



# **CERTIFICATION AND FINANCING PROPOSAL**

# FRV BRYAN SOLAR PARK IN PRESIDIO, TEXAS

Submitted: June 26, 2012

## EXECUTIVE SUMMARY

#### FRV BRYAN SOLAR PARK IN PRESIDIO, TEXAS

The project consists of the construction and operation of a 10.00  $MW_{AC}$  / 12.54  $MW_{DC}$  photovoltaic solar park located in Presidio, Texas (the "Project"). The energy will be purchased by Bryan Texas Utilities ("BTU") pursuant to a long-term Power Purchase Agreement ("PPA") signed with the Project company.

The Project will increase installed capacity of renewable energy resources, reducing the demand on traditional fossil fuel-based energy production and contributing to the displacement of greenhouse gas emissions and other pollutants from power generation by fossil fuels.

The environmental and human health outcomes anticipated for the Project include 10  $MW_{AC}$  of new renewable energy generation capacity; >27,500 MWh/year; and an expected displacement of more than 16,805 metric tons/year of carbon dioxide, 29 metric tons/year of sulfur oxides and 14 metric tons/year of nitrogen oxides.

7,818 residents in Presidio County, Texas

SunEdison, LLC ("SunEdison").

FRV Bryan Solar, LLC ("FBS").

Up to US\$35.0 million.

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### FRV BRYAN SOLAR PARK IN PRESIDIO, TEXAS

#### <u>Project Type</u>

The Project falls in the category of clean and efficient energy. The energy generated will reduce demand on traditional fossil-fuel-based energy production, contributing to the displacement of greenhouse gas emissions and other pollutants from power generation using conventional fossil-fuel technologies.

#### Project Location

The Project site is located in Presidio County, Texas, within three miles of the U.S.-Mexico border.

#### Project Sponsor and Legal Authority

The Project sponsor is SunEdison LLC ("SunEdison" or the "Sponsor"), a whollyowned subsidiary of MEMC Electronic Materials, Inc. (MEMC). SunEdison created a specialpurpose company named FRV Bryan Solar, LLC ("FBS") for the implementation of the Project. FBS is a Delaware-based, limited-liability company registered on January 26, 2010. Its contact representative is Ryan Bennett.

#### 2.1.1. Project Description

#### **Geographic Location**

The Project site is located in Presidio County in West Texas. The property is approximately 2.5 miles northeast of the city of Presidio, which is immediately adjacent to the US-Mexico border and directly across the Rio Grande River from the city of Ojinaga, Chihuahua. Figure 1, below, shows the approximate geographic location of the Project.



#### **General Community Profile**

The Project is expected to directly benefit Presidio County in two ways: (i) via the community's consumption of the electricity generated by the Project, which is expected to provide enough electricity for the equivalent of approximately 800 households<sup>1</sup> and (ii) through the employment opportunities and additional taxes created by the construction and operation of the Project.

According to the 2010 census, Presidio County had 7,818 residents distributed among 3,825 housing units. With regards to median household income (MHI), Presidio County reported an annual average MHI of US\$29,513 for 2006-2010, which compares unfavorably to Texas as a whole (US\$49,646) and the U.S. national average (US\$50,046). Federal offices, retail sales and lodging and food services are the most important economic sectors in the county.<sup>2</sup>

According to the U.S. Department of Labor, in February 2012, the unemployment rate in Presidio County was 11.1%, notably higher than the national average of 8.3%.<sup>3</sup> The Project is expected to generate approximately 75-80 direct jobs during construction, as well as one (1) permanent, full-time job on site during operation; all jobs will be provided through subcontractors.

#### Local Energy Profile

The Energy Information Administration (EIA) of the U.S. Department of Energy (DOE) provides a state-by-state reference for information and data covering energy production and demand.

<sup>&</sup>lt;sup>1</sup> Source: U.S. Department of Energy, Energy Efficiency and Renewable Energy, Energy consumption in Texas homes, <u>http://apps1.eere.energy.gov/states/residential.cfm/state=TX</u>.

<sup>&</sup>lt;sup>2</sup> Source: U.S. Census Bureau, Presidio County Quick Facts 2010.

<sup>&</sup>lt;sup>3</sup> Source: U.S. Department of Labor: Bureau of Labor Statistics.

Figure 2 from the EIA website shows the location of Texas power plants, its renewable energy potential, and energy sources.<sup>4</sup>



According to the EIA, Texas produces and consumes more electricity than any other state and residential use is significantly higher than the per capita national average. Approximately 75% of the land area in Texas is serviced by the Electric Reliability Council of Texas (ERCOT) power grid. ERCOT manages the flow of electricity to 23 million Texas customers, representing 85% of the state's electric load. The ERCOT grid serves much of the Texas border region with Mexico, except for El Paso County. The following ERCOT graph shows generation capacity, portfolio, and peak demand on the ERCOT grid.

<sup>&</sup>lt;sup>4</sup> Source: U.S. Department of Energy, Energy Information Administration (EIA), State Energy Profiles – Texas, 2009.



In 2011, the installed capacity available from renewable sources in ERCOT represented nearly 14% of the generation sources available. However, only approximately 9% of the electricity generated was actually supplied by renewable sources, which includes biomass, geothermal, hydroelectric, solar, and wind generation assets; the remaining 91% was supplied by coal, natural gas, and nuclear power plants.<sup>5</sup> Texas leads the nation and is fifth in the world in installed wind generation capacity. At the end of 2011, ERCOT had 35,000 MW of active generation requests under review, including: 19,400 MW of wind, 9,000 MW of natural gas, 3,600 MW of coal, 940 MW of solar, 100 MW of biomass, and 1,600 MW of other sources. This generation mix reflects the growing trend of renewable energy displacing traditional fossil fuel-based energy production.

The Project will sell the generated electricity to Bryan Texas Utilities (BTU). Currently, BTU's energy comes from a variety of fuel sources. Natural gas represents 68% (277 MW) of its current generation capacity, from four active gas-fired power plants located throughout the state. Coal is the second largest source of generation, currently accounting for 25% (102 MW) of capacity. BTU's coal generation is provided via a partnership with the Texas Municipal Power Agency (TMPA), and BTU owns a 21.7% stake in the Gibbons Creeks coal plant. Wind makes up the

<sup>&</sup>lt;sup>5</sup> Source: ERCOT Quick Facts, http://www.ercot.com/content/news/presentations/2012/ERCOT Quick Facts - Jan 2012.pdf.

remaining 7% (30 MW) of generation capacity. Table 1 shows the energy mix for BTU compared to the state energy mix.

Natural gas and oil	68%	46.4%
Coal	25%	36.5%
Nuclear	-	10.0%
Hydroelectric	-	0.3%
Other Renewables	7%	6.8%
Other purchased power	-	n/a

\* Source: BTU

\*\* Source: U.S. Energy Information Administration, Form EIA-923 "Power Plant Operators Report n/a = not applicable

#### Project Scope and Design

The Project site is located on a 520-acre parcel in Presidio County, Texas. The scope of the Project is to design, build and operate a 10  $MW_{AC}/12.5 MW_{DC}$  solar park consisting of traditional crystalline silicon ("c-si") photovoltaic solar panels mounted on single-axis trackers. BTU will purchase the electricity produced under a 25-year PPA. The Project will interconnect to the Gonzales substation located two miles from the site.

The electricity generated by the Project is expected to be consumed by customers within Presidio County, which is well within NADB and BECC's border jurisdiction. However, energy produced will be credited against BTU power demand for retail consumption. BTU is a regulated municipal utility based in Bryan, Texas.

The Project is expected to begin construction on or before September 15, 2012, with commercial operation (COD) initiating on December 31, 2012. Table 2 presents a non-exhaustive list of key implementation tasks.

Solar resource assessment	Completed
EPC contract*	In progress
Project site lease	In progress
Environmental assessment	Completed
PPA with BTU	Signed
Interconnection Agreement with AEP	Signed
Environmental and construction permits	In progress
Independent engineer's report	In progress
Commercial operation date (COD)	December 2012

\* EPC = Engineering, procurement and construction contract

#### 2.1.2. Technical Feasibility

#### Selected Technology

The Project will be constructed using MEMC polycrystalline photovoltaic solar modules mounted on a series of single-axis trackers from Array Technologies and will utilize SMA Inverters. The Sponsor evaluated different technologies in the solar market, taking into consideration the site characteristics, solar resource, total energy costs, equipment performance and market standard guaranty requirements.

All equipment providers and models have been selected on the merits of price and quality. An optimization analysis was performed to assess best technologies from the standpoint of profitability. In addition, SunEdison has developed relationships with the technology providers beyond a single project, providing economies of scale for several projects in its pipeline.

Below is a description of the main components of the Project:

- <u>Modules</u>: The modules chosen for the Project are the MEMC-P280AMA Multi-crystalline Solar Module. A first-class industry warranty will be provided, consisting of a 10-year limited warranty on materials and workmanship. MEMC modules are assembled with components with proven track records, and there are currently 43 MW of these panels installed in the United States. MEMC implements rigorous quality controls in accordance with industry practices.
- <u>Trackers</u>: The horizontal single-axis trackers that have been selected for the Project are manufactured by Array Technologies (ATI), a leader in the industry with a 15-year track record in the production of solar trackers. The modules are mounted on a structure that is aligned into north-south rows. The tracking mechanism rotates the modules from east to west in the course of each day to ensure they continually face the sun. ATI has installed their trackers on more than 40 sites worldwide that together represent 40+ MW of installed capacity. A GPS-based system will be used to control the tracking system.
- <u>Inverters</u>: The inverters selected for the Project are manufactured by SMA Solar Technology AG (SMA), are certified by the Underwriters Laboratories (UL) and meet the criteria set forth in the Institute of Electrical and Electronics Engineering (IEEE) standard IEEE 1547. SMA inverters also meet the frequency response test requirement set by ERCOT. The inverter models that will be used are rated at 500 kW of AC output.
- <u>Interconnection</u>: The Project has an executed interconnection agreement with AEP Texas North Company, the owner of the grid at the interconnection point. The Project will interconnect to the Gonzales substation that connects via a single 69 kV line to the Alamito Creek substation 50.5 miles away. The point of interconnection is located at the dead-end transmission structure outside the substation that terminates the aforementioned 69 kV transmission line from the Gonzales substation.



• <u>Monitoring and control system</u>: A SCADA system will be used to monitor remotely, track, and document the performance of the PV system relative to its predicted output. The

year. The Interstate Renewable Energy Council ranked Texas tenth nationally for grid-connected photovoltaic (PV) cumulative installed capacity in its U.S. Solar Market Trends Report 2010.<sup>6</sup>



#### 2.1.3. Land Acquisition and Right-of-way Requirements

The Project site is located in Presidio County, Texas, on approximately 520 acres of leased private land, about 2.5 miles northeast of the town of Presidio. The property is in the Rio Grande river basin and the Cibolo-Red Light watershed. Access to the property is provided via an unnamed ranch road off FM 170, east of Presidio. Currently, the immediate surrounding area is utilized for farming and low density residential development.

<sup>&</sup>lt;sup>6</sup> Source: *U.S. Solar Market Trends 2010*, Interstate Renewable Energy Council.

The property is underdeveloped ranchland with no other improvements except for an overhead distribution power line and the unpaved main ranch road that transverses the property in a northeast-southwest direction. FBS and two landowners have fully negotiated the terms of the long-term (30-year) lease agreement for the Project, plus two five-year extension options under the same terms and conditions. One lease agreement is pending for a 100-acre tract.



#### 2.1.4. Management and Operations

SunEdison, which develops, finances, installs, and operates power plants using proven photovoltaic technologies, currently manages approximately 500 MW of renewable energy capacity, including over 550 rooftop and ground-mounted solar systems. It is the first owner/operator in the U.S. to exceed 200 GWh of solar electricity generation. The Project's design will be finalized once an Engineering, Procurement, and Construction (EPC) subcontractor has been selected. SunEdison, which has successfully supervised construction on 355 solar facilities in the U.S., will provide onsite project management and coordinate all contractors through an EPC contract signed with the Project company.

Solar photovoltaic systems are highly reliable and require minimal maintenance. The Project will enter into a long-term, fixed-price contract with a subsidiary of SunEdison (the "O&M Provider") to provide a comprehensive O&M program for the Project. The O&M Provider will operate the solar facility in accordance with an operations and maintenance agreement that, at a minimum, shall provide for the following services:

- Operating the solar facility;
- Performing routine and non-routine maintenance on the solar facility during and after the EPC warranty period;
- Providing all materials and services necessary for solar facility maintenance;
- Monitoring the operations of the Project via the computer monitoring system;
- Performing all duties to the standard mandated by the PPA;
- Complying with all regulatory obligations;
- Developing operating and safety plans; and
- Maintaining all Project information and facility data, including providing reports to its stakeholders.

The Project will be designed to operate automatically with minimal human intervention. Built-in telemetry will allow monitoring, control and problem diagnosis, maximizing system availability and power output over the Project's expected life. The SCADA system includes hardware and software that record and visualize inverter and PV string-level diagnostics. This information helps to troubleshoot problems remotely, so that issues can be corrected on the first site visit.

#### 2.2.1. Compliance with Applicable Environmental Laws and Regulations

#### Applicable Laws and Regulations

Texas established a Renewable Portfolio Standard (RPS) as part of the state's electricity industry restructuring legislation, which was designed to increase the delivery of renewable electricity with associated environmental benefits to the people of Texas. The RPS initially mandated that electricity providers collectively generate 2,000 MW of additional renewable energy by 2009.<sup>7</sup> In 2005, the Texas Legislature approved a much more aggressive RPS, increasing the state's total renewable energy mandate to 5,880 MW by 2015 and 10,000 MW in 2025.<sup>8</sup> The state RPS requirement is apportioned among competitive retail entities based on their market share of retail sales. In a related action, the Public Utility Commission of Texas (PUCT) established a Renewable Energy Credit (REC) trading program that allows for the purchase of RECs to achieve the mandated RPS requirement.

<sup>&</sup>lt;sup>7</sup> Texas Renewable Portfolio Standard, State Energy Conservation Office.

<sup>&</sup>lt;sup>8</sup> Ibid.

There are no state guidelines in Texas for solar plant siting. Counties can discourage, but cannot prohibit, power plant development. As part of the environmental site assessment, the Sponsor considered the following regulations to determine applicability to the proposed Project:

- <u>National Historic Preservation Act (NHPA)</u>. The legislation is intended to preserve historical and archaeological sites and requires federal agencies with jurisdiction over a specific site to take into account the effects of a project on any cultural resources listed or eligible for listing on the National Register of Historic Places (NRHP) at the site. The NHPA also requires that the same federal agencies afford the State Historic Preservation Office (SHPO), any potentially affected Native American tribe, and the Advisory Council on Historic Preservation an opportunity to comment on a project. This is known as the Section 106 Review (16 USC 470).
- <u>U.S. Fish and Wildlife Services (USFWS)</u>. Species listed as threatened or endangered by USFWS are protected by the Endangered Species Act of 1973, as amended. Section 9 of the ESA prohibits the take of threatened and endangered species; "take" is defined as "harass, harm, pursue, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Generally, the USFWS considers modification of regularly occupied endangered species habitat to constitute harm and, therefore, be a violation of the ESA. No threatened or endangered species were identified on the Project site.
- <u>Texas Code of Health and Safety</u>. Section 711.011 of the Texas Health and Safety Code states that any person who discovers an unknown or abandoned cemetery shall file notice of the cemetery with the county clerk in the county in which the cemetery is located. The notice must contain a legal description of the land on which the unknown or abandoned cemetery is found, describing the approximate location of the cemetery and the evidence of the cemetery.

#### Environmental Studies and Compliance Activities

#### Environmental Site Assessment

The Sponsor hired a consultant to conduct an Environmental Site Assessment (ESA) of the 520acre Project site, which consists of two tracts: one property covering approximately 300 acres and an adjacent property of roughly 220 acres. The ESA was performed in accordance with the American Society for Testing and Materials (ASTM) E 1527-05 guidance document, Standard Practice for Environmental Site Assessments.

The purpose of the ESA is to identify, to the extent feasible and pursuant to the practice described in ASTM E 1527-05, recognized environmental conditions associated with the specified property. Recognized environmental conditions are the presence or likely presence of a hazardous substance, including petroleum products, on the specified property under conditions that indicate an existing release, past release, or a material threat of a release of any such substance into structures on the specified property, including the soil surface, groundwater, or surface water of the specified property.

Tasks involved in the ESA included historical records and regulatory review, an on-site inspection, landowner interviews, and a reconnaissance of the surrounding area. A summary of results is presented below:

- <u>Site overview and historical records search</u>: The subject property is located in an area that has historically been used for ranching. Currently, the immediate surrounding area is still utilized for ranching and low density residential development.
- <u>Property ownership and occupant information</u>: The Sponsor is leasing the subject property for the solar Project. There are no current occupants on the subject property.
- <u>Records search</u>: Regulatory database information regarding the spill or potential presence of hazardous waste in facilities and/or properties within the ASTM-mandated search radius of the subject property was reviewed by the consultant. No sites were identified within or immediately adjacent to the subject property.
- <u>Geological and hydrogeological profile</u>: The consultant reviewed Federal Emergency Management Agency (FEMA) floodplain data for the subject property, which revealed that the subject property is located outside of the 100-year floodplain. An examination of aerial photos and a review of U.S. Fish and Wildlife Service National Wetland Inventory data indicate no evidence of wetlands on the subject property.
- <u>Vegetation</u>: The entire Project area is comprised of one vegetation community, scrubshrub upland. Commonly observed species included creosote bush (*Larrea tridentata*), catclaw (*Acacia greggii*), honey mesquite (*Prosopis glandulosa*), Spanish dagger (*Yucca treculeana*), strawberry cactus (*Echinocereus enneacanthus*), prickly pear (*Opuntia engelmannii*), knife-leaf condalia (*Condalia spathulata*), and ocotillo (*Fouquieria splendens*).

#### Endangered Species Evaluation

The Sponsor hired a consultant to conduct an evaluation of the project area for the potential for federally listed threatened and endangered species to occur in or adjacent to the proposed solar plant Project area. The consultant reviewed existing literature sources and conducted field reconnaissance to determine if habitats suitable to support listed species occur in or adjacent to the Project area. Eight (8) federally listed species and candidate species (USFWS 2011) were identified as having the potential to occur in Presidio County, Texas. Four of the species are federally listed as endangered, three are listed as threatened, and one has been designated as a candidate for federal listing as threatened or endangered. None of the species are expected to occur within the Project area. No adverse impacts to federally-listed species are anticipated from construction and operation of the Project.

#### <u>Cultural Resources Report</u>

The Sponsor hired a consultant to conduct an intensive archaeological survey of the Project. Although the Project is not currently subject to federal or state cultural resource regulations, the Sponsor undertook these cultural resource investigations in anticipation of possible future compliance with the requirements of Section 106 and the NHPA. As part of its due diligence, SunEdison has carried out these actions to determine the potential effect of the proposed Project on cultural resources.

The background review revealed that there were no previously recorded archaeological sites within the Project area. On the other hand, field investigations resulted in the documentation of five archaeological sites, three of which are directly within the survey area. These sites are all surficial scatters of prehistoric material and are likely raw material quarry sites. Due to the sparse and ephemeral nature of the site and lack of diagnostic artifacts or cultural features, these sites are considered ineligible for inclusion in the NRHP.

Millington-Ornelas Cemetery is a previously unrecorded historic age cemetery located approximately 150 meters to the east of the survey area. The cemetery contains at least 31 historic age burials dating from the 1920s to the late 1970s. Given its status as an unrecorded cemetery, the consultant documented the cemetery pursuant to Section 711.011 of the Texas Health and Safety Code. The site is currently outside the boundary of the survey area and the overall Project area and, therefore, no additional research or changes to the current design specifications are required.

#### Delineation of U.S. Waters

Seventy-nine aquatic resources and numerous rills within the Project area were identified. All aquatic resources could be considered waters of the U.S. based on their eventual hydrologic connection to the Rio Grande River, which is traditionally considered navigable water. The rills, would be considered non-jurisdictional as they are highly erosional and do not have a reliable ordinary high water mark (OHWM). According to the USACE (2008b), the OHWM is the defining element for identifying the lateral limits of non-wetland waters under section 404 of the Clean Water Act (CWA). In correspondence dated June 2012, the USACE determined that an authorization is not required for the Project.

#### Pending Environmental Tasks and Authorizations

No formal environmental authorizations are pending.

#### Compliance Documentation

No formal environmental authorizations are required for the Project.

#### 2.2.2. Environmental Effects/Impacts

There is a need for affordable and environmentally beneficial alternatives to conventional fossilfuel-derived energy sources. Additionally, renewable energy projects create an opportunity to generate electricity without the same atmospheric emissions generated by fossil-fuel-based plants.

Sunlight is a source of renewable energy, which means it can be produced without 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 consume or pollute water. 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. The Project provides an opportunity to displace greenhouse gases (GHG) and other pollutants produced by traditional fossil-fuel-based energy generation, while providing the residents of the border region with a safe and reliable energy alternative.

#### Existing Conditions and Project Impact – Environment

Historically, the United States has depended to a great extent on fossil fuels for the generation of energy. This conventional energy development can affect the natural environment due to the harmful emissions related to the generation process, including the release of GHG, as well as other pollutants, such as sulfur dioxide ( $SO_2$ ) and nitrogen oxides (NOx).

Current electricity generation for Texas relies on a mix of energy production technologies including: coal (36%), natural gas (45%), nuclear (10%), other renewables (7%) and others (2%). Based on nearly 411 million MWh of net power generation in Texas in 2010, 252 million metric tons of  $CO_2$ , 429,892 metric tons of  $SO_2$ , and 205,601 metric tons of NOx were emitted.

Coal	150,172,832	
Natural Gas	186,882,238	
Petroleum	708,481	
Other Gases <sup>1</sup>	3,290,570	
Nuclear	41,335,248	
Hydroelectric	1,262,832	
Other Renewables <sup>2</sup>	27,704,828	
Other <sup>3</sup>	339,017	
<sup>1</sup> Other gases include blast furnace gas, propane gas, and other manufactured and waste		
gases, derived from fossil fuels.		
<sup>2</sup> Other Renewables includes biogenic municipal solid waste, wood, black liquor, other		
wood waste, landfill gas, sludge waste, agricultural byproducts, other biomass, geothermal,		
solar, photovoltaic energy, and wind		
<sup>3</sup> Other includes non-biogenic municipal solid waste, batteries, chemicals, hydrogen, pitch,		
purchased steam, sulfur, tire-derived fuels, and miscellaneous technologies		
Note: Totals may not equal sum of components because of independent rounding.		
Source: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations		
Report" and predecessor forms.		

The Project will help reduce the demand for fossil-fuel-fired electricity, and since solar power generation has zero fuel cost, zero emissions and zero water use related to energy generation, it will displace related harmful emissions. For the next 25 years, the production of 650,578 MWh of zero-carbon generation will help avoid the emission of nearly 397,500 metric tons of  $CO_2$  into the atmosphere. The anticipated environmental outcomes include new renewable energy

generation capacity (10 MW<sub>AC</sub>; >27,500 MWh in year 1) and an expected displacement of more than 16,805 metric tons/year of carbon dioxide, 29 metric tons/year of sulfur oxides and 14 metric tons/year of nitrogen oxides.

#### Mitigation of Risks

Tasks involved with the ESA included historical records and regulatory review, an on-site inspection, landowner interviews, and a reconnaissance of the surrounding area. Only *de minimis* conditions were identified: six dumpsites and 1 earthen pit.<sup>9</sup> Proper removal and disposal of identified dumpsites is recommended, if they will be impacted by proposed construction activities. Care should be taken with the handling and disposal of roof shingles as their potential to contain asbestos cannot be ruled out.

The purpose and historical use of the earthen pit is unknown. No evidence of hazardous materials was observed inside or around the pit. These items are considered to be *de minimis* conditions and have a low level of environmental risk or liability.

#### Natural Resource Conservation

The Project will help displace the atmospheric emissions generated by fossil-fuel-fired electrical plants since solar energy is generated without the emissions of CO<sub>2</sub>, SOx and NOx. In addition, clean technologies such as solar energy require no water for electricity production, whereas fossil-fuel-fired generation is generally water intensive.

BTU committed to diversify its energy mix by including cleaner energy production technologies. BTU owns four natural gas-fired plants with a total installed capacity of 227 MW and has the option to call upon an additional 50 MW of gas-fired generation. On January 1, 2011, BTU began purchasing wind energy from the Penascal wind farm located in Kennedy County, TX.

#### 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 for purposes of meeting an ever-growing demand for energy, as well as a lost opportunity to generate emission-free energy, such as that derived from solar energy.

#### 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 humans 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 electrical power generation, the Project will positively impact the region by reducing pollutants and thus

<sup>&</sup>lt;sup>9</sup> "De minimis conditions" refer to a level of risk that is too small to be of concern.

help to contain the severity of respiratory 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 Project; on the contrary, a beneficial effect is anticipated on the air quality due to the decreased demand on fossil-fuel-fired electrical 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 Project Benefits

The Project is expected to generate approximately 75-80 direct jobs during construction, as well as one (1) permanent, full-time job during operation, which will all be through subcontractors.

The Project Sponsor has requested a loan from the North American Development Bank (NADB) for up to US\$35.0 million to complete the financing of the Project. The proposed payment mechanism is consistent with the project structure normally seen in the U.S. 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 Agreement (PPA) signed with BTU for a term of 25 years. NADB loan will have no recourse beyond the Project Company, FBS.

NADB performed a financial analysis of the source of payment, BTU; the proposed payment structure; and the Project's cash flow projections over the 25-year term of the PPA. Its financial ratios show that BTU has the revenue capacity to meet its financial obligations under the PPA. BTU is presently rated A+ by FitchRatings, A1 by Moody's, and A+ by Standard & Poor's, which reflects a strong credit quality.

The Project's 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 senior loans, and d) comply with debt service coverage requirements.

In addition, NADB's analysis verified that FBS has the legal authority to contract financing and pledge its revenue for the payment of financial obligations. FBS also has the legal and financial capacity to operate and maintain the Project, and will contract the Project's O&M services with an affiliate 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 of up to US\$35.0 million FBS for the construction of the Project described herein.

BECC released the Draft Project Certification and Financing Proposal for a 30-day public comment period beginning June 15, 2012. The following Project documentation was included with the published proposal:

- Environmental Site Assessment
- Endangered/Threatened Species Study
- Cultural Resources studies
- Waters of the U.S. Delineation Report for the Proposed SunEdison Solar Plant, Presidio County, Texas
- U.S. Army Corp of Engineers correspondence; Action No. SPA-2011-00329-LCO

The 30-day public comment period ended on July 16, 2012, with no comments received.

The Sponsor also promoted the Project at approximately 12-15 Presidio County Commissioners Hearings, as well as three (3) City of Presidio Council meetings held in March and April 2011. Meetings were open to the general public, and meeting agendas were made available to the public beforehand. The County confirmed its support by offering a tax abatement for the first 10 years of the Project. Over the last 15 months, there has been no opposition documented against to the Project.

The Sponsor will conduct a job fair in Presidio prior to beginning of construction. The Economic Development Office in Presidio will work with the Sponsor to arrange the event with the support of the City Administrator.

The Project received attention in several Internet articles, including the *Big Bend Sentinel* and CBS. The information mentioned that the Presidio County Commissioners and the County Judge voted unanimously to extend a 10-year, 80% tax abatement for the construction of the Project.