



CERTIFICATION AND FINANCING PROPOSAL

DON DIEGO SOLAR ENERGY PROJECT IN BENJAMÍN HILL, SONORA

Updated: October 17, 2019



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EXECUTIVE SUMMARY

DON DIEGO SOLAR ENERGY PROJECT IN BENJAMÍN HILL, SONORA

- Project:** The proposed project consists of the design, construction and operation of a 125 MW_{AC} solar park located in the municipality of Benjamín Hill, Sonora (the “Project”).¹ The electricity generated by the Project will be purchased by various subsidiaries of a Mexican retail company pursuant to a long-term power purchase agreement (PPA).
- Objective:** The Project will increase installed capacity of renewable energy resources, which will help reduce future demand on traditional fossil fuel-based energy production and thus displace the emission of greenhouse gases and other pollutants from power generation using fossil fuels.
- Expected Outcomes:** The estimated environmental and human health outcomes resulting from the installation of 125 MW_{AC} of new renewable energy generation capacity are:
- a) Generation of approximately 369.1 gigawatt-hours (GWh) of electricity during the first year of operation.²
 - b) Reduction of approximately 169,443 metric tons/year of carbon dioxide (CO₂), 506 metric tons/year of nitrogen oxides (NO_x), 1,340 metric tons/year of sulfur dioxide (SO₂), and 78 metric tons/year of PM₁₀.³
- Sponsor:** Infraestructura Energética Nova, S.A.B. de C.V. (IEnova).
- Borrower:** IEnova.
- NADB Loan Amount:** Up to US\$100 million.

¹ MW_{AC} stands for megawatts in alternating current.

² Source: Information provided by the Sponsor based on the expected P50 electricity production based on study provided by Burns & McDonnell Engineering Company Inc.

³ Source: NADBANK. CO₂, NO_x, SO₂ and PM₁₀ calculations are based on the potential emissions avoided as a result of reducing future demand on fossil fuel-based electricity through the use of solar energy equivalent to 369.1 GWh/year and the emission factors for the state of Sonora. The emission factors are calculated by NADB based on the power generation portfolio of the state of Sonora and the factors reported per technology in the Mexican National Power System Development Program (PRODESEN) 2018 (emission factors for cogeneration are not reported). The resulting emission factors are: 0.45909 metric tons/megawatt-hour (MWh) for CO₂; 0.00138 metric tons/MWh for NO_x, 0.00363 metric tons/MWh for SO₂ and 0.00022 metric tons/MWh for PM₁₀.

CERTIFICATION AND FINANCING PROPOSAL

DON DIEGO SOLAR ENERGY PROJECT IN BENJAMÍN HILL, SONORA

1. PROJECT OBJECTIVE AND EXPECTED OUTCOMES

The proposed project consists of the design, construction and operation of a 125 MW_{AC} solar park located in the municipality of Benjamín Hill, Sonora (the “Project”).⁴ The electricity produced by the Project will be purchased by various subsidiaries of the Mexican retail company Liverpool, pursuant to a long-term power purchase agreement, and by other large energy consumers. The purpose of the Project is to increase the installed capacity of renewable energy which will help reduce future demand on traditional fossil fuel-based energy production and displace the emission of greenhouse gases and other pollutants from power generation using fossil fuels. The Project is expected to generate approximately 369.1 gigawatt-hours (GWh) of electricity in the first year of operation. As a result, it will displace the emission of an estimated 169,443 metric tons/year of carbon dioxide (CO₂), 506 metric tons/year of nitrogen oxides (NO_x), 1,340 metric tons/year of sulfur dioxide (SO₂) and 78 metric tons/year of PM₁₀ from conventional fossil fuel-derived energy resources.

2. ELIGIBILITY

2.1. Project Type

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

2.2. Project Location

The Project will be developed in the northern region in the state of Sonora. The site of the solar park will be located in the municipality of Benjamín Hill, approximately 75 miles north of the city of Hermosillo and approximately 80 miles south of the U.S.-Mexico border, at the following coordinates: latitude: 30°09'10.90"N and longitude: 111°05'26.28"W. Figure 1 illustrates the geographical location of the solar park facilities.

⁴ MW_{AC} stands for megawatts in alternating current.

Figure 1
PROJECT LOCATION MAP



2.3. Project Sponsor and Legal Authority

The private-sector project sponsor and borrower is Infraestructura Energética Nova, S.A.B. de C.V. (IEnova or the “Sponsor”), which will use a special purpose company called Don Diego Solar, S.A.P.I. de C.V. (the “Project Company”) to implement the Project. Don Diego Solar is a Mexican based company established on October 14, 2013.

The generation permit for the proposed Project was grandfathered under the new Power Industry Law enacted in Mexico in 2014, as the Sponsor requested and obtained the permit prior to the deadline established in the law for grandfathering projects and notified the Mexican Energy Regulatory Commission (CRE) of its intention to continue with the Project in compliance with the established requirements.⁵ A power generation permit for the Project was issued by CRE in November 2014. An updated amendment to the power generation permit for the Project was issued by CRE in November 2018.⁶

⁵ According to the provisions for grandfathering projects, interested parties may establish a grandfathered interconnection agreement for a term of up to 20 years when the generation permit was assigned transmission capacity through an open application period organized by CRE prior to entry into force of the Power Industry Law and is in compliance with the required fees and guaranties.

⁶ Project developers are required to update power generation permits if the facility has not started operations by the date anticipated and/or the capacity has increased.

3. CERTIFICATION CRITERIA

3.1. Technical Criteria

3.1.1. General Community Profile

The Project will generate clean energy that will mainly be consumed in the municipality of Hermosillo. The electricity generated will be equivalent to the annual consumption of 53,159 households.⁷ The municipality will benefit from the creation of employment opportunities and additional income generation during the construction and operation of the Project. According to the Sponsor, the Project is expected to generate approximately up to 650 jobs during construction and ten on-site jobs during operation, plus various administrative positions.

According to the 2015 Mexican intercensal survey, the population of Sonora was 2,850,330, which represented 2.4% of the population of Mexico.⁸ Between the years 2010 and 2015, the population of Sonora grew 6.6%.⁹ The state of Sonora accounted for 3.5% of the gross domestic product (GDP) in 2016.¹⁰ According to the 2014 Economic Census, the main economic activities contributing to the total gross production of the state are: manufacturing (63.2%), mining (11.3%), wholesale trade (6.0%), retail trade (5.5%) and other sectors (14.0%).¹¹

According to the Mexican 2015 intercensal survey, the population of the municipality of Benjamín Hill was 5,233, which represented 0.18% of the population of the state of Sonora.¹² According to the 2014 Economic Census, the main economic activities contributing to the total gross production of the municipality are: retail trade (78.4%), manufacturing (8.4%) and other sectors (13.2%).¹³

Local Energy Profile

In 2014, the legal framework that governs Mexico's National Power System (SEN) underwent a major reform aimed at facilitating investments to consolidate diversification efforts, improve infrastructure and meet growing demand for electricity. Under the new Power Industry Law, the federal government retained control of planning activities and the transmission and distribution infrastructure through CENACE, a decentralized federal agency created by the government to operate the SEN. It is now operating the national grid with more than 936,967 kilometers (582,328 miles) of transmission and distribution lines previously operated by the Mexican Federal

⁷ Source: NADBANK. The estimation is based on 2,103.99 kilowatt-hours of electricity consumption per capita in 2017 according to the Mexican Energy Information System (<http://sie.energia.gob.mx/>) and 3.5 persons per household in the state of Sonora in 2015, as indicated by the Mexican National Institute of Statistics, INEGI.

⁸ Source: INEGI, 2015 Intercensal Survey (<http://www.beta.inegi.org.mx/temas/estructura/>).

⁹ Source: INEGI, *Publicaciones* [Publications], <https://www.inegi.org.mx/app/biblioteca/ficha.html?upc=702825002042>.

¹⁰ Source: INEGI, *México en cifras* (Mexico by the Numbers), <http://cuentame.inegi.org.mx/monografias/informacion/son/economia/pib.aspx?tema=me&e=26>

¹¹ Source: INEGI, 2014 Economic Census (<http://www.beta.inegi.org.mx/app/saic/>).

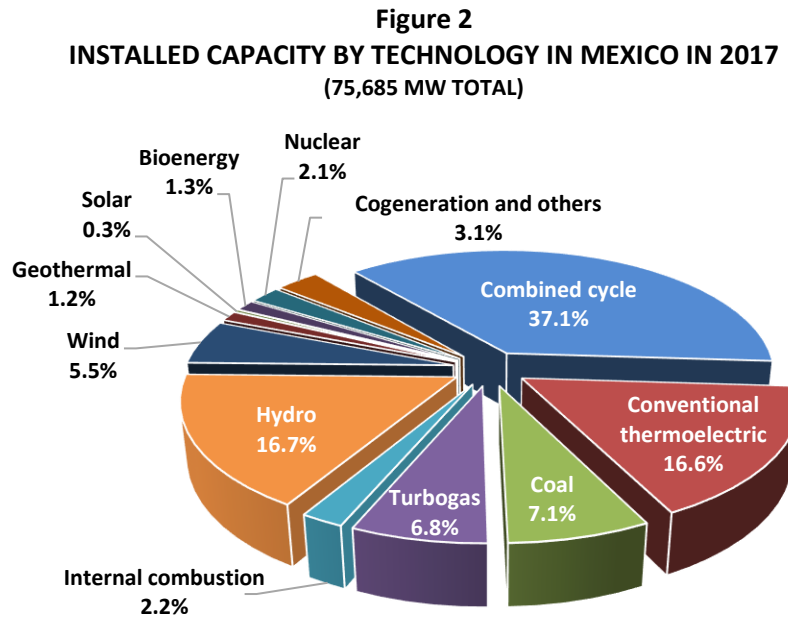
¹² Source: INEGI, 2015 Intercensal Survey (<http://cuentame.inegi.org.mx/monografias/informacion/son/poblacion/>).

¹³ Source: INEGI, 2014 Economic Census (<http://www.beta.inegi.org.mx/app/saic/>).

Electricity Commission (CFE).¹⁴ Under the reform, CFE became a federally-owned for-profit enterprise. CRE, which was created to regulate activities related to private investment in the power and natural gas sector, continues to be responsible for issuing permits to private entities for power generation and the transportation of natural gas.

In 2015, Mexico enacted the Energy Transition Law to regulate the sustainable use of energy and obligations regarding clean energy and the reduction of pollution from the power industry, while preserving the competitiveness of the productive sectors. In line with this new law, the General Law of Climate Change was amended in 2015. Both laws specify, among other provisions, that the Mexican Ministry of Energy (SENER), in coordination with CFE and CRE, must increase the use of clean technologies in power generation to at least 35% by 2024.

Since 1994, Mexico has undertaken efforts to increase the use of non-fossil fuel technologies in power generation. Its energy portfolio currently includes combined-cycle, thermoelectric, geothermal, hydroelectric, coal-fired, solar photovoltaic, wind, turbogas, internal combustion, cogeneration and nuclear power plants. As reported in the 2018-2032 National Power System Development Program (PRODESEN), in 2017, there was 75,685 MW of installed capacity in the SEN, which represents an increase of 3.0% compared to 2016 (73,510 MW). Figure 2 shows the breakdown of installed capacity by technology.

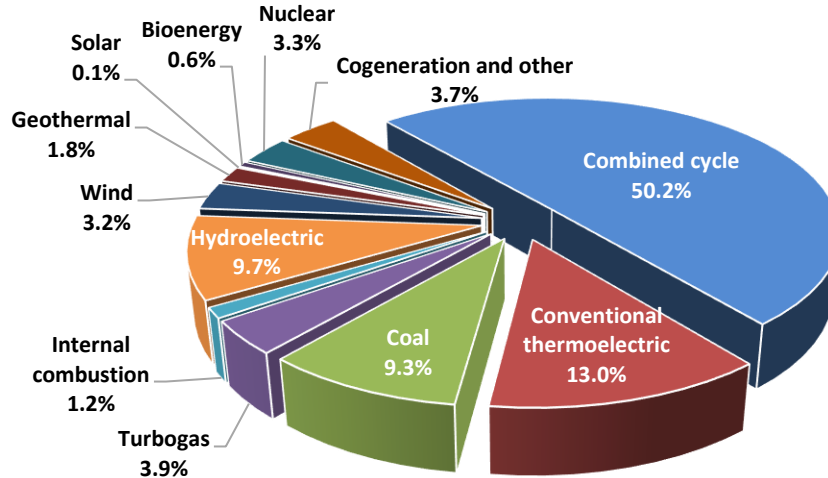


Source: SENER, PRODESEN 2018-2032

During 2017, the National Power System in Mexico generated 329,162 GWh of electricity from all energy sources, which represents an increase of 3.1% compared to the electricity produced in 2016 (319,364 GWh). Figure 3 shows the participation of each technology in Mexican power generation.

¹⁴ Source: SENER, 2018-2032 National Power System Development Program (PRODESEN).

Figure 3
NATIONAL POWER GENERATION BY TECHNOLOGY IN 2017
 (319,364 GWh TOTAL)



Source: SENER, PRODESEN, 2018-2032

For planning purposes, the Mexican power grid is divided into nine control zones, seven of which are interconnected and form the National Interconnected System (SIN). The remaining two zones are independent supply networks serving the areas of Baja California and Baja California Sur. The Project will be located in the Northwest Zone (No. 4), which includes the states of Sonora and Sinaloa as illustrated in Figure 4.

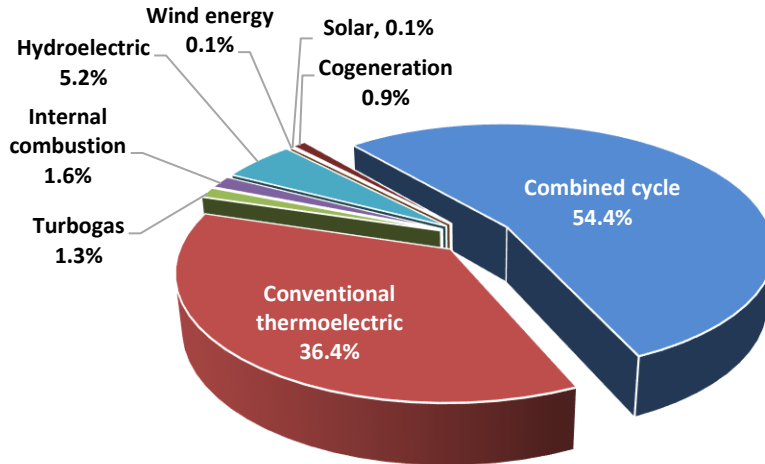
Figure 4
MEXICAN ELECTRIC SYSTEM ZONES



Source: SENER, PRODESEN, 2018-2032

According to SENER, the installed capacity in Sonora was 3,167 MW and generated 17,279 GWh of electricity in 2017. Figure 5 shows the technologies used for electricity generation in the state.

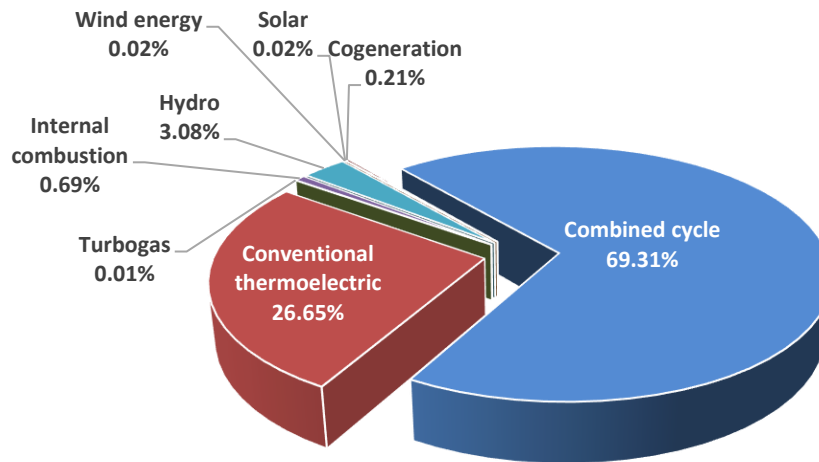
Figure 5
INSTALLED CAPACITY BY TECHNOLOGY IN SONORA IN 2017
 (3,167 MW TOTAL)



Source: Based on PRODESEN 2018-2032

Figure 6 shows the breakdown of power generation by technology in the state of Sonora for public service.

Figure 6
POWER GENERATION BY TECHNOLOGY IN SONORA IN 2017
 (17,279 GWh TOTAL)



Source: Based on PRODESEN, 2018-2032

PRODESEN 2018-2032 includes an Expansion and Decommissioning Program, which entails a net addition of 4,852 MW of capacity to the existing system in Sonora over the next 15 years to achieve a gross capacity of 6,861 MW by 2032. The proposed Project will contribute 1.8% towards achieving this goal.

At the state level, the 2016-2021 Sonora Development Plan (SDP) contains four objectives for supporting areas of strategic development in the state, including energy and environmental objectives to promote sustainable economic development. The SDP includes strategies to support long-term investments in renewable energy projects (including solar, wind, geothermal, hydroelectric and biomass) in the state in order to help reduce harmful emissions from the operation of other fossil-fuel based power plants.

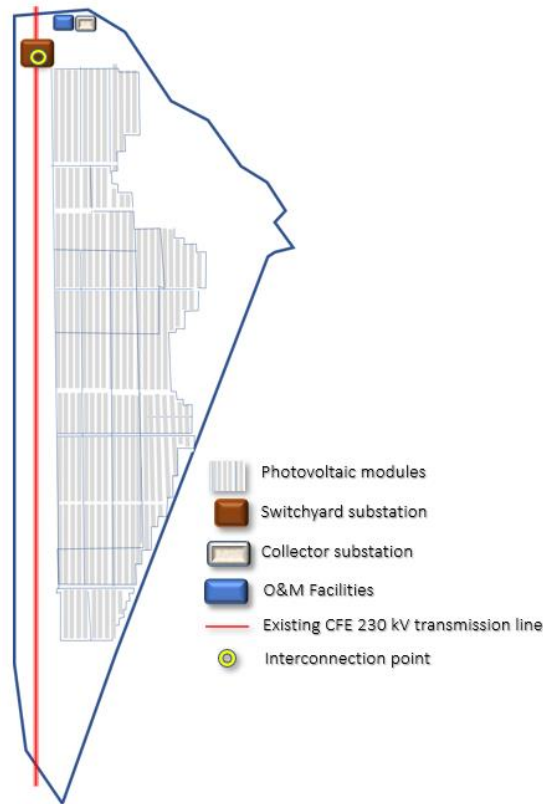
3.1.2. Project Scope

The Project consists of the design, construction and operation of a 125-MW_{AC} solar park and includes the following components:

- ***Modules:*** Approximately 440,000 photovoltaic modules will be installed and mounted on single-axis tracking arrays. The parallel arrays will be spaced apart to minimize inter-row shading by the sun. The panel providers will be selected from a short list of top-tier global providers.
- ***Inverters:*** A total of 42 inverters will be installed to transform direct current from the modules into alternating current.
- ***Interconnection:*** One 34.5/230-kV substation will be constructed to collect the energy through underground lines. The collector substation will step up the energy to 230 kV and deliver it to the switchyard substation through a new overhead transmission line extending 0.2 km (656 ft.) within the Project site. The Project will be interconnected to the national grid through an existing 230-kV transmission line operated by CFE and located within the Project site.
- ***Monitoring and Control System:*** A SCADA system will be used to monitor, operate and track the plant remotely, as well as document the performance of the PV system relative to its predicted output.
- ***Roads:*** Access roads will be constructed to allow the delivery and installation of the components, machinery, equipment and materials required for the modules, collector and switchyard substations, as well as for operation and maintenance of the facilities. The roads will be designed for low-volume traffic.
- ***Operation and Maintenance (O&M) Facilities:*** A permanent O&M facility will be built with administrative space, as well as for the maintenance and storage of equipment during construction and operation.

Figure 7 shows the Project Layout, as well as the location of the project substation, transmission line and collector & interconnection substations.

Figure 7
PROJECT LAYOUT



3.1.3 Technical Feasibility

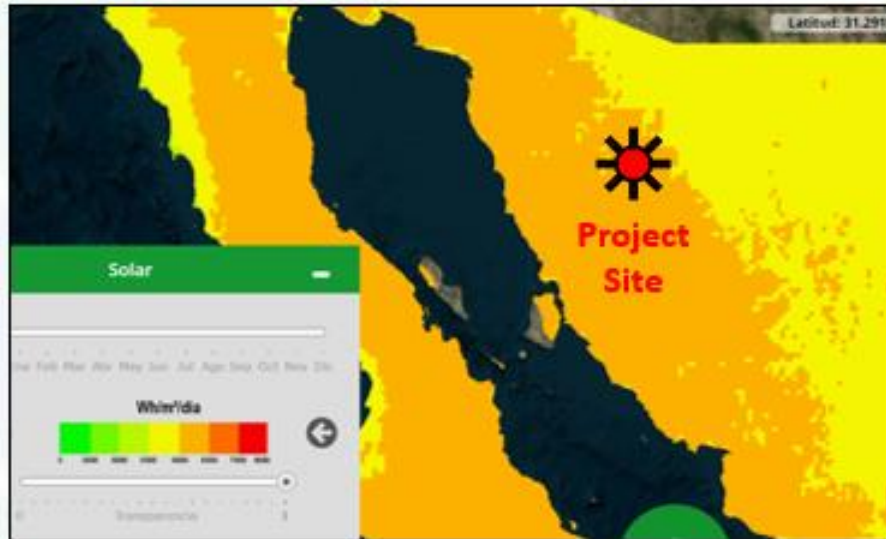
The Sponsor has evaluated solar modules from different suppliers in order to select the equipment best suited to the characteristics of the Project site and solar resource. The process for technology evaluation considers elements such as technical performance, commercial offering and warranties.

Solar Resource Assessment

The Project is located in the state of Sonora. According to SENER, average annual global horizontal irradiation in the Project area ranges from 6,000 to 6,500 watt-hours per square meter a day (see Figure 8).¹⁵

¹⁵ Source: SENER, National Renewable Energy Inventory, <https://dgel.energia.gob.mx/inel/mapa.html?lang=es>.

Figure 8
SOLAR RESOURCE POTENTIAL



Source: SENER, National Clean Energy Inventory.

To assess available solar resources in the Project area, meteorological information from available and reliable sources has been reviewed. The data available for the region, such as global and diffuse solar radiation, temperature, cloud index, etc., have been incorporated into a solar resource analysis. Based on the preliminary results, it is estimated that the Project will produce an average of 369.1 GWh/year of electricity at P50 generation.

3.1.4. Land Acquisition and Right-of-Way Requirements

The Project will be developed on 498.72 hectares (1,232.36 acres) of privately-owned land, which has been secured through lease agreements for the solar park. The land is mainly covered by desert scrub, and some areas are used for livestock grazing. Federal authorization to change the land use for the solar park is required from the Ministry of Environment and Natural Resources (SEMARNAT). Of the land leased for the Project, 373.82 hectares (923.73 acres) will be affected, of 106.73 hectares (263.74 acres) are classified as undisturbed land. The CFE transmission line occupies 12.70 hectares (31.38 acres) of the land. In this case, the environmental regulations establish that a fee must be paid to the Mexican Forest Fund as part of the authorization process. The technical study justifying the land use change requires the Sponsor to submit project information as close as possible to the final design. The Sponsor submitted a formal request to SEMARNAT for the land use change of 380 hectares (939 acres) for the solar park on May 31, 2018 and obtained the corresponding clearance from SEMARNAT on March 14, 2019. The Sponsor will submit an additional request to SEMARNAT for the land use change of approximately 20 hectares (49 acres) that will be used for access roads.

A construction permit from the Municipality of Benjamín Hill has been obtained.

3.1.5. Project Milestones

Preliminary construction works have already started and Commercial Operation Date (COD) will be no later than the fourth quarter of 2019. Table 1 presents the status of key milestones for Project implementation.

Table 1
PROJECT MILESTONES

Permits	Status
Land lease agreements for the solar park	Completed August 2017
CRE authorization for energy generation	Completed November 2014
Amended CRE authorization for energy generation	Completed November 2018
Interconnection agreement	Completed July 2016
Amended Interconnection agreement	Completed February 2019
Archeological clearance for the solar park from the National Institute of Anthropology and History (INAH)	Completed July 2015
SEMARNAT environmental authorization (MIA resolution)	Completed March 2014
SEMARNAT environmental authorization amendment (amended MIA resolution)	Completed September 2018
Land use change authorization from SEMARNAT for solar park	Completed March 2019
Land use change authorization from SEMARNAT for access roads	In process
Authorization of the social impact study from SENER	Completed September 2016

NADB 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.

3.1.6. Management and Operation

IEnova is the first privately-held energy infrastructure company publicly-traded on the Mexican Stock Exchange and one of the largest private-sector energy companies in Mexico in terms of market share. The company develops, builds and operates energy infrastructure. Its activities in Mexico include several lines of business that cover a significant portion of the energy infrastructure value chain that is open to private investment in Mexico.¹⁶ Its assets are divided between two business segments: (i) natural gas, which includes more than 2,900 km (1,800 miles) of pipeline and (ii) electricity, which includes power generation from wind facilities (407 MW), and natural gas-fired plants (625 MW). IEnova is also entering the midstream segment of refined products and solar power generation.¹⁷

¹⁶ Source: International Finance Corporation, <https://www.ifc.org/>.

¹⁷ Source: IEnova webpage <http://www.ienova.com.mx/>

The Sponsor will be responsible for operation and maintenance (O&M) of the solar park. O&M activities include industry standard tasks, remote monitoring, reporting and recordkeeping. The proposed Project will be designed to operate with minimal human intervention. O&M tasks will be performed to optimize the operating times of the system, reduce repair costs and extend the life of the equipment.

3.2. Environmental Criteria

3.2.1. Environmental and Health Effects/Impacts

A. Existing Conditions

Historically, Mexico has depended to a great extent on fossil fuels for the generation of energy. This conventional method of energy generation can affect the natural environment due to harmful emissions related to the generation process, including greenhouse gases (GHG) and other pollutants, such as sulfur dioxide (SO₂) and nitrogen oxides (NO_x). Consequently, there is a need for affordable and environmentally beneficial alternatives to conventional hydrocarbon-based energy sources.

In 2015, the largest source of carbon dioxide equivalent (CO₂e) emissions in Mexico was the energy sector, generating 480.8 million metric tons and representing 70.4% of total emissions (683 million metric tons).¹⁸ The main sources of CO₂e emissions in the energy sector include petroleum and gas, power generation, manufacturing, transportation and fugitive emissions. CO₂e emissions grew at an average annual rate of 1.9% between 1990 and 2015. Power generation accounted for approximately 24.1% of CO₂e emissions (164 million metric tons).¹⁹

In order to support its international commitments to combat climate change under the United Nations Framework Convention on Climate Change (UNFCCC), Mexico has developed strategies to reduce GHG and to transition to a low-carbon economy.²⁰ Mexico prepared its Intended Nationally Determined Contribution (INDC) based on its legal climate change framework, which includes the General Law of Climate Change and the National Climate Change Strategy, Vision 10-20-40. Its INDC target is consistent with the goal of reducing GHG emissions by 50%, compared to 2000 levels, by 2050. According to the INDC goals, Mexico is committed to reducing total CO₂e emissions by 211 million metric tons (22% lower than 2000 levels) by 2030 through unconditional measures.²¹ The reduction of emissions from power generation is estimated at 31% (equivalent

¹⁸ The energy sector includes fossil-fuel burning activities, such as transportation and power generation.

¹⁹ Source: SEMARNAT, National Institute of Ecology and Climate Change, *Sexta Comunicación Nacional y Segundo Informe Bienal de Actualización ante la Convención Marco de las Naciones Unidas sobre el Cambio Climático*, [Sixth National Communication and Second Biennial Update to the United Nations Framework Convention on Climate Change], 2018 (<http://cambioclimatico.gob.mx:8080/xmlui/handle/publicaciones/117>).

²⁰ Source: SEMARNAT. National Climate Change Strategy, Vision 10-20-40, 2013

²¹ INDC includes a set of mitigation measures that Mexico will implement with its own resources (unconditional measures) and/or through international cooperation (conditional measures).

<https://www.gob.mx/inecc/acciones-y-programas/contribuciones-previstas-y-determinadas-a-nivel-nacional-indc-para-mitigacion-80048>

to 63 million metric tons of CO₂e). In support of these efforts, Mexico has enacted legislation aimed at increasing the use of clean technologies in power generation to at least 35% by 2024 and reduce dependence on fossil-fuel based power plants. This Project will support both of those goals.

B Project Impacts

Renewable energy projects create an opportunity to generate electricity by using sources that do not produce GHG and criteria pollutants (SO₂, NO_x, etc.) like those released by fossil-fuel-based plants. Sunlight is a source of renewable energy, which means that it can be produced without depleting natural resources. It is a clean form of renewable energy as it does not produce waste byproducts that require disposal, nor gas emissions that contribute to air pollution and, therefore, provides an opportunity to displace the emission of GHG and other pollutants produced by traditional hydrocarbon-based energy generation, while providing local residents with a safe and reliable energy alternative. Moreover, solar energy production does not consume or pollute water, although minimal amounts may be used for maintenance purposes. Solar energy is currently used in many developed and developing nations to meet their demand for electricity.

The Project will reduce the demand for electricity generated by fossil fuel-based power plants, and since solar-based power generation implies zero emissions, it will displace related harmful emissions. The anticipated environmental outcomes from the installation of 125 MW_{AC} of new renewable energy generation capacity (or approximately 369.1 GWh) include the displacement of an estimated 169,443 metric tons/year CO₂, 506 metric tons/year of NO_x, 1,340 metric tons/year of SO₂ and 78 metric tons/year of PM₁₀.²²

Additionally, the Project will aid in addressing the larger environmental concerns related to greenhouse gases and global warming targeted by the Sonora State agenda and will be consistent with 2016-2021 State Development Plan published on December 12, 2015.

C. Transboundary Impacts

No transboundary impacts are anticipated as a result of the development of the Project.

3.2.2. Compliance with Applicable Environmental Laws and Regulations

A. Environmental Clearance

In accordance with the environmental impact regulations established under the General Law of Ecological Equilibrium and Environmental Protection, the Sponsor prepared and submitted the following environmental documents:

²² Source: NADBANK. CO₂, NO_x, SO₂ and PM₁₀ calculations are based on the potential emissions avoided as a result of reducing future demand on fossil fuel-based electricity through the use of solar energy equivalent to 369.1 GWh/year and the emission factors for the state of Sonora. The emission factors are calculated by NADB based on the power generation portfolio of the state of Sonora and the factors reported per technology in the Mexican National Power System Development Program (PRODESEN) 2018 (emission factors for cogeneration are not reported). The resulting emission factors are: 0.45909 metric tons/megawatt-hour (MWh) for CO₂; 0.00138 metric tons/MWh for NO_x, 0.00363 metric tons/MWh for SO₂ and 0.00022 metric tons/MWh for PM₁₀.

- Environmental Impact Assessment (MIA) for the construction of the San Fernando solar park with a capacity of 125 MW_{AC} and related infrastructure, which was submitted to SEMARNAT on December 13, 2013;
- Amended MIA to include sun trackers and change the name to Don Diego Solar Park, which was submitted to SEMARNAT on August 7, 2018; and
- Land use change application for a 125-MW_{AC} solar park, which was submitted to SEMARNAT on June 8, 2018.

The MIA identifies, describes and evaluates the potential environmental impacts associated with the Project—such as soil erosion and contamination, waste production, removal or loss of vegetation, site hydrology and impacts to wildlife—and includes the proposed mitigation measures to prevent or minimize any negative effect or impacts.

On March 24, 2014, SEMARNAT issued MIA Resolution No. DS-SG-UGA-IA-0190-2014, authorizing the construction of a 125-MW_{AC} solar park and related infrastructure. In compliance with the MIA resolution, the Sponsor must implement the mitigation measures proposed in the MIA, which are described in Section 3.2.2.B below, as well as obtain the required forest land use change permit.

On September 21, 2018, SEMARNAT issued Resolution No. DS-SG-UGA-IA-0530-18, authorizing the amended MIA, which included the installation of sun trackers and the change in the name of the solar park. In compliance with the MIA resolution, the Sponsor must implement the mitigation measures indicated in the original resolution.

On March 14, 2019, SEMARNAT authorized the land use change for 373.82 hectares (923.7 acres) of the Don Diego Solar Park in Benjamín Hill, Sonora.

The National Institute of Anthropology and History (INAH) issued Archeological Clearance No. 401.F(4)19.2015/CIS-563 for the solar park in July 2015. No archeological nor historical elements were found within the Project area.

B. Mitigation Measures

Some environmental impacts are anticipated as a result of Project implementation. The Sponsor has proposed mitigation measures that are intended to reduce, mitigate and control the environmental effects resulting from Project activities. To ensure that mitigation measures are implemented properly and in a timely manner, the Sponsor will also develop the Flora and Fauna Program described in the Project MIA.

The following mitigation measures included in the MIA and its resolution will be implemented:

- Flora
 - Vegetation removed from the Project area will be properly transported to a final disposal site authorized by the Municipality.

- A Soil Management and Restoration Plan will be implemented, which will include measures for soil conservation and/or erosion control.
- The use of herbicides and fire to remove vegetation, which may contaminate ecosystem and water resources, is prohibited.
- A Flora Rescue Plan has been developed by the Sponsor to protect native species and those protected under Mexican standard NOM-059-SEMARNAT-2010.²³ Protective actions will be taken to ensure no species are harmed during any phase of the Project.
- Fauna
 - Prior to land clearing activities, the Sponsor will verify the existence of any fauna protected under Mexican NOM-059-SEMARNAT-2010. The Sponsor prepared a Fauna Rescue Plan to rescue and relocate the specimens to a similar site with the concurrence of the environmental authorities.
 - Activities to identify, rescue and relocate wildlife will be carried out.
 - Wildlife hunting, trapping and trafficking is prohibited.
- Noise
 - The Sponsor will monitor noise levels in accordance with Mexican Standard NOM-081-SEMARNAT-1994.²⁴
 - To minimize noise, all vehicles and machinery will be properly maintained and receive regular tune-ups.
- Air quality
 - Construction materials and waste transported by heavy vehicles will be covered.
 - Access roads will be watered to reduce dust.
 - To minimize emissions produced by internal combustion motors, all vehicles and machinery will be properly maintained and receive regular tune-ups.
- Water resources
 - A drainage system will be implemented to prevent flooding and to maintain the natural flow of surface currents.
 - Portable toilets will be used to dispose of wastewater during the construction phase. A septic tank will be used to dispose of wastewater during the operation phase.

²³ Federal Standard NOM-059-SEMARNAT-2010 identifies and lists endangered species or clusters of wildlife in Mexico and establishes the criteria for inclusion, exclusion or change in risk status for different species based on a method for assessing the risk of extinction.

²⁴ Mexican Federal Standard NOM-081-SEMARNAT-1994 establishes the maximum levels of noise from stationary sources and noise measuring methods.

- *Hazardous waste*: Oils, fuels, and other pollutants will be placed in closed containers in a secure area during all stages of Project construction and operation, and their disposal shall be in accordance with the General Law for the Prevention and Integral Management of Waste and Mexican Standard NOM-052-SEMARNAT-2005.²⁵
- *Solid waste*
 - Procedures will be implemented for the separation, storage, collection and use or disposal of the different types of waste generated during the different stages of the Project in accordance with applicable regulations.
 - Solid waste will be handled and transported to an authorized final disposal site in accordance with the General Law for Comprehensive Waste Management and Prevention and its regulations.

C. Pending Environmental Tasks and Authorizations

The following environmental authorization is pending:

- Land use change authorization from SEMARNAT required for the access roads (approximately 20 hectares).

3.3. Financial Criteria

The Project Sponsor will finance the construction of the Project with a corporate loan from NADB and other multilateral financial institutions, including the International Finance Corporation. NADB's share in the loan will be for up to US\$100 million. The proposed payment mechanism is standard for similar corporate loans.

NADB performed a preliminary financial analysis of IEnova. Its financial ratios support its investment grade ratings: BBB+ from Fitch, BBB from S&P and Baa1 from Moodys. Its strong financial performance provides assurance that IEnova will have sufficient resources to meet its financial obligations under the proposed loan.

Considering the characteristics of the Project and based on a preliminary financial and risk assessment, the proposed Project is considered to be financially feasible and presents an acceptable level of risk. Therefore, NADB has begun processing the loan request for up to US\$100.0 million, to be presented for consideration by its Board of Directors. If approved, the NADB loan would be contracted by IEnova for the construction of the Project.

²⁵ Mexican Federal Standard NOM-052-SEMARNAT-2005 establishes the characteristics, identification procedures and classification of hazardous solid waste, as well as a list of such materials.

4. PUBLIC ACCESS TO INFORMATION

4.1. Public Consultation

NADB published the draft certification and financing proposal for a 30-day public comment period beginning on April 18, 2019. The following Project documentation is available upon request:

- Amended Environmental Impact Assessment (MIA) for the Don Diego Solar Park, dated August 7, 2018;
- MIA Resolution DS-SG-UGA-IA-0190-2014 for the solar park issued by SEMARNAT on March 24, 2014;
- MIA Resolution DS-SG-UGA-IA-0530-18 for the updated technology and name change to Don Diego Solar Park issued by SEMARNAT on September 21, 2018;
- Archeological clearance No. 401.F(4)19.2015/CIS-563 issued by INAH in July 2015.

The public comment period ended on May 18, 2019, with no comments received.

4.2. Outreach Activities

Under the Mexican Power Industry Law, anyone interested in obtaining a permit or authorization to develop projects in the energy sector must present a Social Impact Assessment (SIA) to SENER. In accordance with the guidelines and methodologies established by SENER, the study must identify the communities and towns in the area of influence of a project, as well as identify, characterize, predict and assess its possible consequences for the population, along with mitigation measures and plans for managing the social aspects of the project, including: a Social Management Plan (SMP), Social Investment Plan (SIP), Monitoring and Evaluation Plan, Communication Strategy and Community Involvement Plan, social baseline, and stakeholder analysis. The evaluation also requires that indigenous communities or groups be identified in the area of influence of the project to determine if they need to be consulted. Although grandfathered projects are not required to provide a SIA, as a good business practice, the Sponsor performed a SIA through a consulting firm and submitted it to SENER for review on September 18, 2015.

Based on the assessment, the potential impacts of the Project are minor, site-specific and mainly related to site preparation in the context of the land use change and to the generation of solid waste and wastewater and occupational risks during construction and operation. These potential impacts will be addressed through mitigation measures and proper management. In addition, small communities were identified in the area of influence of the Project. The communities were consulted about the development of the Project, and they provided proposals to be included in the Social Management Plan, which will be used to implement the proposed prevention, mitigation and compensation measures. SENER issued SIA Resolution No. DGAEISyCP.389/16 on September 30, 2016.

As part of the environmental authorization process, on January 9, 2014, SEMARNAT published the request for environmental authorization of the Project in its weekly publication (*Gaceta Ecológica*), which provides information about the projects under evaluation. The ruling did not report any public comments received. Additionally, on December 10, 2013, the Sponsor published an extract of the MIA under review by SEMARNAT in the newspaper *Expreso de Sonora*.

NADB also conducted a media search to identify potential public opinion about the Project. References to the Project were found on the websites listed below:

- *El Economista* (February 28, 2018) – “IEnova invertirá 130 millones de dólares para dar energía solar a Liverpool” (IEnova will invest 130 md to provide solar energy to Liverpool), <https://www.eleconomista.com.mx/empresas/IEnova-invertira-130-millones-de-dolares-para-dar-energia-solar-a-Liverpool-20180228-0113.html>
- *Lexlatin* (March 11, 2018) – “IEnova compra a Fistera Energy planta fotovoltaica” (IEnova buys solar park from Fistera Energy), <https://lexlatin.com/noticias/IEnova-compra-fistera-energy-planta-fotovoltaica>

In summary, these publications highlighted the scope of the Project. Opposition to the Project was not detected from the available media coverage. The Project Sponsor has followed all public consultation requirements in order to comply with applicable environmental clearance and permitting processes.