



CERTIFICATION AND FINANCING PROPOSAL

LOS SANTOS SOLAR I PROJECT IN AHUMADA, CHIHUAHUA

Submitted: February 20, 2015

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.....	2
.....	4
2.1 Technical Criteria	
2.1.1. Project Description	4
2.1.2. Technical Feasibility	11
2.1.3. Land Acquisition and Right-of-Way Requirements	13
2.1.4. Management and Operations	13
2.2 Environmental Criteria	
2.2.1. Compliance with Applicable Environmental Laws and Regulations	14
2.2.2. Environmental Effects / Impacts	16
2.3 Financial Criteria	
3.1 Public Consultation	20
3.2 Outreach Activities	20

EXECUTIVE SUMMARY

LOS SANTOS SOLAR I PROJECT IN AHUMADA, CHIHUAHUA



The project consists of the design, construction and operation of a 13.7-MW photovoltaic solar park located in the municipality of Ahumada, Chihuahua (the “Project”). The energy generated will be purchased by private off-takers pursuant to two or more long-term power purchase agreements (PPAs) executed with the special-purpose company created to carry out the Project.

The Project will increase installed capacity of renewable energy resources in the region, which will reduce the demand for traditional fossil fuel-based energy and contribute to the displacement of greenhouse gas emissions and other pollutants from power generation by fossil fuels.

The estimated environmental and human health outcomes resulting from the installation of 13.7 MW of new renewable energy generation capacity are:

- a) Generation of approximately 40.1 GWh of electricity during the first year of operation;¹ and
- b) An expected displacement of approximately 16,509 metric tons/year of carbon dioxide, 0.1 metric tons/year of sulfur dioxide and 57.6 metric tons/year of nitrogen oxides.²

The proposed Project will be the first utility-scale solar project in the state of Chihuahua and the second largest solar plant in the country.

Buenavista Renewables México, S. de R.L. de C.V. (“Buenavista”).

¹ Based on Independent Energy Production Assessment provided by the sponsor.

² CO₂, SO₂ and NO_x calculations are based on emission displacement from solar energy generation equivalent to 40.1 GWh of energy produced by natural gas-powered generation, which is the predominant fuel source in Chihuahua.

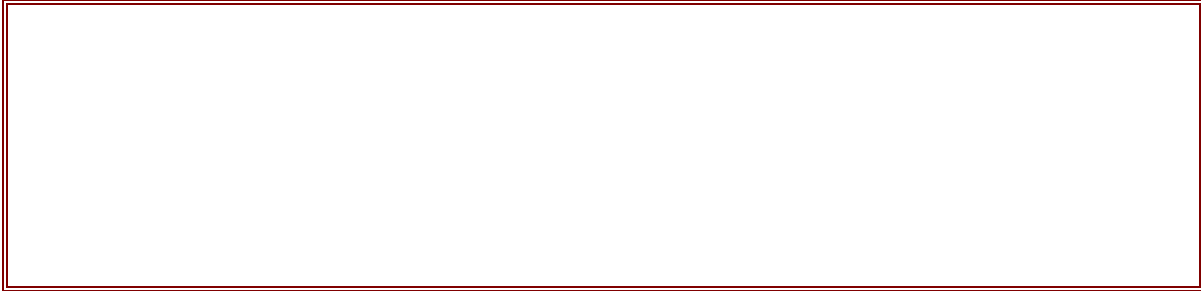
**DRAFT BOARD DOCUMENT BD 2015-4
CERTIFICATION AND FINANCING PROPOSAL
LOS SANTOS SOLAR I, CHIHUAHUA**

Los Santos Solar I, S.A.P.I. de C.V.

Up to US\$35 million.

CERTIFICATION AND FINANCING PROPOSAL

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Project Type

The Project falls into the category of clean and efficient energy.

Project Location

The Project is located in the municipality of Ahumada in the state of Chihuahua, approximately 122 km (76 miles) southwest of the U.S.-Mexico border.

Project Sponsor and Legal Authority

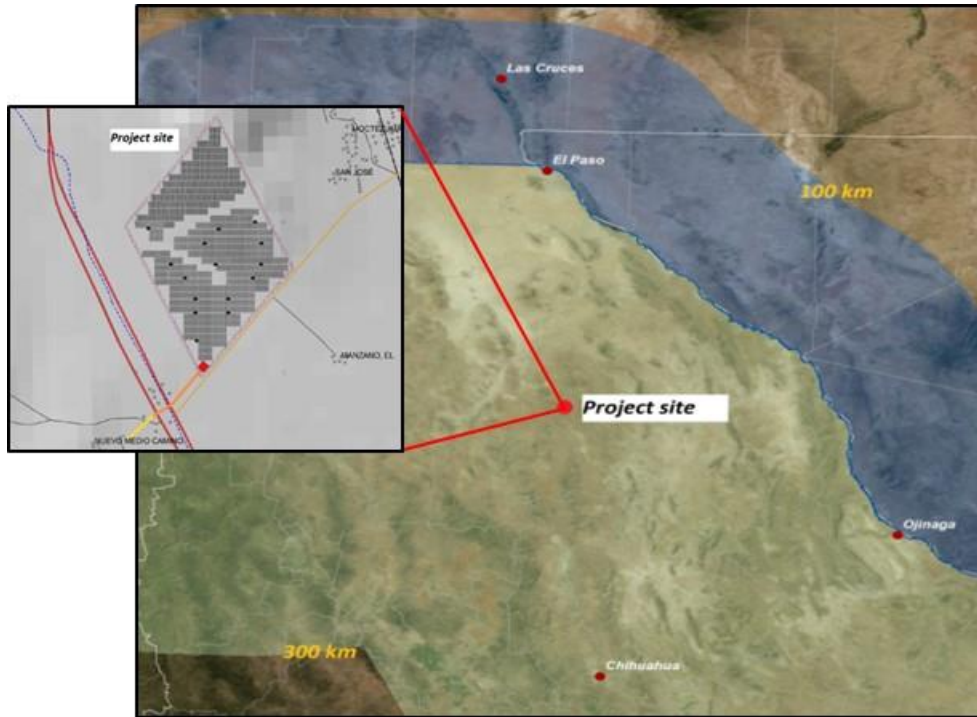
The private-sector Sponsor is Buenavista Renewables México, S. de R.L. de C.V. (“Buenavista” or the “Sponsor”). Its contact representative is David Muñoz Andrade.

2.1.1. Project Description

Geographic Location

The municipality of Ahumada lies directly south of the municipality of Juarez and southwest of the municipality of Guadalupe. The Project will be developed on approximately 100 hectares (247 acres) of land located 29.5 miles southeast of the town of Villa Ahumada, along the east

side of Federal Highway 45, Chihuahua-Miguel Ahumada. Figure 1 shows the approximate geographic location of the Project.



General Community Profile

The Project is expected to benefit border communities in the state of Chihuahua, such as Villa Ahumada and Ciudad Juarez, both of which are served within the North Zone of the Mexican federal electricity commission, CFE.³ Project benefits include the generation of electricity equivalent to the annual consumption of 5,838 households.⁴ The construction of the Project will also benefit local communities by generating employment opportunities and additional taxes.

According to the 2010 census in Mexico, the population of the municipality of Ahumada was 11,457, which represented 0.3% of the total population of the state of Chihuahua. The municipality covers an area of approximately 6,532.5 square miles and borders the municipality of Juarez to the north. Villa Ahumada is the municipal seat.

³ Based on 2010 information from the Mexican national statistical institute, INEGI, BECC estimates more than 2,200,000 households are located within the 300-km border region of the state of Chihuahua.

⁴ Estimation based on 1,986.220 kWh of electricity consumption per capita in 2013 from Mexico's Energy Information System (<http://sie.energia.gob.mx/>) and 3.6 persons per household in the state of Chihuahua as indicated by INEGI (<http://www3.inegi.org.mx/sistemas/mexicocifras/>).

Agriculture is the main economic activity in Ahumada. According to the Mexican national statistical institute, INEGI, in 2011, Ahumada had 143,785 acres planted, mainly with green alfalfa, corn, wheat, and beans. That same year, INEGI reported 5,356 energy users in the municipality of Ahumada, who consumed approximately 280,498 MWh.⁵

Local Energy Profile

In 2014, the legal framework of Mexico's Power System went through a major reform aimed at facilitating investments to improve infrastructure and meet the increasing demand for electricity. Under the new Electricity Industry Law, the federal government retains planning activities and control of the transmission and distribution infrastructure through the National Center of Energy Control (CENACE), a federal decentralized agency created by the government to operate the National Power System (SEN), and CFE becomes a for-profit state-owned power supply company that will compete on an open market. It is important to note that the discussions on regulations are still open, and the characteristics of the Mexican energy market will start to change as these discussions evolve. As a result of the Energy reform, CENACE will now operate an electric grid with more than 537,515 miles of transmission and distribution lines previously operated by CFE,⁶ and CFE will continue supplying electricity to more than 38 million residential, commercial, industrial and public accounts.

During the past 10 years, power generation for public service has increased 27%, with electricity production totaling 258 gigawatt-hours (GWh) in 2013.⁷ CFE generates electricity using various technologies and energy sources. To better support opportunities for increasing and diversifying its energy portfolio, in 1992, the Mexican Power Utility Law was amended to allow for the participation of private capital in energy generation activities under the following schemes: a) cogeneration or small power production, b) self-supply, c) independent power production, d) exports, and e) imports for self-consumption. Additionally, in 1995, the Energy Regulatory Commission (CRE) was created to regulate activities related to the participation of private investment in the power and natural gas sector. CRE is responsible for issuing permits to private entities for power generation and the transmission of natural gas. The 2014 energy reform and new laws transforming the entire power industry in Mexico will consolidate these diversification efforts. The new electricity law contains provisions to grandfather the regulations and permits granted or applied for by the Project under the previous law.

According to the Power Sector Outlook for 2014-2028 (PSE) developed by the Mexican Ministry of Energy (SENER), installed capacity available to CFE for public electricity service in 2013 was approximately 54,949 MW, which represents an increase of 3.45% compared to 2012.⁸ Mexico's energy portfolio includes combined cycle, thermoelectric, coal-fired, turbogas, internal combustion, hydroelectric, geothermal, solar, wind and nuclear power plants. The PSE contemplates an Expansion and Decommissioning Program, which would entail a net addition of 40,393 MW of capacity to the existing system over the next 15 years to achieve a gross capacity

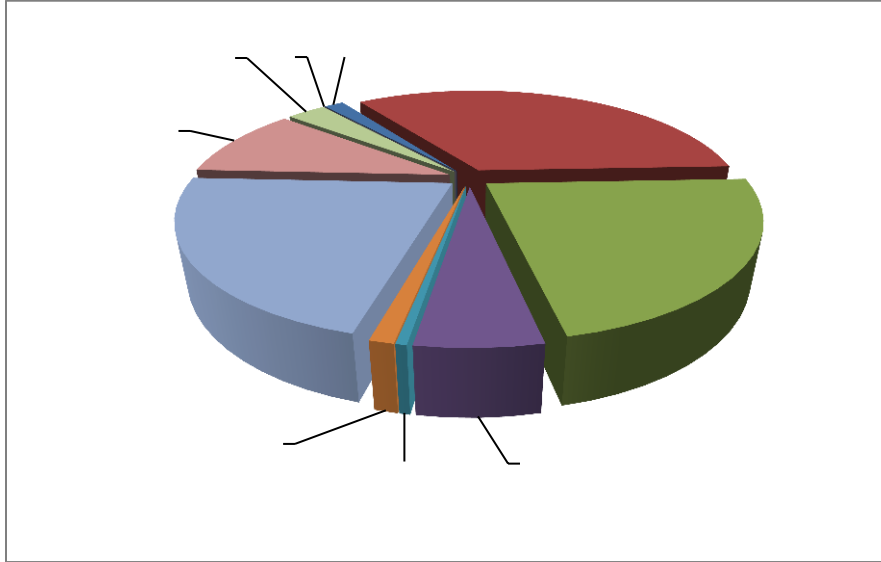
⁵ Based on INEGI information (<http://www3.inegi.org.mx/sistemas/mexicocifras/default.aspx?e=08>).

⁶ Source: Mexican Ministry of Energy (SENER), Power Sector Outlook for 2014-2028.

⁷ Source: Ibid.

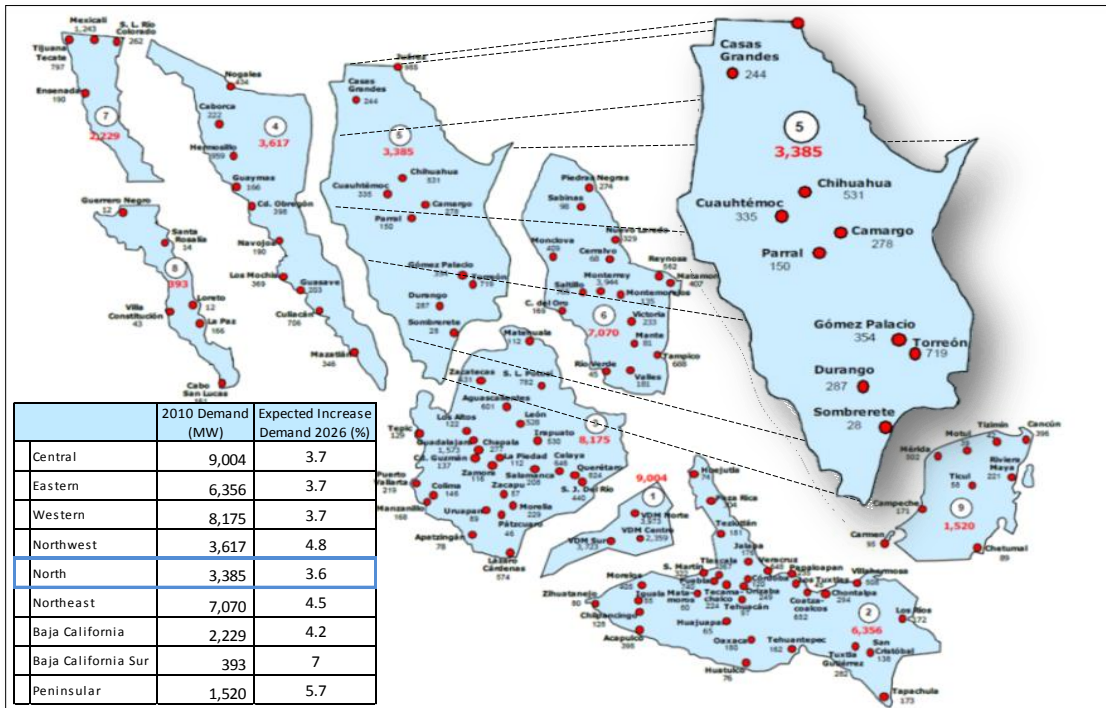
⁸ Excludes private-sector generation (e.g. self-supply, small power producers and cogeneration), which represents approximately 10,000 MW.

of 95,342 MW by 2028. Figure 2 shows the technologies used for electricity generation in Mexico.



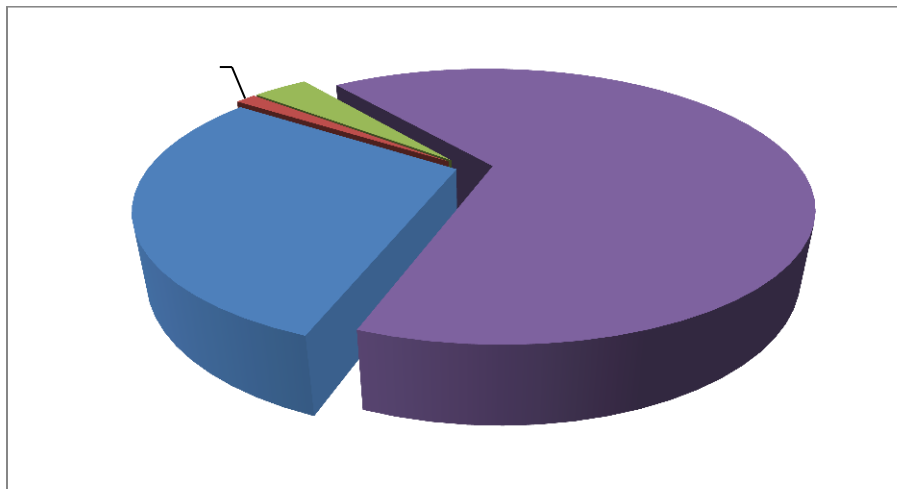
Source: SENER, Power Sector Outlook for 2014-2028.

The Mexican power grid is divided into nine zones, seven of which are interconnected and form the National Interconnected System (SIN). The remaining two zones are independent supply networks serving the areas of Baja California and Baja California Sur. The Project will be located in the North Zone, which includes the state of Chihuahua and Durango, as illustrated in Area 5 in the following figure.



Source: CFE, Power Sector Capital Improvement Program for 2012-2026.

According to SENER, the generation capacity of Chihuahua was 2,121 MW in 2012. Figure 4 shows the technologies used for electricity generation in the state.



Source: SENER.

During 2012, Chihuahua generated 13,400 GWh, as shown in the following table.

Combined Cycle	10,718.0	80.0
Conventional Thermoelectric	2,547.7	19.0
Hydroelectric	89.4	0.7
Turbogas	45.6	0.3

Source: SENER.

To promote the use of renewable energy to meet growing energy demand, the federal government has enacted two laws over the past six years: the Law for Renewable Energy Use and Energy Transition Financing (LAERFTE) in 2008 and the General Law of Climate Change in 2012. Both laws specify, among other provisions, that SENER, in coordination with CFE and CRE, must increase the use of clean technologies in power generation to at least 35% by 2024. In the first quarter of 2015, SENER will establish the requirements for clean energy certificates (CEC), which will begin to be awarded to clean generators in 2018. CEC requirements for the years 2016 and 2017 will be zero. Power market participants will buy certificates tied to their total electricity consumption. SENER will implement a mechanism for trading the certificates to promote clean energy projects.

CFE has undertaken efforts to increase the use of non-fossil-fuel technologies in power generation. In 1994, CFE began operating its first wind farm with a capacity of 1.6 MW in La Venta, Oaxaca. In January 2007, the La Venta II wind farm with a capacity of 83 MW entered into operation in the same area. CFE has also installed a 5-MW photovoltaic solar park in the area of Cerro Prieto in Mexicali, Baja California and, in 2011, a private-sector, 30-MW photovoltaic solar park was constructed in La Paz, Baja California to sell energy to CFE under a PPA. Between 2012 and 2027, CFE is planning to increase the use of renewable energy by 2,892 MW, including wind, solar and hydroelectric resources.⁹

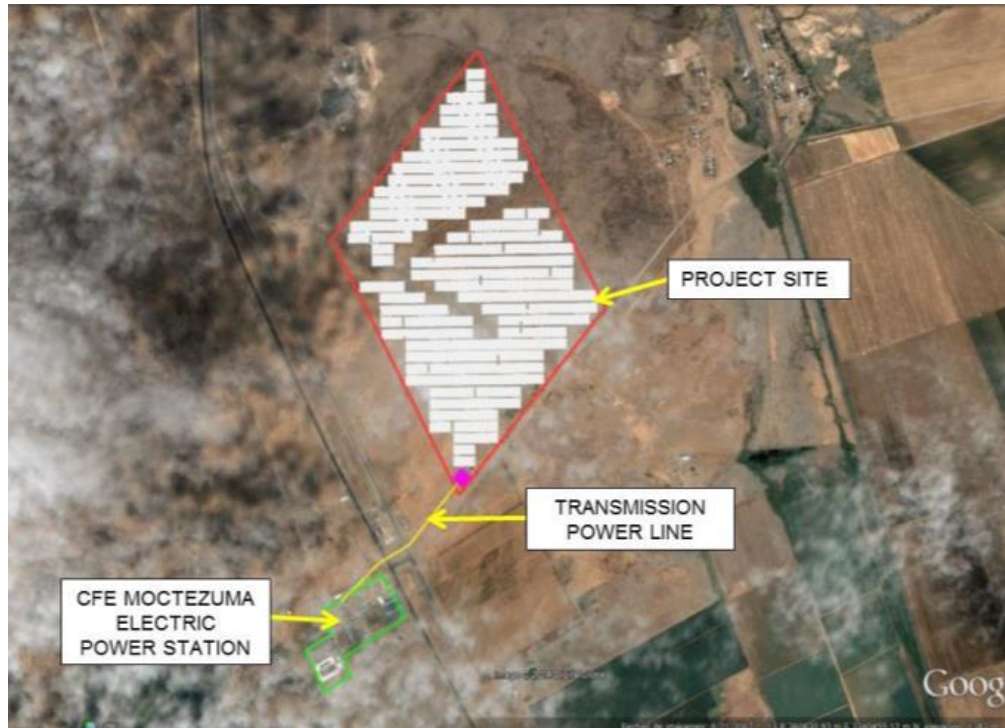
The portfolio of energy technologies in Chihuahua does not include the use of solar energy. The proposed Project will be the first utility-scale solar project in the state and the second largest solar plant in the country.

Project Scope and Design

The scope of the Project includes the design, construction and operation of a 13.7-MW solar plant. The energy generated will be purchased by private off-takers pursuant to two or more 20 year power purchase agreements (PPAs). The primary off-taker is a manufacturing company located in the state of Chihuahua and the other belongs to a regional education network.

⁹ Source: CFE, Power Sector Capital Improvement Program for 2012-2026.

The Project will be constructed on approximately 100 hectares (247 acres) and includes the installation of photovoltaic modules, a collection substation and a 115-kV transmission line extending approximately 450 meters (0.28 miles) to convey the energy to CFE's existing Moctezuma Substation located across the highway, southwest of the site. Figure 5 shows the Project site and schematic layout of the Project.



Construction of the Project is scheduled to start in July, 2015 and the Commercial Operation Date (COD) will be no later than November 2015. Table 2 presents the status of key milestones for the implementation of the Project.

Land lease agreement for the Project	Completed (June 2014)
Right of way from the Mexican Ministry of Communications and Transportation (SCT)	In process
Environmental impact assessment (MIA) resolution from the Mexican Ministry of Environment and Natural Resources (SEMARNAT)	Completed (Dec. 2014)
Forest land use change by SEMARNAT	In process
CRE energy producer permit	Completed (Feb. 2015)
CFE feasibility grid interconnection study	Completed (Dec. 2014)
CFE interconnection agreement	In process
Engineering, procurement, and construction (EPC) agreement	In process
Power purchase agreements	In process
Independent engineering final report	In process
Commercial Operation Date	November 2015

NADB's procurement policies require that private-sector borrowers use appropriate procurement methods to ensure a sound selection of goods, works and services at fair market prices and that their capital investments are made in a cost-effective manner. As part of its due-diligence process, NADB will review compliance with this policy.

2.1.2. Technical Feasibility

Selected Technology

Technology from various suppliers was evaluated and the equipment best suited to the characteristics of the Project site was selected in order to obtain the best performance (long-term energy output) based on the local solar resource. The process for technology evaluation considered elements such as technical performance, cost and warranties. Additionally, the Project's viability was evaluated based on the use of bankable technologies. Through a study, the independent engineer will confirm the suitability of the technology and its expected performance, and will follow up post-certification to provide the conclusions of the study.

The main components of the Project are:

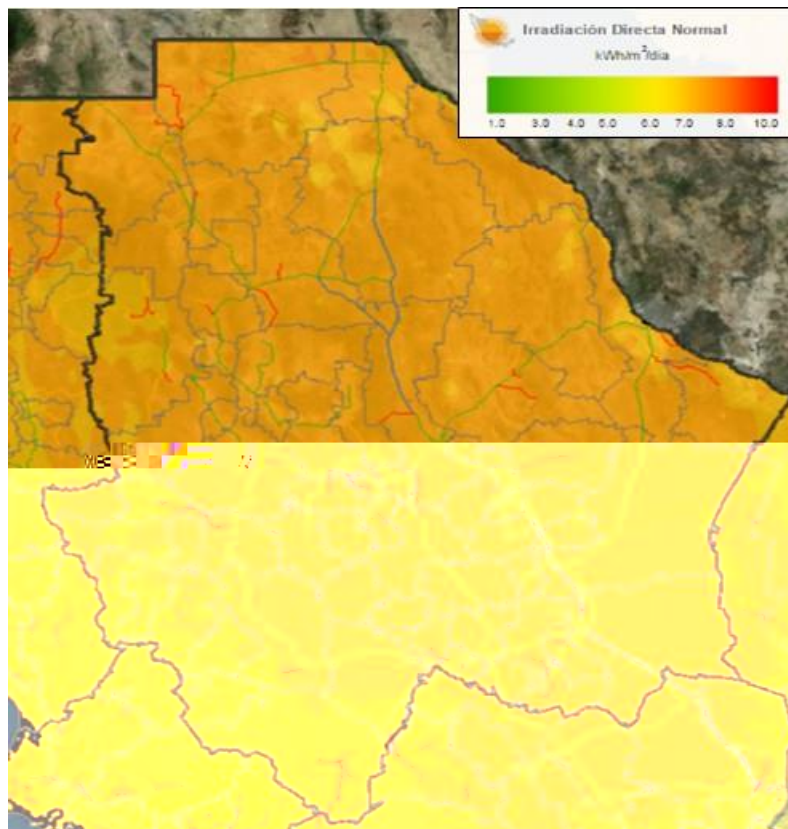
- Modules: Polycrystalline photovoltaic (PV) modules with a capacity of 305 W each will be installed and mounted on a single-axis tracking system to complete the 13.7 MW power capacity.
- Inverters: The inverters selected for the Project will be rated at 1,000 kW of AC output.
- Electrical substation and transmission line: One substation will be constructed to collect the 34.5 kV energy produced by the panels. The energy from the panels will be transmitted to the substation through underground lines. The collecting substation will step up the energy to 115 kV, which will be delivered to the interconnection point at CFE's Moctezuma Substation through a 450 m (0.28 mi) overhead transmission line.

- ***Monitoring and control system:*** A SCADA system will be used to monitor remotely, track, and document the performance of the PV system relative to its predicted output. The Sponsor plans to install the monitoring and control system within the facilities of La Salle University to also serve as a demonstration project for educational purposes.

The Project will not require the construction of access roads as it is located next to the highway; however, a perimeter fence will be required to protect the infrastructure. The Project has an estimated useful life of 25 years.

Solar Resource Assessment

The Project location is considered one of the best for solar resources in Mexico. According to the National Inventory of Renewable Energy (INER) of SENER, the photovoltaic solar resource in Ahumada is 66.46 GWh/year. Figure 6 shows the solar resources of the state of Chihuahua.



Source: National Inventory of Renewable Energy (INER) of SENER.

The Project's energy production has been estimated using the Photovoltaic System (PVsyst) software published by the University of Geneva in Switzerland and METEONORM software

version 7.0, which also uses meteorological information available near the project area. The results were supported by a measurement station installed at the site.

Based on the results of an independent third-party study provided by the Sponsor, the Project will generate approximately 40,142MWh of electricity in the first year of operation, with a long-term average annual performance ratio of 78.8%. Performance losses from conversion of direct current (DC) to alternating current (AC), dust, inverter losses and shading were taken into consideration. The energy generation estimate will be vetted by an independent engineer.

2.1.3 Land Acquisition and Right-of-way Requirements

The Project site is located on private land, in June 2014, the Sponsor signed a long-term land use agreement with the landowners to build the solar park on the site, including the necessary rights-of-way to construct the transmission line to the CFE substation. Documentation related to the long-term land use agreement has been provided to BECC and NADB. The site has existing road access and electrical infrastructure for construction and operations.

A right-of-way permit from the Mexican Ministry of Communications and Transportation (SCT) is required to construct the transmission line across the highway to the interconnection point at the Moctezuma Substation. The Sponsor is completing the technical information required to submit an application for the permit and in preparing the request has consulted with SCT, which has not indicated any concerns about the Project.

The Project will also require a Land Use Change authorization from the Ministry of Environment and Natural Resources (SEMARNAT) for construction. The Sponsor submitted a formal request on September 23, 2014. A response is expected in July 2015. The Municipal permits for construction will be obtained prior to initiating construction.

Loan disbursement will require the appropriate completion of the permits based on the advancement of specific construction tasks.

2.1.4. Management and Operations

Los Santos Solar I, S.A.P.I. de C.V. is a special-purpose company created by Buenavista, a renewable energy development company focused on emerging markets and select isolated economies. These companies have developed strategic partnerships with a number of key service and equipment providers throughout the solar value chain. Unisun Energy, a China-based EPC contractor and late-stage developer is a key strategic partner of Buenavista. Unisun has successfully completed several renewable energy projects in Asia and Europe, where Buenavista has a team of specialists focused on financing and early stage development of renewable energy projects in Mexico and the United States.

Solar photovoltaic systems are highly reliable and require minimal maintenance. The proposed Project will be designed to operate with minimal human intervention. Operation and

maintenance tasks will be performed to optimize energy production, reduce repair costs, and extend the life of the equipment. The Sponsor is currently evaluating a shortlist of operation and maintenance (O&M) providers and expects to execute a contract before construction. The O&M agreement will include tasks such as periodically washing solar modules, visual inspections of the infrastructure to detect damage on modules or to electrical connections, managing onsite vegetation, and other similar tasks.

2.2.1. Compliance with Applicable Environmental Laws and Regulations

According to the Environmental Impact Assessment (MIA) submitted by the Sponsor in August 2014, the Project must comply with the following laws:

- General Law of Ecological Balance and Environmental Protection (LGEEPA), which establishes the environmental regulatory framework, expands the strategic vision, and conveys specific powers and duties to the states and municipalities, so that the environmental problems of each can be addressed directly. In accordance with Articles 28 and 30 of this law, the Project Sponsor developed a MIA that includes mitigation measures to preserve and protect the environment.
- General Law for Comprehensive Waste Management and Prevention (LGPGIR), which seeks to identify the criteria that should be considered by various levels of government in the generation and comprehensive management of solid waste, in order to prevent and control environmental pollution and ensure the protection of human health. Solid waste will be classified in compliance with Article 15 of this law and with applicable regulations and norms for final disposal.
- Law for Renewable Energy Use and Energy Transition Financing, which regulates the use of renewable energy resources and clean technologies to generate electricity for purposes other than public service, as well as establishes the national strategy and instruments for energy transition financing.
- General Law for Sustainable Forest Development (LGDFS), which regulates and promotes the conservation, protection, restoration, production, zoning, cultivation, management and use of the country's forest ecosystems and their resources. In accordance with the provisions of Article 117 of this law, the Project Sponsor will develop a technical study to obtain the corresponding Forest Land Use Change Permit.
- Federal Standard NOM-001-SEMARNAT-1996, which establishes the maximum permissible levels of pollutants in wastewater discharged into national waters and resources.
- Federal Standard NOM-052-SEMARNAT-2005, which establishes the characteristics, identification procedures and classification of hazardous solid waste.
- Federal Standard NOM-054-SEMARNAT-1993, which establishes the procedures for determining the incompatibility of two or more types of solid waste deemed hazardous under NOM-052-SEMARNAT-2005.

- Federal Standard NOM-138-SEMARNAT-SS-2003, which establishes the maximum permissible levels of hydrocarbons in soil and the specifications for their characterization and remediation.
- Federal Standard NOM-059-SEMARNAT-2010, which identifies and lists endangered species or clusters of wildlife in Mexico and establishes the criteria for inclusion, exclusion or change in risk status for different species, based on a method for assessing the risk of extinction.
- Federal Standard NOM-041-SEMARNAT-2006, which establishes the maximum permissible levels of pollutants emitted by vehicles using gasoline as fuel.
- Federal Standard NOM-044-SEMARNAT-2006, which establishes the maximum permissible levels of hydrocarbons, nitrogen oxides, carbon monoxide and particulate emissions and the opacity of fumes emitted by vehicles using diesel as fuel.
- Federal Standard NOM-045-SEMARNAT-2006, which establishes the maximum levels of exhaust fume opacity from vehicles using diesel as fuel.
- Federal Standard NOM-080-SEMARNAT-1994, which establishes the maximum permissible noise levels of exhaust systems of motor vehicles, motorcycles and three-wheel motor vehicles, as well as noise measuring methods.

A full reference of the Project's compliance with the Mexican laws and norms can be found in Chapter 3 of the MIA.

Environmental Studies and Compliance Activities

In accordance with the environmental impact regulations established under the LGEEPA, the Project Sponsor developed and submitted a Regional Environmental Impact Statement (MIA-R), on August 25, 2014, for the proposed solar project. The MIA-R identified, described and evaluated the potential environmental effects associated with the proposed actions. The elements evaluated included soil, flora, fauna, geological and visual resources, as well as sociocultural attributes.

As part of the MIA-R, the Sponsor performed specific field studies to determine the flora and fauna present within the Project site and to identify species listed in federal standard NOM-059-SEMARNAT-2010. The study identified 25 fauna species within the Project site, four of which are listed in the standard: the *Uta stansburiana* (common side-blotched lizard), *Lepus californicus* (black-tailed jackrabbit), *Amphispiza bilineata* (black-throated sparrow) and the *Charadrius montanus* (mountain plover). In order to protect the species identified within the site, the Sponsor will implement mitigation measures, as described in the *Mitigation of Risks* section of this document. No flora species listed in the standard were found.

The information presented in the evaluation of potential impacts was reviewed by SEMARNAT. Based on the overall findings of the MIA-R and after a thorough analysis of the potential impacts, the study concluded that execution of the Project would not significantly affect the environment. The MIA-R Resolution was granted on December 9, 2014.

Finally, the Sponsor undertook a study to identify archaeological elements within the site. No such elements were found at the site or in the surrounding areas.

Pending Environmental Tasks and Authorizations

Land use change authorization by SEMARNAT.

Compliance Documentation

- Release Resolution No. 401.B(4)127.2014 E-D/290 from the Mexican national institute of anthropology and history, *Instituto Nacional de Antropología e Historia* (INAH).
- MIA-R Resolution issued on December 9, 2014, SINAT No. 08CI2014E0006-6.

2.2.2. Environmental Effects / Impacts

There is a need for affordable and environmentally-friendly alternatives to conventional fossil-fuel-derived energy resources. Renewable energy projects create an opportunity to generate electricity without the atmospheric emissions generated by fossil-fuel-based plants. Sunlight is a source of renewable energy, which means it can be produced without the depletion of natural resources. It is a clean form of renewable energy and is currently used in many developed and developing nations to meet their demand for electricity. Solar power does not produce waste byproducts that require disposal or gas emissions that contribute to air pollution. It does not pollute or consume water for electricity production. Water may be used in small amounts for the cleaning of panels from time to time. Any water used for cleaning purposes will be disposed of at appropriate facilities and in accordance with environmental regulations.

Solar energy projects provide an opportunity to displace greenhouse gases (GHG) and other pollutants produced by traditional fossil-fuel-based energy generation, while providing local residents with a safe and reliable energy alternative.

Existing Conditions and Project Impact – Environment

Historically, Mexico has depended to a great extent on fossil fuels for the generation of energy. This conventional method of energy development can affect the natural environment due to harmful emissions related to the generation process, including GHG and other pollutants, such as sulfur dioxide (SO₂) and nitrogen oxides (NO_x).

Table 3 shows the mix of energy technologies used for power generation in Chihuahua, including: combined cycle (79.98%), conventional thermoelectric (19.01%), hydroelectric (0.67%) and gas-fired (0.34%). In 2008, the power generation sector in Chihuahua emitted 30,711.34 metric tons of SO₂ and 8,163.97 metric tons of NO_x.¹⁰ According to the Chihuahua state greenhouse gas inventory, approximately 5.55 million metric tons of carbon dioxide equivalent (CO₂e) were emitted to the atmosphere as a result of energy production activities.

¹⁰ Source: SEMARNAT, National Emissions Inventory in Mexico, 2008 (<http://sinea.semarnat.gob.mx/sinea.php>).

Combined cycle	10,718.0	79.98
Conventional thermoelectric	2,547.7	19.01
Hydroelectric	89.4	0.67
Turbogas	45.6	0.34

Source: SENER, Energy information on the 32 Mexican states, 2012.
 (http://egob2.energia.gob.mx/portal/Informacion_Energetica/inicioAdm.html)

The Project will help reduce the demand for electricity generated by fossil-fuel-based power plants, and since solar-based power generation produces zero fuel costs and emissions, it will displace related harmful greenhouse gas emissions.

The anticipated environmental outcomes from the installation of 13.7 MW of new renewable energy generation capacity (approximately 40.1 GWh during the first year of operation), are the displacement of 16,509 metric tons/year of carbon dioxide (CO₂), 0.1 metric ton/year of SO₂, and 57.6 metric tons/year of NO_x.¹¹

Mitigation of Risks

Some environmental impacts are anticipated from the implementation of the Project. The Sponsor has proposed mitigation measures that are intended to reduce, mitigate and control the environmental effects resulting from project development activities. To ensure that mitigation measures are implemented properly and in a timely manner, the Sponsor will develop an environmental management plan, as described in the MIA-R, which includes subprograms aimed at protecting wildlife. Fauna and flora rescue activities will be carried out simultaneously. The following mitigation programs are proposed:

- Flora Rescue and Relocation Program
 - During site preparation, land clearing and flora rescue activities will be carried out by a specialized team to minimize the impact on existing vegetation.
 - Rescued plants will be temporarily transferred to a nursery for relocation. Relocated plants will be monitored for a period of 12 months. At least 80% of the plants are expected to survive.
 - The transfer to final locations will be carried out during the rainy season or the plants will be watered at night for six months to ensure water is available for proper growth.
 - No fire or agrochemical products will be used in land clearing activities.

¹¹ CO₂, SO₂ and NO_x calculations are based on the emissions displaced by solar energy equal to 40.1 GWh of energy produced by the nearest natural gas power plant in Samalayuca, Chihuahua.

- *Fauna Rescue and Relocation Program*
 - Signs will be placed within the site to indicate designated conservation areas under the plan and to prevent the unnecessary disturbance of other areas.
 - During site preparation, the disturbance, capture, relocation and release of wildlife will be prohibited.
 - Hunting, trapping and trafficking in wildlife will be officially prohibited. Staff will be trained in handling the transfer of wildlife.
 - Land-clearing activities will only be performed in the area designated for the development of the Project.

- *Comprehensive Waste Management Program*
 - Solid waste will be sent to an authorized recycling or transfer station for final disposal in a landfill away from waters bodies, soil or areas adjacent to the Project site and will be properly separated and labeled in closed containers.
 - Containers will be used exclusively for non-hazardous solid waste and will be collected periodically by an authorized contractor.
 - Wastewater generated during site preparation and Project construction will be collected by an authorized contractor.

Natural Resource Conservation

The Project will support natural resource conservation by reducing the demand on fossil fuels for carbon dioxide emission free electricity production and associated improvements to air quality. The Project is anticipated to produce approximately 40.1 GWh of carbon dioxide free electricity in the first year of operation, equivalent to the annual energy consumption of approximately 5,838 households. In addition, clean technologies such as solar energy require no water for electricity production, whereas fossil-fuel-fired generation is typically water intensive.

Mitigation activities will be implemented to minimize impacts on flora and fauna. The Project will not be installed in areas with archeological, cultural or sensitive natural resources.

No Action Alternative

The “no action” alternative to the development of renewable energy sources would result in greater demand for conventional fossil-fuel-based energy production, further depleting natural resources in order to meet the ever-growing demand for energy, as well as a lost opportunity to generate emission-free energy, such as that derived from solar resources. Additionally, the Project will help meet the goals and objectives established under Mexico’s renewable energy law and emission standards, while satisfying increased demand for electricity. Should the Project not be implemented, the target mix of renewables (35% in 2024) in Mexico will be delayed. ***Existing Conditions and Project Impact – Health***

Epidemiological research has shown that both chronic and acute exposure to harmful emissions associated with fossil-fuel-based energy production can lead to serious respiratory problems. It is estimated that, at the very least, prolonged exposure to excessive levels of pollutants can

deteriorate the respiratory capacity of human beings and greatly contribute to the increased incidence of cardiopulmonary diseases, such as asthma, heart ailments and lung cancer.

By using clean, renewable resources instead of conventional fossil-fuel sources in power generation, the Project will positively impact the region by reducing pollutants and thus help to contain the severity of respiratory problems and other diseases aggravated or caused by air pollution. In addition, the reduction of GHG emissions is expected to mitigate climate effects that create more vulnerable conditions for human health.

Transboundary Effects

No negative transboundary impacts are anticipated as a result of the development of the solar energy project; on the contrary, a beneficial effect is anticipated on air quality due to the decreased demand on fossil-fuel-fired power plants in the region. Furthermore, the Project will aid in addressing the larger environmental concerns related to greenhouse gases and global warming targeted by international agendas.

Other Local Benefits

The Project will promote the social and economic development of the municipality of Ahumada in the state of Chihuahua. Employment of construction personnel will provide a temporary beneficial impact on local businesses and the regional economy through increased expenditure of wages for goods and services. During construction, the Project is expected to generate 50 to 60 direct jobs, while five to ten permanent jobs are expected to be created during operation. To the extent feasible, personnel for construction would be drawn from the local population.

The Project will also be the first large-scale solar project in the state and the second largest in the country. The monitoring and control system will be located at La Salle University to serve as a demonstration project for educational purposes.

The Project Sponsor has requested a loan from the North American Development Bank (NADB) to complete the financing of the Project. The proposed payment mechanism is consistent with the project structure normally seen in the Mexican renewable energy industry. The source of payment will be the revenue generated by the Project in accordance with the pricing established under the Power Purchase Agreements (PPA) to be signed by the Project Company for a term of 20 years. The NADB loan will have no recourse beyond the Project Company Special Purpose Vehicle.

The Projects' expected revenue from the sale of electricity is estimated to be sufficient to: a) cover scheduled O&M expenses, b) fund any debt service reserve, c) pay the debt service on the senior loan, and d) comply with debt service coverage requirements.

In addition, NADB's analysis verified that Project Company has the legal authority to contract financing and pledge its revenue for the payment of financial obligations. Los Santos also has the legal and financial capacity to operate and maintain the Project, and will contract the Project's

O&M services to a firm with ample experience and expertise in these types of projects. NADB has verified that the projected O&M costs are in accordance with industry standards.

Considering the Project's characteristics and based on the financial and risk analyses performed, the proposed Project is considered to be financially feasible and presents an acceptable level of risk. Therefore, NADB proposes providing a market-rate loan for up to US\$35 million to the Project Company for the construction and operation of the project described herein.

BECC released the draft project certification and financing proposal for a 30-day public comment period beginning December 19, 2014. The following documentation was made available upon request:

- Regional Environmental Impact Assessment (MIA-R), *Manifestación de Impacto Ambiental Modalidad Regional, "Los Santos Solar I y II"*, August 2014.
- MIA-R Resolution No. 08CI2014E0006-6 issued by SEMARNAT.
- Clearance Letter from the Mexican national institute of anthropology and history, INAH, September 2014.

The public comment period ended on January 18, 2015. A private citizen requested information related to the environmental clearance process and in particular asked about who participated in the environmental impacts review, if impacts on wildlife were analyzed, the use of pesticides, the type of solar panels to be used and the existence of public consultation. BECC responded to all the questions by providing information included in the MIA-R and SEMARNAT's resolution, as well as indicating that the Project has followed the procedures established by SEMARNAT for environmental impact evaluations and public consultation. No further questions were received.

As part of the environmental clearance process, the Sponsor published an ad in the most widely circulated newspaper in the area, *Diario de Juarez*, on August 26, 2014. The ad included a brief description of the Project and the findings of the environmental impact assessment. The newspaper ad also informed the community that a MIA had been submitted to SEMARNAT for review and that the documents would be available for consultation. The Sponsor has also been in contact with the municipal authorities of Ahumada to share information about the Project and to obtain their support and authorization. Additionally, the Sponsor submitted to the 30-day public comment process as required for certification, which demonstrates a willingness to comply with a similar requirement for the CRE permit.

BECC conducted a media search to identify potential public opinion about the Project. References to the Project were found on several Internet sites, such as *El Economista*, *El Diario el Estado*, Netnoticias, Ahoramismo.mx and MBW–Mexican Business Web.

- *El Economista* (September 5, 2014) – “Chihuahua se perfila para liderar energía solar” (Chihuahua is emerging as a leader in solar energy),
<http://eleconomista.com.mx/estados/2014/09/05/chihuahua-se-perfila-liderar-energia-solar>.
- *El Diario el Estado* (August 26, 2014) – “Descartan impacto ambiental negativo por proyecto de energía solar en Villa Ahumada” (Negative environmental impact of solar project in Villa Ahumada discarded),
http://eldiariodechihuahua.mx/El_Estado/2014-08-26/Descartan-impacto-ambiental-negativo-por-proyecto-de-energ%C3%ADa-solar-en-Villa-Ahumada/3a172c0df3245d9158a56e26bbbd2dcd.
- *Netnoticias* (September 6, 2014) – “Chihuahua: Primer lugar en generación de energía solar” (Chihuahua: First place in solar energy generation),
<http://www.netnoticias.mx/Nota.php?ID=143440>.
- *Ahoramismo.mx* (September 30, 2014) – “Hay siete proyectos de energía solar para Chihuahua; empresa coreana, la primera” (There are seven solar energy projects for Chihuahua; Korean company to be the first.)
<http://ahoramismo.mx/hay-siete-proyectos-de-energia-solar-para-chihuahua-empresa-coreana-la-primera/>.
- *El Economista* (December 23, 2014) – “Aprueban megaproyecto solar para Chihuahua” (Megasolar project approved for Chihuahua)
<http://eleconomista.com.mx/estados/2014/12/23/aprueban-megaproyecto-solar-chihuahua>
- *MBW -Mexican Business Web* (December 24, 2014) – “SEMARNAT aprueba proyecto solar con inversión de 39 mdd en Chihuahua”. (SEMARNAT approves solar project in Chihuahua with a US\$39 million investment),
<http://www.mexicanbusinessweb.mx/negocios-rentables-en-mexico/semarnat-aprueba-proyecto-solar-con-inversion-de-39-mdd-en-chihuahua/>.

No opposition to the Project was detected in the available media coverage or by the Sponsor. The Project Sponsor has followed all public consultation requirements in order to comply with the applicable environmental clearance and permitting processes.