/SYN); Steven Collins (VPS/ESG); Ulrike Aulestia Vargas (SCF/SYN) and Jean-Marc Aboussouan (Chief, SCF/INF)
Borrower:	Two Uruguayan special purpose companies
Sponsor:	Fotowatio Renewable Ventures (FRV)
Funding:	IDB: up to US\$ 60 million or 40% of Project costs C2F Loan: up to US\$ 30 million Total Project Cost: US\$ 150 million
Safeguards Policies Identified:	OP-102, 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 of the construction, operation and maintenance of two solar photovoltaic (PV) power projects totaling 60 MW, as well as their associated facilities, including two transmission lines. 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 220 hectares, (see Figure 2), which will require verification during the due diligence process. 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. The 10 MW San Javier facility will be located approximately 20 km south of the City of Paysandu (see Figure 3), the second largest city in Uruguay with a population of approximately 500,000 people. The Project will occupy approximately 30 hectares and will construct a 0.7 km-long 150 kV transmission line (see Figure 4).
- 2.2** The Project will provide approximately 120 GWh per year of electricity and will be tied into the national grid. The Borrowers seek to sign Power Purchase Agreements (PPAs)

with UTE with a 25 year term for Santa Ana and a 30 year term for San Javier. To date, no PPAs have been signed, but should be signed in early September 2013.

- 2.3** The Project encompasses the installation or construction of the following components: i) erection of solar photovoltaic crystalline panels mounted on single axis trackers (exact number of panels to be verified) with a combined capacity of 60 MW; ii) construction of two new substations iii) construction of two new 150 kV transmission lines of approximately 3.0 km and 0.7 km to connect the solar facilities to the national grid; iv) several smaller underground electrical lines within the project area; v) possible construction and maintenance of service roads (length and alignment to be verified during due diligence); and vi) construction of support buildings, including offices and a temporary worker camp.
- 2.4** The Project is estimated to have a 12 month construction period. The start of construction is expected to occur in 2013; however the exact date will require verification. The Project's construction phase is expected to be completed with operations beginning in June 2014, and have an operational life of 25 to 30 years. The number of workers required during construction, operations, and decommissioning will be verified during the due diligence phase and is currently estimated to be 30-40 workers for construction and five for operations.
- 2.5** By adding 60 MW of renewable energy to the national grid and supplying approximately 120 GWh per year, the Project is estimated to displace approximately 85,000 tons of CO₂e per year.

Figure 1. General Location Map – La Jacinta

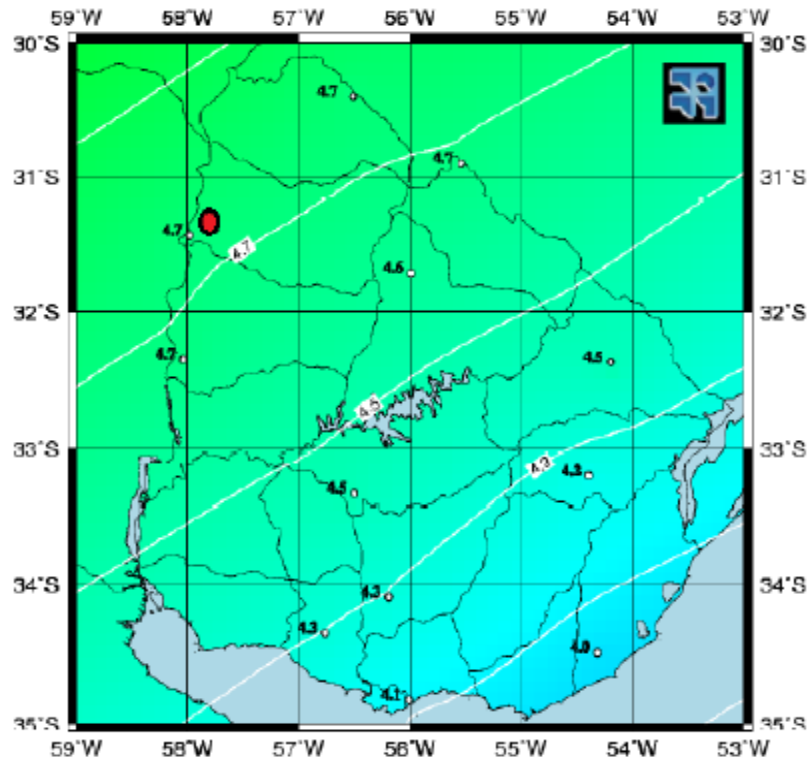


Figure 2. Project Location Map – La Jacinta



Figure 3. General Location Map – San Javier

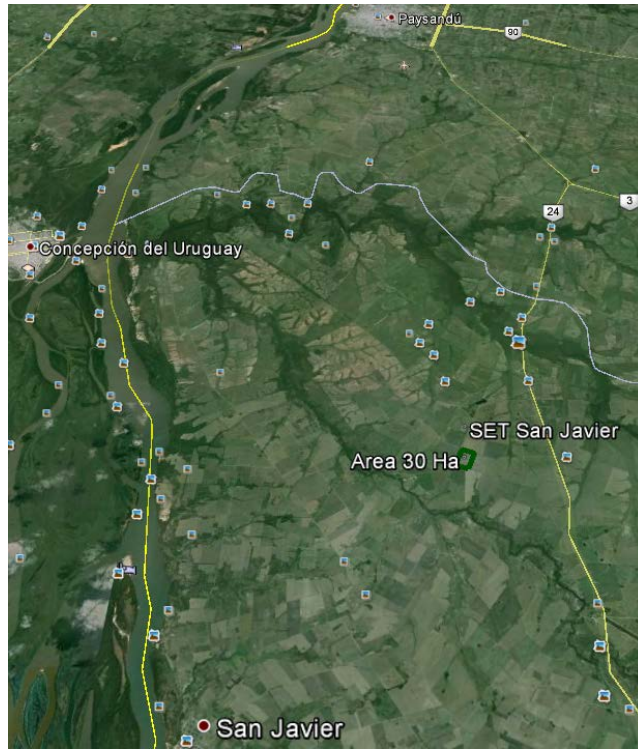
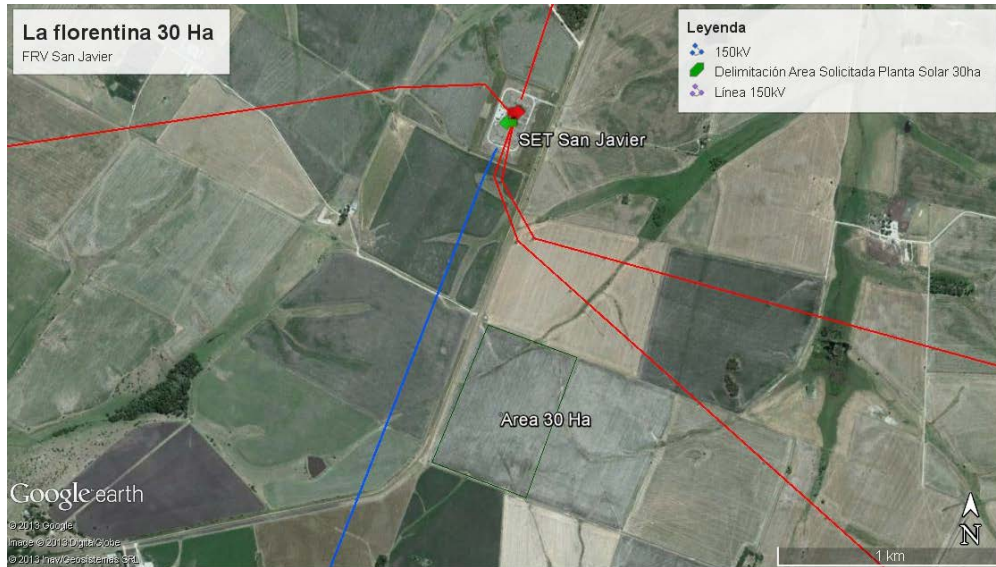


Figure 4. Project Location Map – San Javier



III. INSTITUTIONAL AND REGULATORY CONTEXT

- 3.1 The regulatory framework in Uruguay establishes that electricity generation is an open market in which any generator meeting certain conditions can connect to the public grid. In practice, however, all private generation companies have entered the market through contracts with UTE. Decree#133/2013 of the Government of Uruguay instructs UTE to sign PPAs with private solar energy generators for a nominal capacity of up to 200 MW.
- 3.2 The Government of Uruguay (“GoU”) has launched a 200MW solar PV program with the goal of awarding power purchase agreement (“PPAs”) on a first-come-first-served basis at a feed-in tariff of US\$ 91.7 MWh. The feed-in tariff was established by the *Administración Nacional de Usinas y Transmisiones Eléctricas* (“UTE” or the “Offtaker”), the state-owned public utility of Uruguay, based on the long term marginal cost of energy in Uruguay.
- 3.3 Following the rules of the bidding process, FRV presented for consideration by UTE the La Jacinta Solar PV Plant (“La Jacinta”) and the San Javier Solar PV Plant (“San Javier”). The proposals are currently being analyzed by UTE and per bidding rules the PPAs will be signed on September 9, 2013.
- 3.4 The Environmental Validation Communication (VAL) was submitted to DINAMA in June 2013 requesting the Project be classified as a Category A project under Uruguayan legislation (equivalent to a Category C project under Bank guidelines). The Bank has classified the project as a Category B project under its own guidelines and will require an Environmental and Social Assessment and public consultation in compliance with the Bank’s policy OP-703, which have not yet been prepared and would not be required under Uruguayan law should the project be classified as requested. The Project expects to have the environmental license from DINAMA by September 2013. Should DINAMA decide the project should be classified as a Category B project, the permitting process would be delayed from the currently projected schedule.
- 3.5 A construction license is also required from MEM MIEM (Ministry of Energy). The Project plans to submit the request in early September 2013 and obtain the license by November 2013. The anticipated acquisition of this license is also based on the assumption DINAMA will provide a favorable classification.
- 3.6 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 potentially, 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. Based on available information, the Project had been classified by the Bank

as a Category B operation. Based on available documentation, it does not appear that the Bank's OP-710 on involuntary resettlement would be triggered; however, the transmission line alignment and land use / land lease negotiations and agreements will be investigated to further determine this. It is not anticipated that the Project will trigger the OP-704 The Natural and Unexpected Disasters Policy; however, this will be assessed during the due diligence process.

IV. ENVIRONMENTAL AND SOCIAL SETTING

- 4.1** Based on available project documentation, the solar facilities will potentially occupy a total area of approximately 250 ha between the two facilities, which will be permanently affected by the erection of the solar panels, substations, transmission lines, 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 cattle ranching. The landscape surrounding both projects appears to be mostly composed of agricultural fields. The Uruguay River, located to the west of both project sites (the sites are approximately 100 km apart) and the Dayman River near the La Jacinta site could provide habitat for sensitive species; however, potential impacts to these areas or their inhabitants are not detailed in the environmental documentation provided. Due Diligence will investigate the potential impacts to the area from the placement of the solar facilities.
- 4.2** The La Jacinta and San Javier project areas respectively lie approximately 5 km south of the City of Salto and approximately 20 km south of the Paysandu, the nearest large cities. Currently, there is no precise information available on the scale of economic activities occurring within the project area and surrounding community; however, significant agricultural activity is clearly present in surrounding areas based on aerial imagery. The individual project areas both appear 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. Due diligence will investigate whether any such consultation occurred. Residents in the local community will be interviewed during the Due Diligence process to gauge the effectiveness of the consultation process and gain an understanding of 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 environmental documentation does not identify any protected habitats in the area and much of the land has been disturbed by previous activities including farming and ranching. 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; however, the project's proximity to a river system may attract a number of species. These results will be verified during the Due Diligence process; additional biological surveys may be required.
- 4.5 There is currently no information regarding archaeological surveys available; typically, in Uruguay, a clearance must be issued by the Government in order to proceed with construction. The existence of *such* a certificate will be reviewed during the Due Diligence process. It is possible that additional archaeological surveys of the affected areas may be required 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) 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. Of specific importance for the Salto project may be resettlement and economic displacement, the risk of encountering archeological sites or artifacts during construction or disturbing unknown sites, the risk of temporarily affecting the livelihoods of communities, and safety issues arising from increased traffic.
- 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.
- 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 Salto Solar 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.** Review the Project EIA and determine if additional flora and/or fauna surveys should be conducted to gather baseline data;
 - b.** Investigate the potential impacts of the transmission lines, provided more details on their locations;
 - 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.** Determine if the land purchase and/or lease agreements have been completed in line with IDB policies;
 - e.** Assess the adequacy and timely consultation and information dissemination process with affected parties of the current project;
 - f.** Ensure appropriate archaeological surveys have been conducted and a Chance Find Procedure will be implemented during construction;
 - g.** 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;
 - h.** Assess the adequacy of the health and safety procedures of the company;
 - i.** Review the Environmental and Social Management Plan (ESMP) to ensure the avoidance, minimization, and mitigation of any potential impacts;
 - j.** Determine if the Project has been developed and implemented in compliance with the environmental laws and regulations of Uruguay;
 - k.** 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.

