



Project:	Puerto Libertad Solar Park		
Location:	Pitiquito, Sonora	Certification Date:	March 8, 2018
Sector:	Clean energy	Operation Startup:	June 5, 2019
Population Benefitted:	490,450	Closeout Date:	July 2021

Pre-project Conditions

Historically, Mexico has depended to a great extent on fossil fuels for the generation of electricity. These conventional sources of energy adversely affect the environment due to the harmful emissions produced in their processes, including greenhouse gases (GHG) and other pollutants, such as sulfur dioxide (SO₂) and nitrogen oxides (NO_x). Consequently, there is a need for affordable and environmentally beneficial alternatives to conventional hydrocarbon-based energy sources. Renewable energy projects create an opportunity to generate electricity using sources that do not produce pollutant emissions like those released by fossil-fuel-based plants. Sunlight is a clean form of renewable energy, which means that it can be used continuously without depleting natural resources and does not produce waste byproducts that require disposal or gas emissions that contribute to air pollution.

Project Objective

Reduce demand for traditional fossil-fuel based energy production through the installation of a solar photovoltaic energy generation facility and thus contribute to the displacement of harmful emissions.

Project Scope

The project consisted of designing, constructing, and operating a solar park with a total generation capacity of 317.5 megawatts of alternating current (MW_{AC}) on approximately 1,194 hectares (2,905 acres) of rural land and was divided into two components: Component 1 (180 MW_{AC}) and Component 2 (137.5 MW_{AC}). The project included the installation of polycrystalline solar modules mounted on single-axis tracker arrays and the construction of a collector substation and switchyard. The energy generated by the project would be delivered to the national grid through an existing transmission line owned by the Mexican National Electricity Commission (CFE).



Project Results

Outputs	Indicator	Target in 2018 (at certification)	Actual 2020
Polycrystalline solar modules	number of panels	Not specified	1,222,800
Substations	number	2	2
Energy capacity installed	MW _{AC}	317.5	317.5

Outcomes – Year 1 of Operation	Indicator	Target in 2018 (at certification)	Actual 2020
Electricity generation	megawatt-hours	961,550	917,762
Quantity of CO ₂ emissions displaced	metric tons/year	440,390	418,371

The lower-than-expected energy generation in the first year of operation was mainly a result of less solar irradiation than anticipated and curtailments issued by the Mexican national energy regulator due to conditions in the grid and the reliability of the power transmission system.

NADBank Financing

	USD
Loan	\$ 65,992,000

Approximately 53% of the loan was funded with the proceeds of NADBank green bonds.