CERTIFICATION AND FINANCING PROPOSAL

ENERGIA SIERRA JUAREZ 1 WIND ENERGY PROJECT IN TECATE, BAJA CALIFORNIA AND SAN DIEGO COUNTY, CALIFORNIA

Revised: November 11, 2013

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INDEX

EXECUTIVE SUMMARY

ENERGIA SIERRA JUAREZ 1 WIND ENERGY PROJECT IN TECATE, BAJA CALIFORNIA AND SAN DIEGO COUNTY, CALIFORNIA

Project:	The project consists of the construction and operation of a 155.1 MW_{AC} wind energy farm located in Tecate, Baja California, Mexico, and includes the construction of a 7.7 km (4.8 mi) transboundary double-circuit transmission line to deliver electricity to San Diego County, California in the United States (the "Project"). The electricity generated will be purchased by San Diego Gas & Electric (SDG&E), pursuant to a long-term Power Purchase Agreement (PPA).
Project Objective:	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.
Expected Project Outcomes:	The anticipated environmental and human health outcomes resulting from the installation of 155.1 MW_{AC} of new renewable energy generation capacity are: a) Approximately 463.4 GWh of electricity during the first year of operation, and b) An expected displacement of approximately 125,809 metric tons/year of carbon dioxide and 189 metric tons/year of nitrogen oxides. [1]
Sponsor:	Infraestructura Energética Nova, S.A.B. de C.V. (IENova).
Borrower:	Energía Sierra Juárez S. de R.L. de C.V. (ESJ).
Loan Amount:	Up to US$50 million.

[1] SO_2 emission reductions are not calculated for this Project due to the minimal SO_2 emission factor based on the California energy generation portfolio. According to the Energy Information Administration (EIA), the SO_2 emission factor is less than half of the smallest unit of measure: 0.5.

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1. ELIGIBILITY

Project Type

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

Project Location

The Project site is located in both Mexico and the United States. Specifically, the proposed infrastructure will be installed within the municipality of Tecate, Baja California and in San Diego County, both of which are adjacent to the U.S.-Mexico border.

Project Sponsor and Legal Authority

The private-sector project sponsor is Infraestructura Energética Nova, S.A.B. de C.V. (IENova or the "Sponsor"), which will use a special purpose company named Energía Sierra Juárez S. de R.L. de C.V. (ESJ), for the implementation of the Project. Energía Sierra Juárez S. de R.L. de C.V. is a Mexican-based, limited-liability company incorporated on June 30, 2008. Its contact representative is Nelly Molina.

2. CERTIFICATION CRITERIA

2.1 TECHNICAL CRITERIA

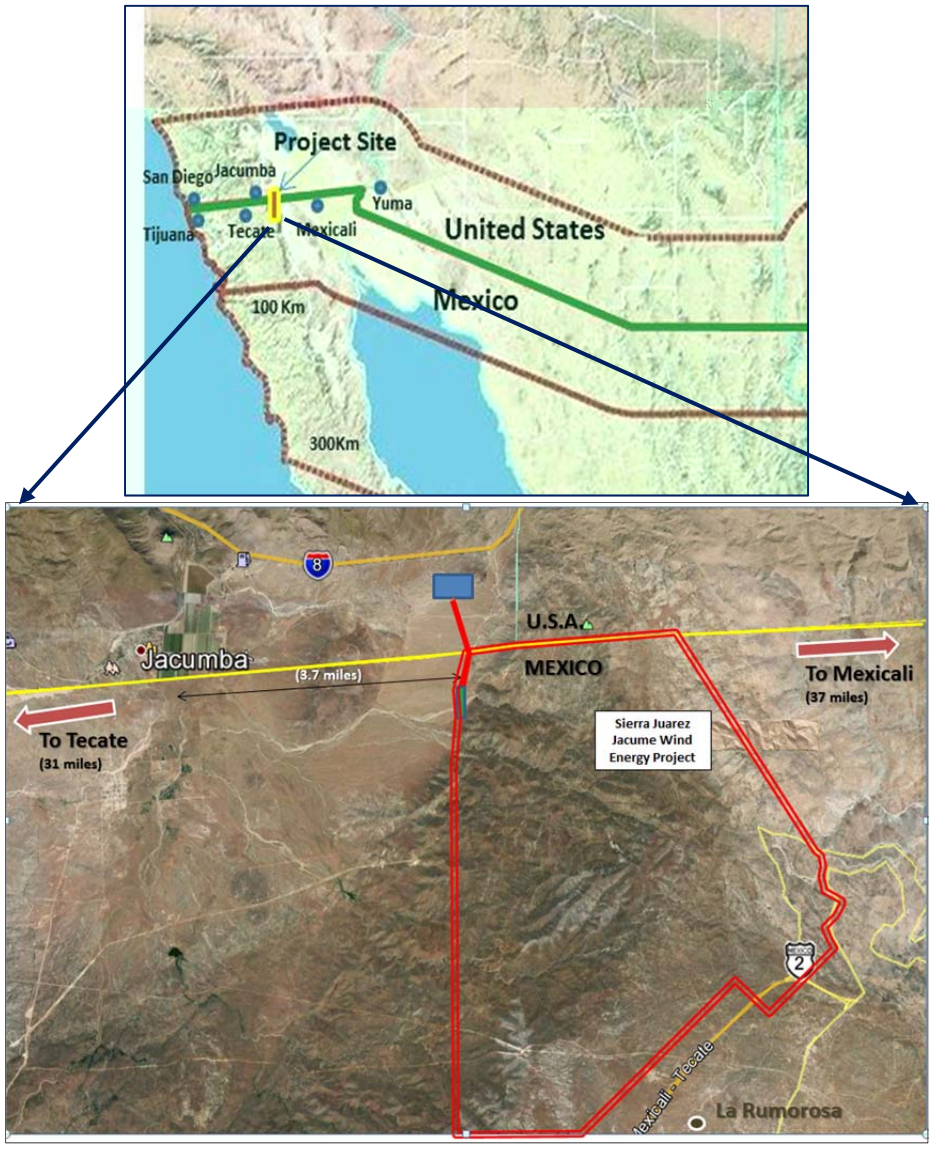
2.1.1. Project Description

Geographic Location

The Project will be located in the municipality of Tecate, Baja California in Mexico and in San Diego County, California in the United States. The wind farm and a 6.5 km (4.04 mi) segment of the transboundary, double-circuit generation-tie line ("transmission line") will be located in Ejido Jacume, approximately 31 miles east of the city of Tecate and 37 miles west of Mexicali in the state of Baja California, Mexico. The wind farm will be developed on approximately 5,300 hectares (13,100 acres) of land. The remaining segment of the transmission line—1.2 km (0.75 miles)—will be constructed across the border in San Diego County.

Figure 1, below, shows the approximate geographical location of the Project.

Figure 1
PROJECT VICINITY MAP



General Community Profile

The Project is expected to directly benefit San Diego County by generating electricity equivalent to the annual consumption of approximately 70,832 households.

According to the 2010 U.S. census, the population of San Diego County was 3,095,313, which represents 8.3% of the state's population. The median household income (MHI) reported in 2010 for San Diego County was US$59,923. The main work force activities are: management,

business and arts (39.7%); services (18.5%); sales (25.5%); natural resources and construction (8.2%); and production and transportation (8.0%). According to the U.S. Department of Labor, in January 2013, the unemployment rate in San Diego County was 8.6%, higher than the national average of 7.9%.

Additionally, the Project is expected to provide economic benefits to the municipality of Tecate, Baja California by creating employment opportunities and additional income from taxes during the construction and operation of the Project.

According to the 2010 census, the population of Tecate was 101,079 residents, which represents 3.2% of the state's population. The median household income (MHI) reported in 2009 for Tecate was approximately US$7,600. The main work force activities are: manufacturing industries (51%); commerce (18%); and temporary lodging, food and beverage services (9%). The unemployment rate in Tecate is 7.4%, higher than the national average of 4.99%.[2] The Project is expected to generate approximately 350 jobs during construction and seven permanent jobs during operation.[3]

Local Energy Profile

Although the energy will be generated in Mexico, the electricity will be delivered directly to San Diego County through a transmission line that will be connected to the SDG&E East County (ECO) substation, which is connected to the Southwest Powerlink electric grid. The Project will be an independent system and will not affect any existing infrastructure belonging to the Mexican Federal Electricity Commission (CFE), nor is it expected to affect local electricity distribution.

The U.S. Department of Energy (DOE), through the Energy Information Administration (EIA), provides a state-by-state reference for information and data covering energy production and demand. Figure 2 from the EIA website shows the location of California's power plants, its renewable energy potential, and energy sources.[4]

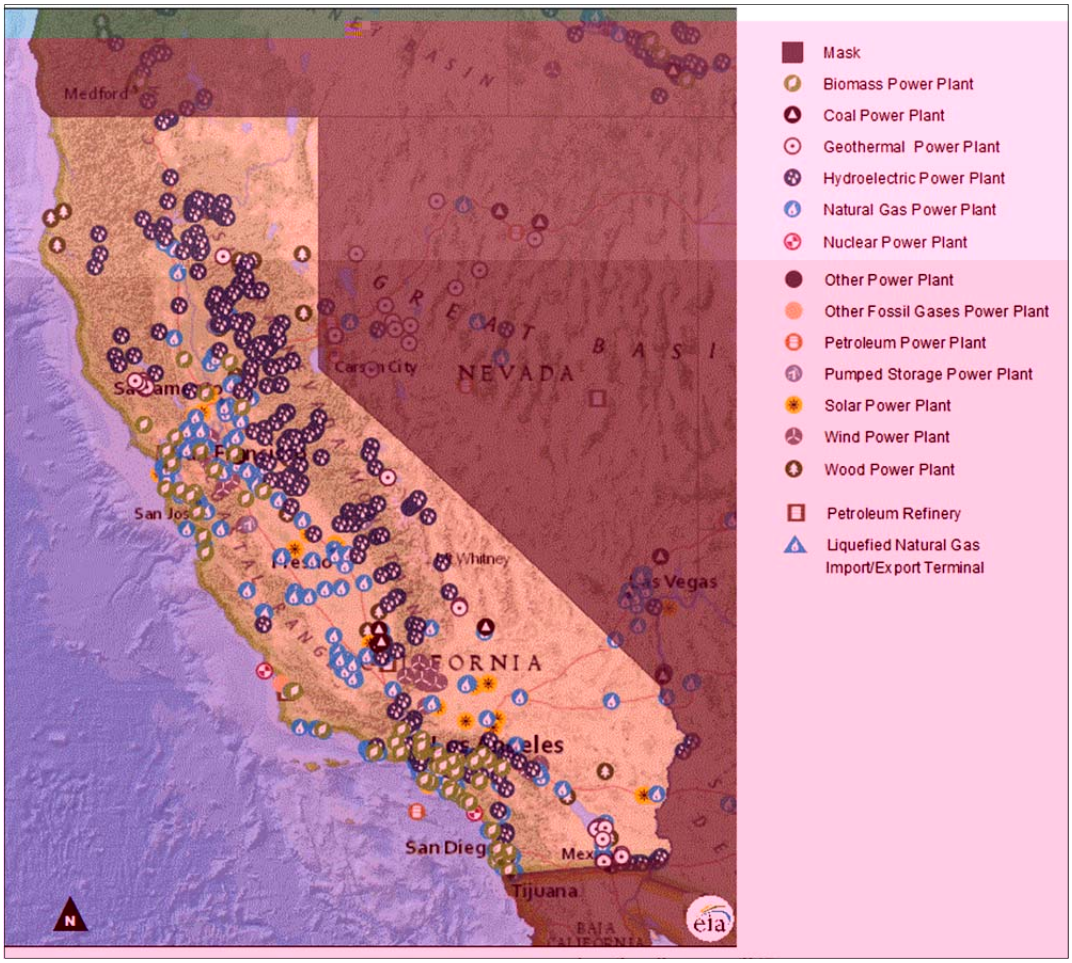
California's Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill 1078. In November 2008, the California Energy Policy Report's goal of achieving 33% generation from renewable sources by 2020 was confirmed by Governor Arnold Schwarzenegger in Executive Order S-14-08. In 2009, the California Air Resources Board (CARB) under its Assembly Bill 32 authority was directed by Executive Order S-21-09 to enact regulations to achieve the goal of 33% renewables by 2020.

In order to achieve the 33% goal by 2020, Senate Bill X1-2 was signed by Governor Edmund Brown, Jr., in April 2011. Under this new RPS, all electricity retailers in the state, including publicly-owned utilities (POUs), investor-owned utilities (IOUs), electricity service providers, and

[2] Source: 2009 Mexican Economic Census.
[3] Source: Environmental Impact Assessment prepared by the Corporación Ambiental de México, S.A. de C.V. and submitted to SEMARNAT on September 15, 2009.
[4] Source: U.S. Department of Energy, Energy Information Administration, State Energy Profiles – California, 2012.

community aggregators, must adopt the new goals of 20% of retail sales from renewables by the end of 2013, 25% by the end of 2016, and 33% by the end of 2020.

Figure 2
CALIFORNIA'S ENERGY SOURCES



The electricity generated by the Project will be sold to SDG&E, a wholly-owned subsidiary of Sempra Energy. For more than 125 years, SDG&E has been providing energy services in the San Diego region. With a service area spanning 4,100 square miles and covering most of San Diego County and part of Orange County, SDG&E currently serves 1.4 million electric customers and 850,000 natural gas customers, representing 3.4 million people.[5]

Over the past 12 years, SDG&E has maintained an active capital investment program aimed at providing sufficient and reliable power to its customers, including investments in renewable and other clean sources of power generation. In 2011, nearly 20.8% of the energy delivered to retail

[5] Source: SDG&E, http://sdge.com/aboutus

customers was provided by renewable energy resources, such as wind, geothermal, biomass, hydroelectric, and solar facilities. In the same year, SDG&E signed 17 new power purchase agreements, mostly with solar and wind energy projects, which in aggregate represent 1,482 megawatts of capacity. With these contracts, SDG&E is in a position to reach the 25% renewable power requirement by 2016, and at present rates of procurement, SDG&E is fully on track to meet the California RPS requirement of 33% of retail sales from renewables by 2020.

Natural gas is the largest single fuel power source for SDG&E, accounting for 42.8% of total installed capacity, followed by nuclear at 20.4%, other renewables at 15.7%, coal at 2.7%, and unspecified sources at 18.4%. Table 1 shows the in-state generation capacity of SDG&E by fuel source compared to California's total installed generation mix.

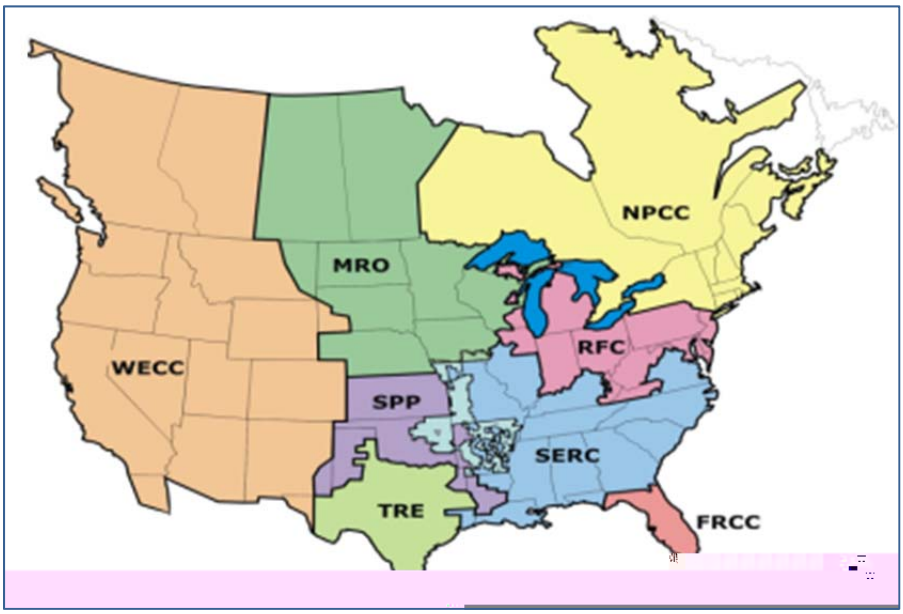
Table 1
ENERGY GENERATION CAPACITY PORTFOLIO COMPARISON

Energy Resources	SDG&E[3] (2011)	CA Mix[4] (2011)
Natural Gas	42.8%	62.4%
Nuclear	20.4%	6.4%
Other Renewables[1]	15.7%	11.7%
Coal	2.7%	0.7%
Hydroelectric	-%	18.8%
Unspecified[2]	18.4%	-%
Total	**100%**	**100.0%**

[1] Includes wind, solar, geothermal, landfill gas, and digester gas and biomass resources. This represents physical power purchased to support SDG&E's system load.
[2] Electricity from transactions, not traceable to specific generation sources.
[3] Source: San Diego Gas & Electric Generation Fact Sheet, 2013.
[4] Source: California Energy Commission, *Electric Generation Capacity & Energy: 2001 – 2011.*

SDG&E is part of the California Independent System Operator (CAISO), which manages the flow of electricity across the high-voltage, long-distance power lines that cover 80% of California's power grid. CAISO is a member of the Western Electricity Coordinating Council (WECC), the regional entity responsible for coordinating and promoting system reliability in the Western Interconnection. Geographically, WECC is the largest and most diverse of the eight regional entities that have delegation agreements with the North American Electric Reliability Corporation (NERC) (see Figure 3).

Figure 3
NERC REGIONS



Due to the size and diverse characteristics of the region, WECC and its members face unique challenges in coordinating day-to-day interconnected system operations and the long-range planning needed to provide reliable power service across nearly 1.8 million square miles. CAISO evaluates both off-peak and on-peak deliverability scenarios to determine base cases that consider all the connected facilities. Renewable energy generation facilities have priority over gas turbines or combined-cycle generation facilities**.** In a typical off-peak scenario, renewable energy generation facilities will be on-line, while the remaining energy generation required will be supplied by the lowest cost generation facilities.

Project Scope and Design

The scope of the Project is to design, build, and operate a 155.1 MW_{AC} wind farm and construct a 7.7 km (4.8 mi) transboundary, double-circuit generation-tie line (transmission line) to deliver power from the wind farm to the SDG&E ECO substation located in San Diego County.

SDG&E will purchase the electricity produced by the Project pursuant a 20-year PPA. The electricity will be produced in Mexico by Energía Sierra Juárez, S. de R.L. de C.V. (ESJ), which obtained a permit from the Mexican Energy Regulatory Commission (CRE) to export energy as an independent energy producer pursuant to Resolution Number RES/205/2012 issued on June 14, 2012. The 30-year permit authorizes ESJ to implement a 156-MW wind farm, including all the activities necessary for the transmission, transformation and delivery of the electricity and allows the company to export energy to the United States, specifically to the American company Energía Sierra Juárez, U.S., LLC (ESJUS), who will sell the energy to SDG&E.

The Project will generate clean energy using 47 wind turbines located on approximately 5,300 hectares (13,100 acres) of leased land. The 230-kV transmission line will have a double circuit

and will extend about 7.7 km (4.8 mi). Approximately 6.5 km (4.04 mi) of the transmission line will be installed in Mexico, from the Project site to the U.S.-Mexico border. The remaining 1.2 km (0.75 mi) of the transmission line will be installed in the United States, from the border to the point of interconnection at the SDG&E ECO Substation, which is currently under construction and is expected to come online in the fourth quarter of 2014. The transboundary double-circuit transmission line will also be used to import energy from the San Diego County ECO Substation for the start-up of Project operations.

According to the energy production assessment, the wind turbines are located in areas that have been determined to be optimal for wind generation, considering available meteorological information and site access.[6]

Figure 4
PROJECT LAYOUT

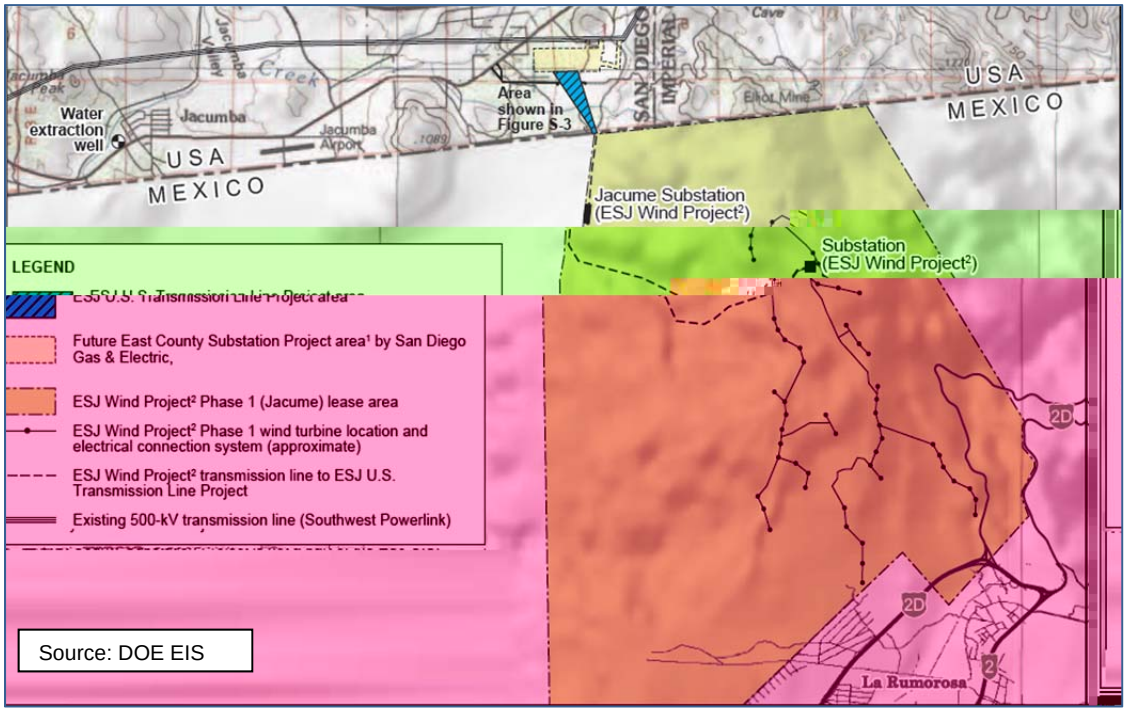


Table 2 presents a non-exhaustive list of key tasks for Project implementation, along with their status.

[6] Garrad Hassan, Assessment of the Energy Production of the Proposed Energy Sierra Juarez I Wind Farm, April 2013.

Table 2
PROJECT MILESTONES

Key Milestones	Status
Mexico – (See sections 2.1.1., 2.1.3., 2.2.1.)	
MIA resolution issued by SEMARNAT	Completed (July 2010)
Forestry land use change authorization issued by SEMARNAT	Completed (July 2011)
State MIA resolution issued by the State of Baja California	Completed (February 2012)
Land use authorization issued by the Municipality of Tecate	Completed (April 2012)
CRE authorization for energy generation, exportation and importation	Completed (June 2012)
Construction permits issued by the Municipality of Tecate	Completed (December 2012)
CILA Concurrence letter	Completed (March 2013)
CONAGUA permits to cross the aqueduct	Completed (April 2013)
Lease agreement (Ejido Jacume)	Completed (November 2006)
United States – (See sections 2.1.3., 2.2.1.)	
Final Environmental Impact Statement issued by DOE	Completed (May 2012)
Record of Decision and DOE Presidential Permit No. PP-334	Completed (August 2012)
Project site lease agreement (transmission lines)	Completed (August 2010)
IBWC approval letter	Completed (April 2013)
Interconnection Agreement with SDG&E	Completed (October 2011)
San Diego County Major Use Permit (MUP)	Completed (January 2013)
Project Implementation (See sections 2.1.1., 2.1.4.)	
PPA with SDG&E	Completed (July 2012)
Turbine Supply Agreement and Maintenance Agreement	Completed (May 2013)
Final Wind Assessment Report	Completed (August 2013)
Engineering, Procurement and Construction (EPC) contract	Completed (July 2013)
Commercial Operation Date (COD)	March 2015

In order to meet the Commercial Operation Date in March 2015, in September 2013, ESJ instructed ANEMO to initiate preliminary construction, design and engineering activities under a limited scope (not including full construction activities).

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

According to the energy production assessment, the Project Sponsor evaluated several different models of wind turbines from various providers and selected the equipment that was considered the most suitable for the characteristics of the site and that will provide the best performance (long-term energy output) based on wind resources.[7] The Sponsor also analyzed different site layouts, total energy costs, equipment performance and cultural and environmental impacts.

The Sponsor has been gathering data from 10 meteorological units at the ESJ site since May 2005. An independent engineering consultant made an assessment of the expected energy to be produced using the selected technology in the Project area. The results of the analysis support the installation and adequate performance of 47 wind turbines for the wind farm.[8]

According to the Mexican Environmental Impact Statement (*Manifestación de Impacto Ambiental, Modalidad Regiona*l), the Final Environmental Impact Statement of the DOE, and Exhibits D.1 General Turbine Specifications, D.2.1. Scada System Description and D.14 Tower Foundation Requirements from the Manufacturer Wind Turbine Supply and Warranty Agreement between ESJ and Vestas, as well as information provided by the Sponsor, the main components of the Project are:

- **Wind turbines:** The proposed Project includes 47 wind turbines, each with 3.3 MW nominal power, 112-meter rotor diameter and 84-meter hub height. Equipment and infrastructure associated with the turbines include:
    - *Wind turbine transformers*: The equipment necessary to step up the voltage of generated power to 34.5 kV for transmission.
    - *Towers:* A tubular steel structure made up of several sections, depending on the height of the tower.
    - *Medium-voltage grid:* The power generated by the wind turbine will be transmitted to the substation using overhead power lines on poles (metal, wood or concrete) that will transmit the power generated at each wind turbine to a "collector" substation.
    - *Blades/rotor:* Carbon and fiberglass blades with a length of 54.65 meters will be used for the Project. The turbines will be equipped with a braking system designed to halt the rotor under all foreseeable upset conditions. The turbines also will be equipped with a parking brake to keep the rotor stationary while maintenance or inspection is performed. Some chemicals will be used for lubrication and cleaning (anti-freeze, oil).

[7] Garrad Hassan, Assessment of the Energy Production of the Proposed Energy Sierra Juarez I Wind Farm, April 2013.
[8] Burns and McDonnell, Memorandum Deviation from GLGH Loss Estimates in the ESJ Pro Forma BMcD Project No. 74911, August 2013.

- **Monitoring and control system:** Each turbine will be equipped with a computer control system to monitor operating conditions and analyze variables, such as noise, wind speed and direction, air and machine temperatures, electrical voltage, currents, vibrations, blade pitch, and yaw (side to side) angles. The control system will always be in operation to ensure that the machines function efficiently and safely. Each turbine will be connected via fiber optic cables to a central Supervisory Control and Data Acquisition (SCADA) system that will allow for remote control of the entire system from a host computer.

- **Roads:** The Project will include the construction of approximately 40 kilometers (25 miles) of permanent roads of compacted native material and some areas of asphalt, to allow circulation within the proposed Project area and provide access to each turbine, the substation switchyard, loop-in structures and the operation and maintenance (O&M) building. Requirements for site preparation, construction and maintenance are provided in the state authorization for the Project.

- **Operation and maintenance facilities:** There will be an O&M facility at the Project site. The O&M building and yard will be constructed to store critical spare parts and provide a building for maintenance services. The facility will include a permanent administrative, maintenance and storage building structure, in addition to a control building for the substation.

- **Meteorological towers:** Three permanent measurement towers will be installed up to 84 meters high and anchored to a concrete foundation at the base.

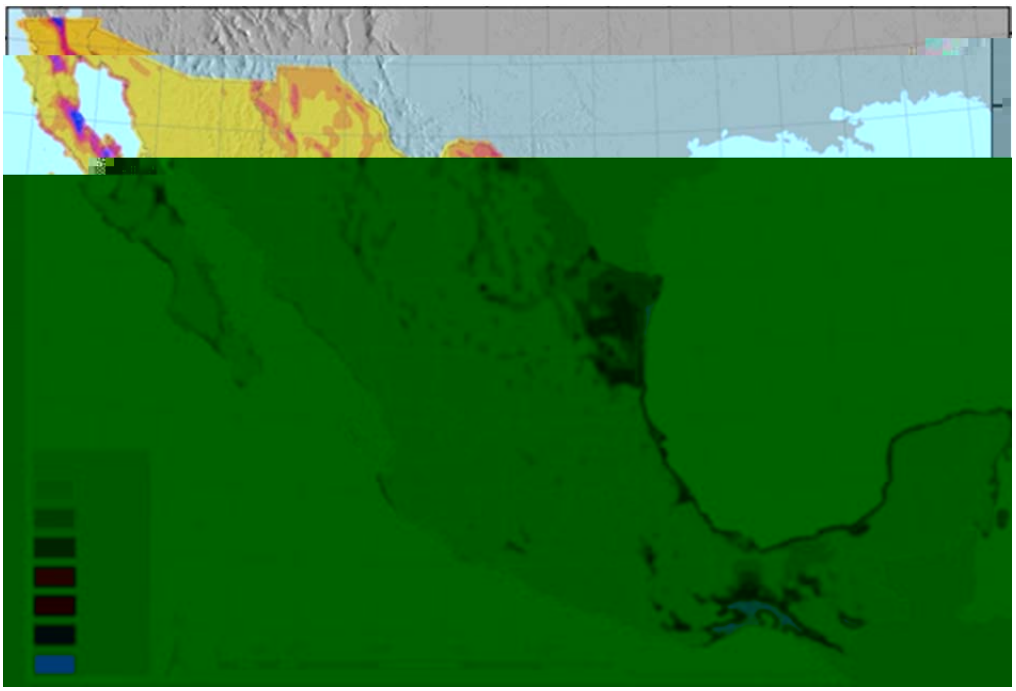
- **Electrical substation**: A substation will be constructed as part of the Project to receive the electricity generated by the turbines. It will be installed to step up the voltage from 34.5 kV to 230 kV and to deliver energy from the Project to the ECO Substation in the United States.

- **Transboundary transmission line:** The transmission line will have a double circuit with a capacity of 230 kV and will extend 7.7 km (4.8 mi). The transmission line will also be used to import energy from the ECO Substation for construction purposes and to export energy from the wind farm.

Assessment of Wind Resources

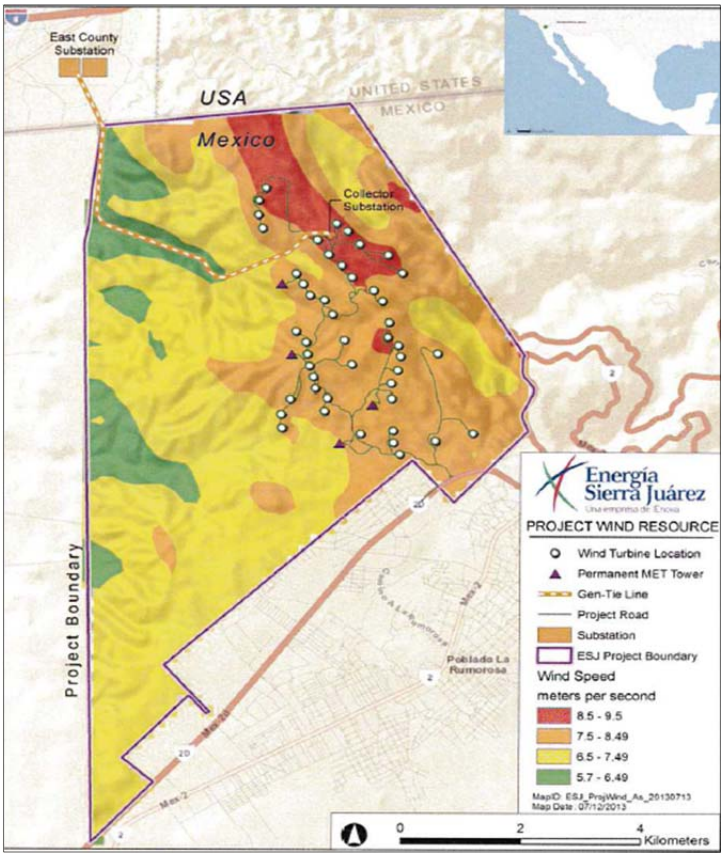
The wind farm is located in Baja California in the Sierra Juarez mountain range with elevations ranging between 1,200 and 1,400 meters (3,937 and 4,600 feet) above sea level. The site terrain is considered highly complex, with areas of steep slopes in excess of 17° covering approximately 50% of the site and large rocky outcroppings throughout. East of the site, the terrain drops rapidly to the Sonoran Desert with elevations generally below 200 m (650 ft.). According to the Electric Power Research Institute (IIE), wind resources in the state range from 501 to 600 W/m^2 (see Figure 5).

Figure 5
NATIONAL WIND RESOURCE POTENTIAL



In order to review and model available wind resources in the Project area, several meteorological towers were installed and have been collecting data since 2005, including wind speed, wind direction and ambient temperature. All the towers are located within close range of the proposed locations for the turbines. The available data was compiled, validated and incorporated into the wind resource analysis, which measured wind speed changes at different altitudes. According to the results of this evaluation, the region where the Project will be located has excellent wind resources. The area boasts strong winds, with annual mean wind speed in the neighborhood of 8.2 m/s at hub heights of 79.5 m, 84 m, and 85 m (See Figure 6).

Figure 6
WIND SPEED AT THE PROJECT SITE



2.1.3. Land Acquisition and Right-of-way Requirements

The Project site encompasses a total area of approximately 5,300 hectares (13,100 acres). The Project site is located in a rural area that contains little infrastructure. ESJ has obtained permits and rights of way to use ejido land to construct the Project in Mexico. A lease agreement was signed on November 10, 2006, to secure the use of the property for a period of 30 years.[9]

Authorization was required to change the land use from agricultural to energy production. The Municipality of Tecate issued this authorization on April 7, 2012 (Document number 177/2012). The land use was approved in accordance with the State Urban Development Plan and the State Development Plan. An area of 197 hectares (487.29 acres) in the Project site was designated for forestry land use and required an authorization from SEMARNAT for the construction of the Project, which was issued on July 27, 2011.

[9] A lease agreement was executed on November 10, 2006, between Rumorosa Wind Energy S.A. de C.V. and the Ejido representatives. A transfer of rights between Rumorosa Wind Energy S.A. de C.V. and Ecogas Holding Company S. de R.L. de C.V. (currently Energía Sierra Juárez, S. DE R.L. DE C.V.) was approved by the Mexican Ministry of Rural Affairs (*Secretaría de la Reforma Agraria*) in Baja California on August 8, 2007.

The Project also obtained the following clearances and authorizations related to rights of way and the use of property for infrastructure installation in Mexico:

- The Mexican federal agency for roads and bridges (CAPUFE) and BANOBRAS have issued a right of way off of the federal highway to the Project site. The Mexican Ministry of Communications and Transportation (SCT) has authorized construction of an access to the Project site within this right of way.
- Construction permit (513/12) issued by the Municipality of Tecate.
- Concurrence letter (CEU 00375/13, EXP. CEU/263) issued by the International Boundary and Water Commission (CILA), Mexican Section, for the construction of a transboundary transmission line.
- National Water Commission (CONAGUA) authorizations (1246, 1247, 1248) for the construction of an internal road and the installation of electrical collection lines that will cross the Rio Colorado Aqueduct right-of-way.

The Project also obtained the following clearances and authorizations related to rights of way and use of property for infrastructure installation in the United States:

- U.S. Department of Energy Presidential Permit (PP-334) to construct, operate, maintain, and connect a double-circuit 230-kV electric transmission line across the U.S.-Mexico border.[10]
- Grant of a new access easement between the Sponsor and private parties for the construction, maintenance and operation of the Project (August 31, 2010).
- Approval letter issued by the International Boundary and Water Commission (IBWC), U.S. Section, for the construction of a transboundary transmission line.
- Major Use Permit No. P09-008 (MUP) issued by San Diego County for the construction and operation of a double-circuit transmission line on January 1, 2013. According to the MUP, the following construction related permits will need to be obtained from the County for the Project:
    - Construction permit;
    - Grading permit;
    - Encroachment permit; and
    - Excavation permit.

  These permits will be obtained prior or during the construction process as needed in accordance with San Diego County's regulations.

[10] In issuing the Presidential Permit, DOE considered the electric reliability of the facility, its environmental impacts pursuant to the National Environmental Policy Act (NEPA) and required the concurrence of the U.S. Department of Defense and the U.S. Department of State. Based on the concurrence of both of these departments, as well as on the results of the environmental review and public comment process, a Presidential Permit was issued.

2.1.4. Management and Operations

The Project will be constructed by ANEMO, in accordance with the EPC contract signed on July 10, 2013. ANEMO is a consortium of three established companies that have experience in the installation of wind farms and other infrastructure in the area. An affiliate of IENova will provide construction management services during the construction period, administration services and asset management/project administration services (legal, accounting, scheduling, etc.). The affiliate will also provide operation and management services that include continuous system monitoring, emergency response, maintenance, warranty management, spare parts inventory management, performance reporting, and preparation of the annual maintenance plan and operating budget during the life of the Project.

The Sponsor executed a wind turbine supply and warranty agreement, as well as a services and maintenance agreement, with Vestas Mexico.[11] The manufacturer will supply the wind turbines to the site and will provide maintenance and services for a five-year period following start of commercial operation.[12]

The proposed Project will be designed to operate with minimal human intervention. Operation and maintenance tasks will be performed to optimize the operating time of the turbines, reduce repair costs and extend the equipment lifespan. The O&M contractor will have a Preventive Maintenance Manual available to ensure the safe operation of the wind turbines. Maintenance tasks will include regular visual inspections, servicing equipment, and minor repairs.

As part of the requirements for operation of the Project, ESJ obtained the following authorizations issued by the Mexican Energy Regulatory Commission (CRE):

- Permit No. E/932/EXP/2012, based on Resolution No. RES/205/2012, to generate electricity for export through an independent production scheme.
- Permit No. E/933/IMP/2012, based on Resolution No. RES/206/2012, to import electricity for its own consumption.

For infrastructure installed in the U.S., long-term maintenance activities would entail occasional activity within the previously disturbed footprint of development. No ground disturbances associated with the operation of the transmission line outside of these areas is expected.

[11] Source: Vestas webpage, http://www.vestas.com/Default.aspx?ID=10332&action=3&NewsID=3276.
[12] The contract execution date was May 17, 2013. The scope of work includes all work, services, supervision, management, labor, equipment, materials, parts, tools, consumable parts and other items to perform scheduled maintenance of the wind turbines and warranted equipment.

2.2 ENVIRONMENTAL CRITERIA

2.2.1. Compliance with Applicable Environmental Laws and Regulations

Due to the transboundary location of the proposed infrastructure development, environmental laws and regulation from both Mexico and the United States apply. Below is a description of environmental laws and regulations from both countries that are applicable to the Project.

Applicable Laws and Regulations in Mexico

The Project is subject to federal and state environmental clearance authorizations in Mexico. Below are a list of the general laws and regulations applicable to the Project, as provided in the Environmental Impact Assessment (Manifestación de Impacto Ambiental, Modalidad Regional):[13]

- 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 environmental problems can be addressed directly.
- General Law for Waste Prevention and Comprehensive Waste Management (LGPGIRS), 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.
- General Wildlife Law, which establishes the concurrence of the federal, state and local governments regarding the conservation and sustainable use of wildlife and their habitats in Mexico.
- General Law for Sustainable Forest Development which regulates and promotes the conservation, protection, restoration, production, zoning, cultivation, management and use of the country's forest ecosystems and their resources.
- Baja California Environmental Protection Law, which establishes the framework for environmental protection in Baja California.
- Environmental Impact Assessment Regulation, which establishes the requirements for a Federal Environmental Impact Assessment, as well as the activities that must be included in the submittal.
- Emissions and Pollutants Transfer Regulation, which indicates the requirements for the prevention of air pollution and pollutants transfer.
- Atmospheric Pollution Regulation, which indicates the requirement for the prevention of air pollution.
- NOM 041 SEMARNAT 2006, which establishes the maximum permissible emission of pollutants from the exhaust of vehicles in circulation that use gasoline as fuel.

[13] As prepared by Corporación Ambiental de México, S.A. de C.V., September 2009.

- *NOM-045-SEMARNAT-2006*, which establishes the maximum permissible levels of smoke opacity from the exhaust of vehicles in circulation that use diesel or mixtures including diesel as a fuel.
- *NOM-052-SEMARNAT-2005*, which establishes the characteristics, identification and classification of hazardous waste and a list of such waste.
- *NOM-080-SEMARNAT-1994*, which establishes the maximum levels of noise emissions from motor vehicles, motorcycles, and three-wheel motor vehicles, as well as noise measuring methods.
- *NOM-081-SEMARNAT-1994*, which establishes the maximum levels of noise from stationary sources and noise measuring methods.
- *NOM-059-SEMARNAT-2010*, which identifies the species of endangered wildlife in Mexico by compiling the corresponding lists and establishing the criteria for inclusion, exclusion or change in risk status for different species, using a method for assessing their risk of extinction.
- *Baja California State Development Plan 2008-2013, 2011 update* (*Plan Estatal de Desarrollo*, PED), which describes state government's development plans and projects, including strategies for the reduction of greenhouse gas (GHG) emissions and promotion renewable energy projects. Based on the Plan, the Project required a land use change authorization.

Applicable Laws and Regulations in the U.S.

The proposed Project is also subject to both federal and state environmental clearance authorization processes in the United States. As described in the Environmental Impact Statement (EIS) for the Project, DOE determined that issuance of a Presidential Permit for the transboundary transmission line constituted a major federal action that may have a significant impact upon the environment within the context of the National Environmental Policy Act of 1969 (NEPA). Additionally, because ESJUS applied to the County of San Diego for a MUP for the Project, the County reviewed the environmental impacts of that permit in accordance with the California Environmental Quality Act (CEQA). The CEQA document (EIR) was prepared by the California Public Utilities Commission (CPUC).

Based on the federal, state and local jurisdiction established for the Project, the following environmental laws and regulations are applicable:

- *National Environmental Policy Act of 1969 (NEPA)*, which provides guidance on the environmental evaluation process requirements for projects located on federal property, seeking federal funds or requiring permits from a federal agency. Regulations guiding the Department of Energy NEPA are found in 10 CFR Part 1021.
- *Endangered Species Act (ESA),* which requires consultation to identify endangered or threatened species and their habitats, assess impacts thereon, obtain necessary biological opinions and, if necessary, develop mitigation measures to reduce or eliminate the adverse effects of construction or operations.

- *Migratory Bird Treaty Act*, which requires consultation to determine if there are any impacts on migrating bird populations due to construction or operation of project facilities. If so, the applicant will develop mitigation measures to avoid adverse effects.
- *E.O. 13112: Invasive Species*, which requires agencies, to the extent practicable and permitted by law, to prevent the introduction of invasive species, provide for their control and minimize the economic, ecological, and human health impacts that invasive species cause.
- *Bald and Golden Eagle Protection Act 16*, which requires consultations to be conducted to determine if any protected birds are found to inhabit the area. If so, the applicant must obtain a permit prior to moving any nests due to construction or operation of project facilities.
- *Environmental Quality Improvement Act*, which requires each federal agency conducting or supporting public works activities affecting the environment to implement policies established under existing law that provide for enhancement of environmental quality.
- *National Historic Preservation Act of 1966 (NHPA),* as amended, which requires the preservation of historical and archaeological sites and requires federal agencies with jurisdiction over a proposed federal project to take into account the effect of the undertaking on cultural resources listed or eligible for listing on the National Register of Historic Places and requires that the 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 the undertaking. This is known as the Section 106 Review (16 USC 470).
- *Archaeological and Historical Preservation Act*, which requires issuance of permits for any disturbances of archaeological resources.
- *E.O. 13175: Consultation and Coordination with Indian Tribal Governments*, which requires consultation on a government-to-government basis with tribes and nations.
- *Noise Control Act*, which requires facilities to maintain noise levels that do not jeopardize the health and safety of the public.
- *Pollution Prevention Act*, *which* establishes as a national policy that pollution should be reduced at the source and requires a toxic chemical source reduction and recycling report for any owner or operator of a facility that is required to file an annual toxic chemical release form under Section 313 of the Superfund Amendments and Reauthorization Act.
- *Clean Air Act*, which requires sources to meet standards and obtain permits to satisfy: National Ambient Air Quality Standards (NAAQS), State Implementation Plans (SIPs), New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPs) and New Source Review (NSR).
- *Clean Water Act*, which requires a permit for discharge of dredge or fill material into waters of the United States and certification of water quality. Additionally, the policy requires EPA or state-issued permits, National Pollutant Discharge Elimination System (NPDES) permits, and compliance with provisions of permits regarding the discharge of effluents to surface waters and additional wetland protection requirements.

- *E.O. 12898: Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*, which requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.
- *California Environmental Quality Act (CEQA)*, adopted in 1970 and incorporated into the Public Resources Code §§21000-21177. Its purpose is to inform governmental decision-makers and the public about the potentially significant environmental effects of proposed activities; require changes in projects through the use of alternatives or mitigation measures when feasible; and disclose to the public the reasons why a project was approved if significant environmental effects are involved. CEQA applies to projects undertaken, funded or requiring an issuance of a permit by a public agency.
- *California Renewables Portfolio Standard (RPS)* established in 2002 under Senate Bill 1078. In November 2008, the California Energy Policy Report's goal of 33% generation from renewable sources by 2020 was confirmed by Governor Arnold Schwarzenegger in Executive Order S-14-08. In 2009, the California Air Resources Board (CARB), under its Assembly Bill 32 authority, was directed by Executive Order S-21-09 to enact regulations to achieve the goal of 33% renewables by 2020.

Environmental Studies and Compliance Activities in Mexico

In accordance with the Environmental Impact Regulations established by the LGEEPA, the Project Sponsor developed and submitted an Environmental Impact Statement (*Manifestación de Impacto Ambienta*l, *modalidad regional, MIA-R*), on September 15, 2009, for a proposed wind project to be implemented in four phases and distributed in four areas: ESJ-Jacume, ESJ-La Rumorosa, ESJ-Cordillera Molina and ESJ -Sierra de Juarez. The MIA-R identified, described and evaluated the potential environmental effects associated with the proposed actions and alternatives. The elements evaluated included soil, geological and hydrological resources, flora and fauna, and visual resources, as well as sociocultural aspects and the migratory routes of birds, bats and other species. Based on the findings of the MIA and after a thorough analysis of the potential impacts, the study concluded that execution of the entire Project would not significantly affect the environment. The ESJ-Jacume area, presented in this proposal, is the first phase of the four-phase project to advance.

The information presented in the evaluation of potential impacts was reviewed by SEMARNAT and a resolution was issued on July 15, 2010, via document S.G.P.A./DGIRA.DG.4751.10, authorizing the construction of the Project, subject to the development of additional activities and the delivery of information related to environmental impacts and mitigation measures to be performed prior to and during the construction process and operation. The following table presents the activities and information required, as well as their respective status.

Table 3
ACTIVITIES AND INFORMATION REQUIRED BY SEMARNAT

Activity /Information Requirement	Status of SEMARNAT Approval
Update the characterization and environmental assessment of the Project site	Completed
Submit Environmental Quality Assurance Program	Completed
Submit insurance document for performance of all activities required for the wildlife species identified in NOM-059-SEMARNAT-2010	Completed
Submit Soil Rehabilitation Program	Completed
Implement a Wildlife Rescue Program	Program submitted Implementation pending – pre-construction
Submit Bird and Bat Monitoring Study	Completed - pre-construction Pending - post-construction
Submit noise level evaluations	Completed
Submit Compensation Program	Completed
Submit assessment of impacts resulting from the implementation of the Project	Pending - post-construction
Submit an annual administrative report	Format accepted
Notify the agency 15 days prior to initiating construction work	Completed

In compliance with the General Law for Sustainable Forest Development, on December 18, 2009, ESJ requested authorization from SEMARNAT to change the land use of 197.2 hectares (487.3 acres), less than 4% of the Ejido Jacume leased land. On July 27, 2011, SEMARNAT issued a resolution through official letter No. DFBC/SGPA/UARRN/DSFS/2531/11, authorizing the land use change for the construction of the Project, subject to the development of additional activities and the delivery of information related to environmental impacts and mitigation measures to be performed.

Pursuant to the Baja California Environmental Protection Law, the Project Sponsor developed and submitted an Environmental Impact Statement to the State of Baja California Ministry of Environmental Protection (SPA) on December 7, 2011, for the construction and rehabilitation of access roads for the Project. On February 15, 2012, an authorization resolution was issued by SPA under file number SPA-TIJ-0500/12 3.3.0190-MIA/11, requiring activities related to environmental impacts and mitigation measures to be performed before and during the construction and rehabilitation of the access roads.

The mitigation measures required by the federal and state environmental authorizations are further described in Section 2.2.2.

Environmental Studies and Compliance Activities in the U.S.

As part of the environmental review to support the request for a Presidential Permit for the proposed Project, DOE published a Federal Register "Notice of Intent to Prepare an Environmental Assessment and to Conduct Public Scoping Meetings; Baja Wind U.S. Transmission, LLC" on August 4, 2008 (73 FR 45218). On August 28, 2008, a public scoping

meeting was held in Jacumba, California, and written and electronic comments on the scope of the environmental assessment were solicited. Based on the comments received, DOE determined that an EIS would be the appropriate NEPA document for the proposed Presidential Permit. Accordingly, on February 25, 2009, DOE issued, in the Federal Register, a "Notice of Intent to Prepare an Environmental Impact Statement; Energia Sierra Juarez U.S. Transmission, LLC" (74 FR 8517).

Based on this approach, DOE prepared the Energia Sierra Juarez U.S. Transmission Line Project Final Environmental Impact Statement. As part of the development of this environmental review process, DOE invited the County of San Diego to participate as a cooperating agency in the evaluation of the EIS. As a cooperating agency, the County provided information to DOE related to topics within the County's jurisdiction and expertise.

To offer broad public review of the Project's environmental studies and the resulting EIS, the participating federal agencies completed the following activities:

- On September 17, 2010, the U.S. Environmental Protection Agency (EPA) published the Notice of Availability of the Draft EIS in the *Federal Register*.[14] Simultaneously, DOE published its Notice of Availability and Public Hearings. All comments, including comments received after the required submittal date, were considered during preparation of the final EIS. Comments and responses are available in the EIS document.
- On May 29, 2012, DOE distributed the Final EIS prior to the publication of the EPA Notice of Availability to interested agencies, organizations, and others as registered on the Project website mailing list.
- On June 8, 2012, EPA published the Notice of Availability of the Final EIS in the *Federal Register* (77 FR 34041).
- On August 17, 2012, DOE published the Record of Decision (ROD) for Issuing a Presidential Permit to Energia Sierra Juarez U.S. Transmission, LLC, for the Energia Sierra Juarez U.S. Transmission Line Project in the *Federal Register* (77 FR 49789).[15]

Potential environmental impacts from the action alternatives identified in the EIS and the mitigation measures identified for each resource area are included in Section 2.11 of the Final EIS. The finding and conclusions of the final EIS were published as part of the ROD. Below are the environmental elements and respective review results.

- *Biological Resources:* All action alternatives would result in permanent disturbance to approximately 10 acres of natural vegetation and wildlife habitat. Minor temporary disturbances to wildlife and breeding birds during construction would be expected from increased noise and traffic during construction of the Project. Under all action alternatives, some bird mortality could result from collisions with the transmission line

[14] Pursuant to 40 CFR 1506.9 and in accordance with Section 309(a) of the Clean Air Act, EPA is required to make public its comments on the EIS's issued by other federal agencies.
[15] Source: http://www.gpo.gov/fdsys/granule/FR-2012-08-17/2012-20234/content-detail.html.

even after mitigating measures are applied. No adverse effects to special status species are expected from any of the action alternatives.

- *Visual Resources:* All action alternatives would result in permanent, potentially moderate-to-major, long-term, adverse visual impacts due to land scarring. Views of construction equipment and activity would result in a temporary, moderate adverse impact. The long-term presence of the transmission line would result in a moderate adverse impact.

- *Cultural Resources:* Under all action alternatives, the construction activity would result in the potential for minor impacts to currently unknown cultural resources. ESJ has incorporated measures into its Project design to eliminate potential impacts to eleven (11) known prehistoric archaeological sites in the Area of Potential Effect (APE) defined for the proposed transmission line.

- *Noise:* Construction of the transmission line would result in temporary, minor increases in ambient noise levels. These levels would be below the county noise ordinance at the nearest receptor site located approximately 1,600 feet west of the construction area. Operation of the transmission line would introduce a sporadic low noise as a result of the corona effect. The 230-kV configurations would result in an approximate maximum of 8.8 dBA at the property line, which is below the limit of 45 dBA established in the County ordinance for nighttime property line sound levels.[16] The preferred alternative would not exceed the limits imposed by the San Diego County ordinance.

- *Transportation and Traffic:* The action alternatives would result in a minor temporary increase in traffic on local roadways, a minor potential for adverse impacts to traffic safety at the project's ingress/egress, and a short-term minor potential for roadway damage from construction activities. ESJ is working with the County of San Diego to develop a traffic control plan.

As an additional note, components of the Project were previously evaluated for environmental impacts under the NEPA and CEQA processes related to other projects, including the development of the ECO Substation managed directly by SDG&E. The ECO project required the use of rights-of-way under the jurisdiction of the U.S. Bureau of Land Management (BLM), authorization by the CPUC, and approval of a County MUP to construct the substation, as well as the related environmental impact finding

transboundary transmission line), to make the appropriate findings for its discretionary action under CEQA for this Project. The County of San Diego Board of Supervisors approved the MUP for the Project's transmission line, which was recorded in January 2013.

Pending Environmental Tasks and Authorizations

There are no environmental authorizations pending.

Compliance Documentation

For the components located in Mexico, the following environmental compliance documentation is available for the Project:

- Land Use Change Authorization issued by SEMARNAT, Official Letter No. DFBC/SGPA/UARRN/DSFS/2531/11, dated July 27, 2011.
- Land Use Authorization issued by Municipality of Tecate, Document Number 177/2012, dated April 7, 2012.
- SPA State MIA Resolution SPA-TIJ-0500/12 3.3.0190-MIA/11, issued by the Baja California Ministry of Environmental Protection, dated February 15, 2012.
- SEMARNAT MIA Resolution S.G.P.A./DGIRA.DG.4751.10, dated July 15, 2010.

For the component located in the United States, the following environmental compliance documentation is available for the Project:

- Record of Decision for Issuing a Presidential Permit to Energia Sierra Juarez U.S. Transmission, LLC, for the Energia Sierra Juarez U.S. Transmission Line Project in the Federal Register (77 FR 49789) issued by DOE, August 17, 2012.

2.2.2. Environmental Effects/Impacts

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

Wind 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. Wind power does not produce waste byproducts that require disposal or gas emissions that contribute to air pollution. It does not consume or pollute water. No water is expected to be used for turbine cooling during normal operation. Water may be used in small amounts for the cleaning of turbines 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. These conventional sources of energy adversely affect the environment due to the harmful emissions produced in their generation processes, including GHG and other pollutants, such as sulfur dioxide (SO_2) and nitrogen oxides (NOx).

Current electricity generation in California relies on a mix of energy technologies, including: natural gas (45.3%), hydroelectric (21.3%), nuclear (18.3%), other renewables (13.6%), and coal (1.6%). Based on nearly 200,000 GWh of net power generation in California in 2011, 47.9 million metric tons of CO_2 and 81,366 metric tons of NOx were emitted.[17]

Table 4
2011 CALIFORNIA ELECTRIC POWER INDUSTRY GENERATION

Energy Source	Total Generation 2011 (GWh)[1]
Natural Gas	90,919
Coal	3,120
Nuclear	36,666
Hydroelectric	42,731
Other Renewables[2]	27,200

[1]Source: California Energy Commission, Electric Generation Capacity & Energy: 2001 - 2011.
[2]Other Renewables include biomass, geothermal, photovoltaic energy, and wind.

The Project will help reduce the demand for fossil fuel-fired electricity, and since wind power generation has zero fuel cost, zero emissions and zero water use, it will displace harmful emissions. Over the next 20 years of the Project's accreditation period, the production of approximately 9,268 MWh of zero-carbon generation will help avoid the emission of more than 2.5 million metric tons of CO_2 into the atmosphere. The anticipated environmental outcomes

reporting, as well as annual reports, must be submitted to ensure that mitigation measures are implemented properly and in a timely manner. The mitigation measures presented in the environmental authorizations including monitoring programs developed by the project sponsor are summarized below.

Mitigation Activities in Mexico

Environmental mitigation activities required by SEMARNAT and the Baja California Ministry of Environmental Protection include the following:

- *Quality Assurance Program*. Implement a Quality Assurance Plan for all mitigation activities and submit an annual report to SEMARNAT.

- *Insurance Document*. Submit an insurance document for the performance of all the activities required by SEMARNAT for the wildlife species identified in NOM-059-SEMARNAT-2010, in order to comply with all terms and conditions established in the permit and with Articles 51 and 52 of the Federal Regulation for Environmental Impact Evaluations.

- *Flora and Fauna Protection and Rescue Plan, especially for species included in Mexican Standard NOM-059-SEMARNAT-2010*. Establish a plan to identify and generate methods for:
    - The recovery of these organisms, as well as to improve protective measures for wildlife and woodland areas.
    - The reforestation program must use a 3:1 ratio.
    - Forest vegetation outside the authorized area must not be affected by construction work related to the Project.
    - The hunting, trapping and trafficking of wildlife is prohibited, along with the trafficking of wild plants in and around the Project area.
    - Once Project activities are completed, a reforestation program with species native to the zone shall be carried out.
    - The plan will be evaluated on an annual basis to determine its effectiveness and make any necessary adjustments.

- *Evaluation of impacts to avian and bat species in the Project area, especially those included in the NOM-059-SEMARNAT-2010*. Conduct field studies to monitor bird and bat species and determine their density and flight patterns before initiating the Project and perform monitoring activities during construction and operation. The bird and bat monitoring activities consist of two phases: pre- and post-construction and operation. The pre-construction study has been concluded, and the report was issued in April 2013. The study identifies and characterizes migrating and resident avian and bat species in the Project area. It includes monitoring activities during certain intervals in 2009, 2011 and 2012-13. The second phase of the study will begin when construction activities commence, will continue through the first year of operations and will include subsequent activities as required by environmental regulations. The results will indicate if the mitigation measurements were effective or need to be improved.

- *Environmental Plan for the Construction, Operation and Maintenance Process*. Generate guidelines for minimizing and preventing unforeseen impacts during site preparation and construction, with special attention given to water bodies and the preservation of archaeological sites.

- *Disturbance Analysis*. Submit a disturbance analysis for all activities related to the Project with before and after comparisons, which will be evaluated by SEMARNAT and may require additional mitigation measurements, if applicable.

- *Fire Protection Plan*. Develop a plan to identify potential sources of fire, along with procedures to prevent and control fires. The use of fire and chemicals is prohibited for all stages of clearing and maintenance of the Project areas.

- *Waste Management*. The program mainly consists of establishing ways to reduce and control waste generation, as well as its temporary storage and transportation, and to prevent soil pollution.

- *Erosion and Sediment Control Plan.* Implement a soil protection program that includes soil conservation and erosion prevention. The plan must identify control measures, soil stabilization and restoration, and runoff controls.

- *Restoration Areas during the Operation and Maintenance Phase*. Develop a plan in conjunction with the landowners and the authorities to address required restoration.

- *Decommissioning Plan*. Develop a plan 180 days prior to Project abandonment. This plan could include details regarding: Disconnecting the power grid, removal of wind turbines and their components, demolition of buildings and warehouses, and rehabilitation of these areas with native vegetation.

- *Noise Level Evaluations*. Conduct evaluations on a yearly basis, in accordance with Mexican Standard NOM-081-SEMARNAT-1994.

Mitigation Activities in the United States

Environmental mitigation activities required by DOE and the County of San Diego include the following:

- *Worker Training*. ESJUS should engage a qualified biologist to provide training and area-specific information to contractor personnel to ensure that construction workers are aware of good business practices, such as:
    - Temporary and permanent habitat protection measures;
    - Worker rules of conduct (e.g., no pets in or adjacent to the construction area; avoid harm or harassment of wildlife; no firearms in or adjacent to the construction area except for security personnel);
    - Actions to take if previously unidentified sensitive resources are encountered; and
    - Points of contact for comments and questions about the material discussed in the program.

- *Wildlife Entrapment*. Open excavations should be covered at the end of each work day to prevent wildlife entrapment. Covers should be secured in place prior to workers leaving the site, and should be strong enough to prevent wildlife from breaching the cover and becoming entrapped.

- *Weed Control Plan*. ESJUS should prepare and implement a weed control plan that describes the weed control measures during the pre-construction, construction, and long-term operation phases

- *Groundwater Well Habitat Replacement*. Permanent impacts to native habitat at the groundwater well access road should be replaced in accordance with San Diego County guidelines (2010a). Desert saltbush scrub should be replaced at a 2:1 ratio, and southern cottonwood willow riparian forest habitat should be replaced at a ratio of 3:1.

- *Visual Mitigation Measures*. Implement efforts to reduce color contrast and views of land scars, as well as the visual contrast of towers and conductors.

- *Cultural Resources*. Provide worker training to contractor personnel to ensure that they are aware of the potential for archaeological discoveries.

- *Transportation and Traffic*. Consult with and inform U.S. Border Patrol and CAL FIRE.

- *Public Health and Safety*. A qualified environmental scientist should perform a characterization study of any identified contaminated sites to determine the nature and extent of the contamination.

- *Fire and Fuel Management*
  - Develop and implement a Construction Fire Prevention Plan;
  - Coordinate with emergency fire suppression activities; and
  - Remove hazards from work areas.

- *Air Quality and Climate Change*
  - Use low-emission construction equipment;
  - Minimize vehicle idling; and
  - Encourage carpooling.

- *Water Resources*. Use non-potable water for all Project-related requirements during construction.

- *Geology and Soils*. Widening or upgrading of existing access roads should be minimized to the extent practical in areas of acid igneous rock or rough broken land, which are very sensitive to disturbance and have a high erosion potential.

- *Services and Utilities*. ESJUS should coordinate with the U.S. Border Patrol and local law enforcement, and implement appropriate actions to prevent unauthorized use of the improved access road and ensure the security of the construction right-of-way.

Natural Resource Conservation

The Project will support natural resource conservation by improving air quality and reducing the demand for fossil fuels for energy production. The Project is anticipated to produce approximately 463.4 GWh of zero-carbon electricity in the first year of operation, which will help displace the atmospheric emissions generated by fossil-fuel-fired electrical plants since wind energy is generated without the emissions of CO_2 and NOx. In addition, clean technologies such as wind energy require no water for electricity production, whereas fossil-fuel-fired generation is generally water intensive.

No wind turbines will be installed in areas with archeological, cultural or sensitive natural resources identified in the MIA.

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 help 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

The potential for transboundary environmental negative impacts as a result of construction and operation of the Project were analyzed in the DOE's EIS and SEMARNAT's MIA authorization. Specific to special status species, the information available indicates that the potential for impact on biological resources within the U.S. as a result of operation of the ESJ wind project in Mexico is not significant. The wind turbines, including associated safety lighting, will be visible from several viewing points in the U.S. No other significant impacts are anticipated; however a beneficial effect related to air quality is expected 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.

Both IBWC and CILA issued authorizations for Project construction, subject to required set-backs and a clear line-of-sight allowance between the Project and any affected monuments.

Other Local Project Benefits

During construction, the Project is expected to generate approximately 350 direct jobs. During operations, the Project is expected to generate seven permanent, full-time jobs. The employment of construction personnel would provide a temporary, beneficial impact on local businesses and the regional economy through increased expenditure of wages for goods and services. Personnel for construction would be drawn from local populations to the extent feasible. A limited number of construction personnel may require temporary housing, likely in local hotels, and would purchase food, beverages, and other commodities, which would provide temporary benefits to the local economy.[18]

[18] Source: Final Environmental Impact Statement for the Energia Sierra Juarez U.S. Transmission Line, by U.S. Department of Energy & Cooperating Agency – County of San Diego, May 2012.

2.3. FINANCIAL CRITERIA

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 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 SDG&E for a term of 20 years. NADB loan will have no recourse beyond the Project Company, ENERGIA SIERRA JUAREZ S de R.L. de C.V. (ESJ).

NADB performed a financial analysis of the source of payment, SDG&E; the proposed payment structure; and the Projects' cash flow projections over the 25-year term of the PPAs. SDG&E's financial ratios indicate that it has maintained a sound financial position Currently, SDG&E is rated A/Stable by Fitch, A2/Stable by Moody's, and A/Stable by Standard & Poor's, which indicates 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 the senior loan, and d) comply with debt service coverage requirements.

In addition, NADB's analysis verified that ESJ has the legal authority to contract financing and pledge its revenue for the payment of financial obligations. ESJ also has the legal and financial capacity to operate and maintain the Project, and will contract the Project's O&M services with a firm with ample experience and expertise in these types of projects. NADB will verify 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$50 million to ESJ for the construction of the Project described herein.

3. PUBLIC ACCESS TO INFORMATION

3.1. PUBLIC CONSULTATION

BECC released the Draft Project Certification and Financing Proposal for a 30-day public comment period beginning October 10, 2013. The following Project documentation is available upon request:

- Environmental Impact Assessment (*Manifestación de Impacto Ambiental, Modalidad Regional*) prepared by Corporación Ambiental de México, S.A. de C.V., September 15, 2009.
- MIA resolution for the Energía Sierra Juárez wind farm, issued by SEMARNAT, Document S.G.P.A./DGIRA.DG.4751.10, July 15, 2010.
- Land Use Change Authorization issued by SEMARNAT (for areas in the project site classified as a forest), Official Letter No. DFBC/SGPA/UARRN/DSFS/2531/11, dated July 27, 2011.
- MIA resolution issued by the Baja California Ministry of Environmental Protection (*Secretaria de Protección al Ambiente de Baja California*), File number SPA-TIJ-0500/12 3.3.0190-MIA/11, February 15, 2012.
- Land Use Authorization issued by the Municipality of Tecate, Document Number 177/2012, April 7, 2012.
- Concurrence letter from the International Boundary and Water Commission (CILA), Mexican Section, for the construction of a transboundary transmission line, issued on March 26, 2013.
- Final Environmental Impact Statement for the Energia Sierra Juarez U.S. Transmission Line, by U.S. Department of Energy & Cooperating Agency – County of San Diego, May 2012.
- DOE Presidential Permit No. PP-334 for Energia Sierra Juarez U.S. Transmission, LLC, to construct, operate, maintain, and connect a double-circuit, 230,000-volt (230-kV) electric transmission line across the U.S.-Mexico border in eastern San Diego County, California; August 31, 2012.

The public comment period ended on November 9, 2013, with no comments received.

Project information continues to be available to community residents through the Project's webpage: "ENERGIA SIERRA JUAREZ TRANSMISSION LINE EIS", hosted on behalf of the DOE's Office of Electricity Delivery and Energy Reliability (http://esjprojecteis.org/index.htm). The information describes several Project components and includes:

- *About the Project*, which provides an abstract of the Project timeline and U.S. authorizations.

- *Document Library*, which contain links to U.S. permits, public comments, authorizations, studies, and transcripts of public meetings.
- *Schedule*, which describes NEPA's milestones.
- *Public Involvement*, which contains the dates of U.S. public hearings, EIS comments and links to obtain a copy of the final EIS, as well as a contact page to send questions about the EIS or NEPA processes regarding the Project.
- *Tribal Consultation*, which summarizes the Tribal Consultation efforts for this Project.
- *Other Resources*, which contains links to external resources (the DOE home page, permit documents, etc.).
- *Contact*, to receive updates and announcements regarding the Project via email or ask for more information.

3.2 OUTREACH ACTIVITIES

Outreach activities to provide access to Project information, as well as to invite public comments on the Project, were conducted by the Project Sponsor on both sides of the border. As part of the environmental clearance process in Mexico, the Sponsor published a summary of the Project in the newspapers, *El Mexicano,* on September 29, 2009, and in both *El Mexicano* and *El Pais* on October 20, 2009.

Additionally, the regional and central offices of SEMARNAT made the MIA document available for public consultation and held a public meeting to present the Project in the city of Tecate on November 12, 2009. A total of 127 participants and 16 speakers attended the meeting. During the meeting, 13 presentations from attendees supported the Project asserting that the wind farm will promote use of renewable energy and will generate benefits to their community. Three additional presentations expressed concern related to the environmental document, claiming that the study did not include a full description of the works and activities that would be required for the Project and thus the potential impacts were not fully anticipated. At the end of the meeting, SEMARNAT advised the attendees that the public comment period would conclude on November 20, 2009.

After the comment period ended, the Sponsor was responsible for reviewing and responding to the public comments received. On November 27, 2009, ESJ submitted responses to SEMARNAT, which are included in the final MIA document.[19] The MIA resolution indicates that, as a result of public comment, additional information and mitigation measures were required from the Sponsor to identify potential impacts of future phases.

Outreach activities for the infrastructure that will be installed in the U.S. also followed the requirements of the formal environmental clearance processes. The DOE published a Notice of

[19] Source: Authorization resolution of the Environmental Impact Manifest (MIA) for the Energía Sierra Juárez Mexico wind farm, issued by SEMARNAT Document S.G.P.A./DGIRA.DG.4751.10. July 15, 2010.

Intent to Prepare an Environmental Assessment and to Conduct Public Scoping Meetings. Additionally, on August 4 and 28, 2008, Baja Wind U.S. Transmission, LLC, held public scoping meetings in Jacumba, California, to solicit written and electronic comments on the scope of the Environmental Assessment. Based on the comments received, DOE determined that an EIS would be the appropriate NEPA document for the proposed presidential permit.

On October 5 and 6, 2010, DOE held two public meetings on the Draft EIS in Jacumba, as well as another public hearing in San Diego on October 7, 2010. In response, DOE received seven letters or emails from private citizens, government agencies and non-governmental organizations, including one letter from a Native American tribe (Quechan Tribe). Comments received were related to: visual impacts of industrial facilities in rural areas; avian mortality due to the transmission line and wind turbine construction and operation in Mexico; potential disturbance of buried archeological resources in the Project area and consideration of the broader cultural landscape; fire hazard; homeland security; and consideration of groundwater and land use impacts. The comments and DOE responses are identified as 401–1 through 401–17 in the Final EIS Comment and Response Document (Volume 3).

Due to the required environmental clearance processes for the Project, an extensive effort has been made to provide public access to information related to the Project and full consideration for public comments received during the environmental review processes has been incorporated into the Project findings and authorizations. In relation to these authorizations, formal claims have been filed in both countries and are pending court rulings. A brief summary of each claim is provided below.

- On December 26, 2012, two local organizations, Protect Our Communities Foundation and Backcountry Against Dumps, filed a complaint against DOE in U.S. federal court challenging the issuance of the Presidential Permit on various grounds, including alleged violations of the National Environmental Policy Act, the Endangered Species Act, the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. On April 11, 2013, DOE and the Sponsor filed a motion to dismiss the complaint. The motion is fully briefed and is pending with the Court.

- On November 28, 2011, Terra Peninsular A.C. (TP), a local organization, filed a complaint in Mexican federal court challenging the issuance of the MIA. The plaintiff alleges violation of the Ecological Balance and Environmental Protection Act (LGEEPA) and its regulations. On April 2, 2012, the court admitted the complaint. In June 2012, SEMARNAT and the Sponsor filed their responses to the claim, requesting dismissal of the suit due to failure to file within the established timeframe. The Court denied the petition for injunctive relief (suspension of effects) on March 1, 2013. The Court's ruling on the motion for dismissal is pending.

Finally, BECC conducted a media search to identify public opinion about the Project. References to the Project were found in articles on several Internet sites, including:

- Internet new La-Ch.com, "periodismo sin h muda" (January 5, 2010): "*Sempra quiere cheque en blanco*" (Sempra wants a blank check), which provides details about the public meeting held by SEMARNAT.

http://www.la-ch.com/index.php?option=com_content&view=article&id=2766:pide-sempra-un-cheque-en-blanco-para-su-planta-olica&catid=34:general&Itemid=53

- Ensenada.net (February 24, 2011): "*Evalúa Sempra si seguirá proyecto parque Eólico"* (Sempra evaluates whether wind farm project will continue) *http://ensenada.net/noticias/nota.php?id=19937*
- *Internet news enlineabc.com* (January 11, 2012): "*Proyectan parque eolico en Sierra de Juárez" (*Wind farm projected in Sierra de Juarez), describing the schedule for the Sustainable Development Council in Baja California, which includes revision of the Project.
- *La jornada/unam on line* (September 25, 2011): "*Soslaya Semarnat reclamos en BC por planta eólica de Sempra*" (SEMARNAT sidesteps claims in BC concenring the Sempra wind farm). *http://www.jornada.unam.mx/2011/09/25/sociedad/036n1soc*
- *El Mexicano, gran diario regional* (March 23, 2012): "*California comprará energía eólica a BC*" (California will buy wind energy from BC).
- *Proceso.com.mx* (January 18, 2013): "*Estados Unidos: Demanda en contra del parque eólico en La Rumorosa*" (USA: Lawsuit against wind farm in La Rumorosa), describing the Project and the litigation process in the U.S. (*http://www.proceso.com.mx/?p=331037).*

As reflected in the articles above, Project information has been made available to the general public, and both the Sponsor and the authorities have received comments and provided responses. The Project Sponsor has demonstrated willingness to address comments and continues to work to satisfy legal matters related to the formal authorization process. The Project Sponsor has followed all public consultation requirements in order to comply with applicable environmental clearance and permitting processes.