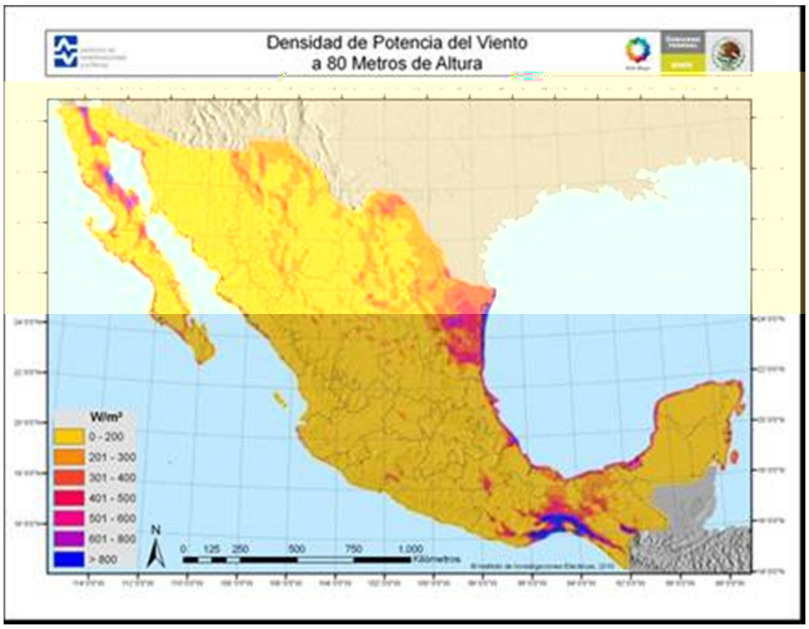
El Porvenir Wind Project, Reynosa, Tamaulipas, México

Clean and efficient energy

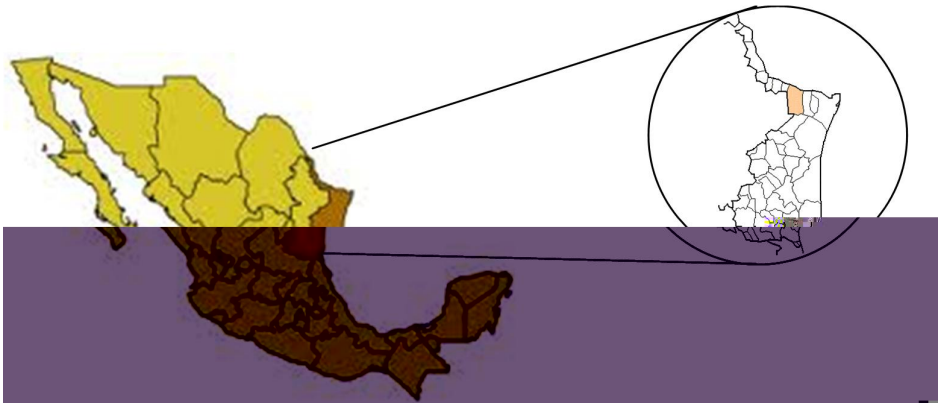
Private-sector environmental infrastructure project

Reynosa, Tamaulipas

The Municipality of Reynosa is located in northern Tamaulipas and is part of sub-region 2. The seat of the municipality is the City of Reynosa, located at latitude 26º05' N and longitude 98º18' W, 38 meters above sea level. It borders the United States of America to the North, along the Rio Grande, and the Municipalities of Mendez to the South, Rio Bravo to the East, and Diaz Ordaz and the State of Nuevo Leon to the West. It covers a surface area of 3,156.34 square kilometers, which represents 3.7 percent of the Stateôs total area.



The project site is located approximately 15 kilometers south of the U.S.-Mexico border.



608,891 (Municipality of Reynosa, 2010)

3% (2005-2010 estimate by CONAPO)

Agriculture (two planting and harvesting cycles per year); livestock (primarily cattle and some fine horses); industry, mostly the petroleum industry and *maquiladoras,* as well as the service sector.

9,757

212,686

3.63 persons per household

Reference: 2010 Population and Housing Census, Results per Community, INEGI, 2010.

In 2009, primary energy production in Mexico amounted to 9,852.9 petajoules (PJ). Fossil fuels continued to be the main source of energy produced by the country, with a contribution of 90.5%. The energy produced from renewable sources accounted for 6.2%, nuclear power provided 1.1%, and mineral coal 2.2%.

Source: Mexico's Secretariat of Energy

Fossil fuels were followed in importance by the production of renewable energy, which contributed 6.2% of all the primary energy. From these sources of energy, 42.9% was wood, with a 3.8 percent increase compared to 2008. Geoenergy, with a 25.6% contribution to the proe( )3614 0 0 1 0 0 10.3772 772 234 42 371.048202(5)13.5 sh538(6)13.9owed a 1.3202(5)13.58074.2795(p)-9.58202(er)-10.5359(cen)44.5565(t)-23.1 the 6renewab le energy p( )3614 0 roe( )3614 0 0 -9.58202(c)27.0693(ti4 42 371.048236 su( )3614 0 gar ca ne bagasse .3772 772 ontributed 14.6%, maintaining a share very similar to 2008. Solar and wine( )3614 0 wer p contributed 1.32-9.58202(%)-561.56(to)36.7898( )-560.699(th)13.627(e)27.0693 energies, increasing their participation by 0.3213.5808( )-398.559(p( )3614 0 e)27.069 respe.3772 772 2 to the p( )3614 0 year evio

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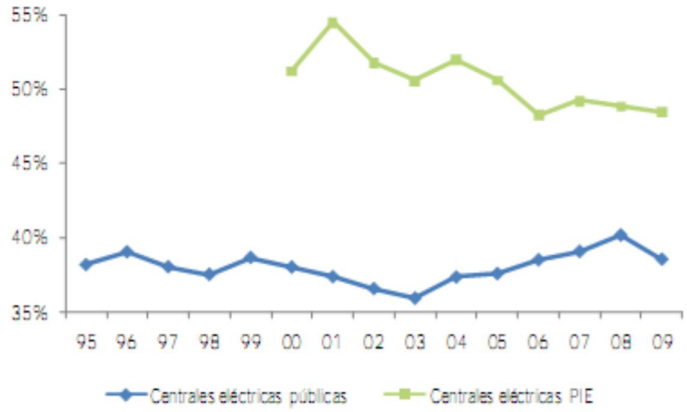


Source: Mexico's Secretariat of Energy

This project will increase the amount of energy obtained from renewable sources in Mexicoôs national grid, promoting renewable capacity growth and diversifying the mix of power generation sources, and making a significant contribution to sustainable development in the region. This represents a key solution, because the current mix of power generation sources in Mexico is primarily dependent on fossil fuels. The wind project is expected to have an estimated life of 25 years[1].

CETSA

CETSAôs Manager

Mexican partnership registered in the Public Registry of Commerce.

2008

Not in conflict with any international treaty or agreement.

The purpose of this project is the construction and implementation of a wind farm that will produce electrical power using state-of-the-art wind turbines selected to achieve high efficiency and maximum use of available resources. The

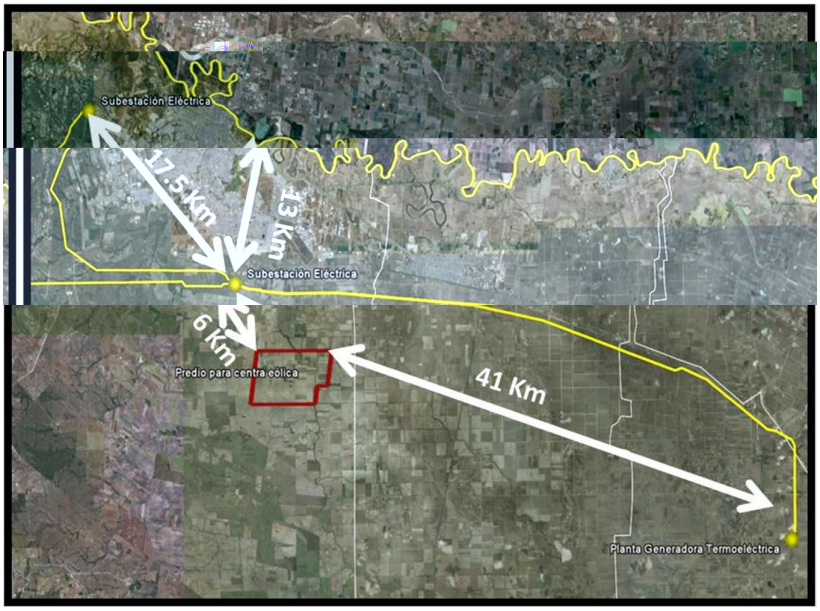
[1] Clean Development Mechanism Project Design Document (CDM-PDD); El Porvenir I Wind Farm. Document Version: 0. Date: 29/04/2010.
http://cdm.unfccc.int/Projects/Validation/DB/96DF8D0P6VW8APVGAJTSN1PNRUSS5K/view.html

energy generated will be sold and used in its entirety by an end user/partner for a period of 15 years. The project will have an installed capacity of 54 MW and will generate approximately 156.4 GWh[2] of electricity annually.

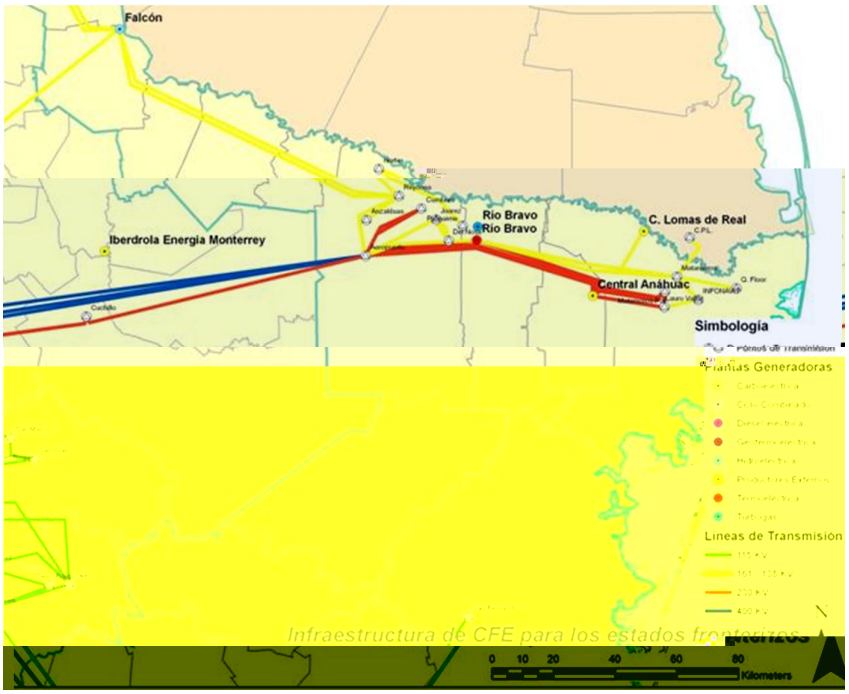
The project will be enlarged by the construction of a second phase of 72 MW.

608,891 residents of the Reynosa municipality

The site is approximately 6 km from an electrical substation, which features multiple transmission lines of varying voltages; it is also located approximately 41 km from the Rio Bravo thermoelectric plant, and 13 km from the U.S.-Mexico border. Figure 6 shows the location of the project site. Figure 7 describes the electrical infrastructure existing in the region.[3]



[2] This value was used for the emissions reduction estimates. For the energy generation used in the NADBank financial model, the P50 value proposed by GL Garrard Hassan was used.
[3] Diagnóstico de Infraestructura Energética para los Estados de la Frontera Norte de México; Border Environment Cooperation Commission (BECC), Sep. 2008, ISBN: 978-607-8021-00-0, p. 14



There is a need for affordable and environmentally beneficial alternatives to conventional fossil fuel-derived energy sources. The lack of affordable financing mechanisms to support clean energy projects reduces the options available to utilities for the development of clean energy. Additionally, renewable energy projects create an opportunity to generate electricity without releasing the same type of atmospheric emissions generated by fossil fuel fired plants or using scarce water resources for electricity production.

The proposed project creates an opportunity to displace greenhouse gases and other pollutants produced by traditional fossil fuel-based energy generation, while providing local residents with a safe and reliable energy alternative. Estimated emission improvements include the displacement of 90,976 metric tons of carbon dioxide (CO_2) during the projectôs first year of operation, in addition to supporting the decrease of other pollutants, such as sulfur dioxide (SO_2) and nitrogen oxides (NOx).

Under the ñNo Actionò alternative, the community will continue to use power based on non-renewable resources, and will miss the opportunity to mitigate greenhouse gas emissions and other air pollutants.

The project will help to stimulate the growth of the wind power industry in Mexico and will serve as a demonstration for wider application of wind power technology and other projects for

	clean renewable electricity generation in local and national level.

None.

The project meets all the general requirements under this criterion.

Mexico continues to rely on fossil fuels for the generation of energy. This conventional generation approach affects the natural environment due to the harmful emissions related to the generation process, including the release of greenhouse gases (GHG) as well as other pollutants such as sulfur dioxide (SO_2) and nitrogen oxides (NOx), as well as the depletion of natural resources.

According to the GHG inventories and projections developed for the State in coordination with BECC, the energy generation sector contributes with 17.3 million metric tons (Mmt) of CO_2-e/year (2005), 61% of the total emissions.[4]

Tamaulipas accounted for approximately 24.8 Mmt of CO2e gross production based emissions, an amount equal to about 3.8% of Mexico GHG emissions (based on 2005 national emissions), and 16.4 percent compared to the sum of its emissions in the six States, representing the fifth state of the border with Mexico increased emissions, only Baja California has lower emissions than Tamaulipas.

Tamaulipasô gross GHG emissions are rising at a higher rate than those of the nation as a whole. Tamaulipasôs gross GHG emissions increased 43% from 1990 to 2005, while national emissions rose by 31% from 1990 to 2005. The main source of GHG emissions in Tamaulipas is the use of energy. In 2005, the energy sector accounted for 88% of the total emissions of greenhouse gases in the state of Tamaulipas. At the national level, the electricity sector accounted for 63% of gross emissions of greenhouse gases in 2005.

The project will have a positive impact on air quality by reducing pollutant emissions, which could help to mitigate the severity of respiratory and other diseases that are aggravated or caused by air pollution. Additionally, the reduction in GHGs could contribute to mitigate climate impacts that create vulnerable conditions for human health.

The project complies with all applicable environmental laws and regulations, specifically the General Law of Ecological Equilibrium and Environmental Protection (LGEEPA, for its Spanish acronym), and its corresponding Environmental Impact Statement (MIA, for its Spanish acronym) adheres and complies with the provisions of the existing Environmental Impact

[4] Emisiones de Gases de Efecto Invernadero en Tamaulipas y Proyecciones de Casos de Referencia 1990-2025; Border Environment Cooperation Commission (BECC), Jun. 2010, Summary, Page ï x-.

Assessment Regulations, pursuant to the MIA approval issued by the Secretariat of the Environment and Natural Resources (SEMARNAT). Additionally, the project does not anticipate any significant environmental impacts, as set out in the relevant legal provisions regarding Ecological Equilibrium and Environmental Protection. The project has also developed a plan to monitor waste during the wind farmôs construction and operation phases, which has been approved by the appropriate environmental authority.

Epidemiological research has shown that both, chronic and acute exposure to harmful emissions associated with fossil-fuel based energy production, can lead to serious respiratory problems. It is estimated that, at the very least, prolonged exposure to excessive levels of pollutants can deteriorate the respiratory capacity of humans and greatly contributes to the increase incidence of cardiopulmonary diseases such as asthma, heart ailments, and lung cancer. The following table lists some of the human health and environmental impacts associated with pollutant emissions.

Emmision	Problems	Impacts
SO_2, NOx	Fine Particulates	- Regional haze - Lung and heart diseases
NOx, COV	Ozone Smog	- Respiratory diseases - Permanent lung damage
CO_2	Climate Change	- Increase in global temperature - Extreme weather
Mercury, Selenium	Air Toxics	- Damage to central nervous system - Contaminated lakes
SO_2, NOx	Acid Rain	- Degradation of soil, foliage and water bodies
Nuclear Waste	Radioactive Waste	- Health risks - Dangerous to store, transport

In summary, by substituting the demands on electrical power generation from conventional fossil fuel sources with renewable resources, the project could help improve air quality and the general environmental conditions affecting the health of residents, not just in the specific project location, but within the region and beyond.

The project intends to generate electrical power by utilizing wind resources available in the area through the use of wind turbines. Due to the nature of this project, no negative

environmental impacts are anticipated during its construction and operation phases, since the project will be located in an area devoted to agriculture, and its ecosystem is entirely adapted to such use. The project area does not contain any fragile ecosystems or unique/endangered species. To determine risks related to avian species, a bird monitoring study was conducted for a year in the project area; the purpose of this study was to monitor the migratory patterns of birds, and to study the populations of native birds and insects, as required by the Environmental Impact Statement approved by the applicable authority. The results of this study were satisfactory, as the location of the Wind Farm will not impact any bird or insect migratory routes and the project areaôs ecosystem is not home to any protected species.

Electrical power generated by the State of Tamaulipas amounts to approximately 2,264 GWh/year (2006), of which 64 GWh/year are produced by hydroelectric power plants, and 2,200 GWh/year by thermoelectric plants that operate on vapor (2,093 GWh/year) and turbo-gas (107 GWh/year)[5].

The El Porvenir Wind Farm, with a nominal installed capacity of 54MW, will contribute to the CFE grid in the State of Tamaulipas approximately 192.3 GWh/year of electricity that will be used in its entirety by Reynosa and adjacent communities, replacing a similar amount of energy generated by conventional power plants existing in the region. The energy produced by the El Porvenir Wind Farm will be equivalent to approximately 7.5% of the total amount currently produced by the State.

The project plans to take advantage of carbon credits offered through the Kyoto Protocolôs Clean Development Mechanism (CDM); therefore, the anticipated GHG emission reductions were calculated for the project on the basis of standard emission factors (EF) established by the United Nationôs Intergovernmental Panel on Climate Change (IPCC, 1996 and 2006) for projects registered under the CDM. Because El Porvenir Wind Farm will be interconnected to CFEôs national grid, greenhouse gas emission reductions were calculated on several steps, pursuant to CDM guidelines and the methodological tool to calculate emission factors for a complex electricity system[6]. For this purpose, the different EF are applied concurrently to calculate an annual emission reduction baseline:

[5] Diagnóstico de Infraestructura Energética para los Estados de la Frontera Norte de México; Border Environmental Cooperation Commission (BECC), Sept. 2008, ISBN: 978-607-8021-00-0, pp. 10-12.

[6] UNFCCC/CCNUCC; CDM ï Executive Board, EB 35 Report, Annex 12, and Methodological tool (Version 01.1): Tool to calculate the emission factor for an electricity system.

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

Where:

BE_y = Baseline emissions in year y (tCO_2/ year)

$EG_{PJ,y}$ = Quantity of net electricity produced and supplied to the grid as a result of the implementation of the CDM project in the year *y* (MWh/ year).

Although the estimated generation of the wind energy facility is 192.3 GWh/year based on the preferred turbine technology, the power production estimate used for emission reduction targets is more conservative in the CDM. The targeted emission reductions in the CDM are based on the anticipated generation of a less efficient turbine technology and closely reflect the more conservative power generation curve of the preferred technology.

$EF_{grid,CM,y}$ = Combine margin CO_2 factor for grid connected power generation in year y (latest version of the emissions calculation established by the CDM for Mexico, equivalent to 580.81 $tmCO_2$/GWh).

Therefore:

$$BE_y = 90{,}976\ tmCO_2/year$$

The projectôs GHG reduction goal will be Ó 90,976 metric tons of CO_2/year, for an approximate total of 1.18 million tons of CO_2 equivalent during the 2012-2025 period.

According to Tamaulipasôstate inventory of greenhouse gases[7], GHG emissions from the electricity sector, based on state electricity use, will amount to 6.71 million $tmCO_2$/year in 2015, 7.91 million $tmCO_2$/year in 2020, and 9.50 million $tmCO_2$/year in 2025. Based on the above, the El Porvenir Wind Farm will help obtain GHG emission reductions of 1.35%, 1.15%, and 0.96% in the respective years.

Acid deposition, or acid rain, results from emissions of SO2 and NOx, primarily from power plants, vehicles and industry. Additionally, acid rain created by increased levels of SO2 and NOx in atmospheric precipitation can have harmful effects on crops and livestock, further endangering human populations.

In the official letter DGCARET/0448/2011[8] dated August 30,2011, the SEMARNATôs General Directorate of Air Quality, Emissions Registry and Contaminant Transfer, stated that:

1. Currently, the Reynosa region is provided with electric power from the Emilio Portes Gil thermoelectric plant,

[7] Emisiones de Gases de Efecto Invernadero en Tamaulipas y Proyecciones de Casos de Referencia 1990-2025; Border Environment Cooperation Commission (BECC), Jun. 2010, Table 1, pp. 5.

[8] Annex to the official letter DGCARETC/0448/2001 dated August 30, 2011, received by BECC as an answer to the specific question submitted to the SEMARNATôs Dirección General de Gestión de la Calidad del Aire, Registro de Emisiones y Transferencia de Contaminantes on June, 2011.

which generated 1,513 GW-h in 2005 (INEM), using the following fuels:

a. 196,279,730 m^3 of natural gas, equivalent to 6,123,927 GJ
b. 195,440 m^3 of bunker oil, equivalent to 8,175, 641 GJ

2. SEMARNAT estimates that as a result of the wind generated 156 GW-h per year at the Reynosa project, the following amounts of fuels will be avoided:
   a. 20,231,400 m^3 of natural gas, equivalent to 631,220 GJ
   b. 20,145 m^3 of bunker oil, equivalent to 842,706 GJ

Thus, the avoided emissions by the projected wind power central, in metric tons per year, will be:

PM10	PM2.5	NOx	SO2	CO	COV	NH3
60.0	50.6	189.7	1,442.4	39.3	3.6	2.9

The estimated amounts of NOx and SO2 that will be displaced, given that the power will be used in a region served by conventional vapor-based thermoelectric plants fueled by natural gas and bunker oil, will be 189.7 and 1,442.4 tm/year, respectively.

Water conservation will also be a benefit of the project, as the water used in large quantities for conventional energy production is not necessary for wind-derived energy.

Nor the MIA or environmental studies for the project identified any concerns related to water use.

The intent of the sponsor is to construct and operate the plant in compliance with all applicable environmental standards by applying mitigation measures aimed at preventing the creation of significant adverse impacts. The project sponsors will supervise the construction and maintenance of the necessary roads, buildings, fences, structural components, flood control installation of the wind turbines and racking systems and will manage the proper discarding of materials or components that have completed their useful life.

The approval of the Environmental Impact Statement included a bird monitoring study which was performed during a period of one year and was approved by SEMARNAT in March 2011. Additionally, the sponsor will conduct an avian monitoring study after the development of the Project in accordance with the methodological guidelines recommended by SEMARNAT.

The environmental impact resulting from the project will be positive overall; since the project will aid in the reduction of harmful atmospheric emissions generated by fossil fuel fired electrical plants. Some temporary impacts will be produced during the construction and operation of the plant. Some of these impacts include elevated noise levels, vibration, visual intrusion, and dust. The impacts will be managed accordingly. Since wind energy produces negligible carbon dioxide emissions, when compared to conventional fossil fuel derived methods, and since wind-generated electricity is accomplished without the effects of NOx and SO_2 emissions during its production, the project can help reduce the associated harmful effects of these emissions by providing clean electrical power. Generally speaking, it will also conserve water resources, as wind energy production does not require the use of water.

No negative transboundary impacts are anticipated as a result of the development of the wind energy project, on the contrary, a beneficial effect is anticipated on the air quality due to the decreased demand on fossil fuel fired electrical plants. The project could benefit the communities adjacent to the project area, as the potential reduction in pollutants made possible by the project helps to improve air quality across the airshed. Furthermore, the project will aid in mitigating the larger environmental concerns related to greenhouse gases and global warming targeted by international agendas.

This project required the development of Environmental Impact Statement (EIS)-*'Modalidad Particular'* for the Wind Park and the transmission line, as well as their approval by Mexicoôs Secretariat of the Environment and Natural Resources (SEMARNAT), as established by the General Law of Ecological Equilibrium and Environmental Protection.

In September 19, 2008, the SEMARNAT Delegation in Tamaulipas, through the official communication SGPA/03-2345/08, conditionally approved the Environmental Impact Statement. Conditions included the development of a bird monitoring study, a noise monitoring study, and a waste monitoring program.

- The bird monitoring study was conducted during a one-year period and it was approved by SEMARNAT in March 2011. The results of the study were very favorable and no protected species were found in the project area. The study also found that the location of the project does not impact any bird or insect migratory routes.
- The noise monitoring study was approved by SEMARNAT in March 2011; it will be conducted during three different phases: pre-construction, construction, and post-construction.

- The waste monitoring program was approved by SEMARNAT in February 2010. The purpose of the program is to ensure the proper management of waste generated during the construction phase.

In September 10, 2008, the SEMARNAT Delegation in Tamaulipas, through the official communication SGPA/03-2107/10, approved the Environmental Impact Statement for the projectôs transmission line. This approval did not include any requirements for additional studies.

Capacity RE installed/generated
(Target = 54 MW; 192.3 GW-h/year)

Displacement of CO_2
(Target Ó 90,976 metric tons/year)
(Baselines: 882,351 metric tons)

Displacement of SO_2
(Target Ó 1,442.4 metric tons/year)
(Baseline: 13,995 metric tons)

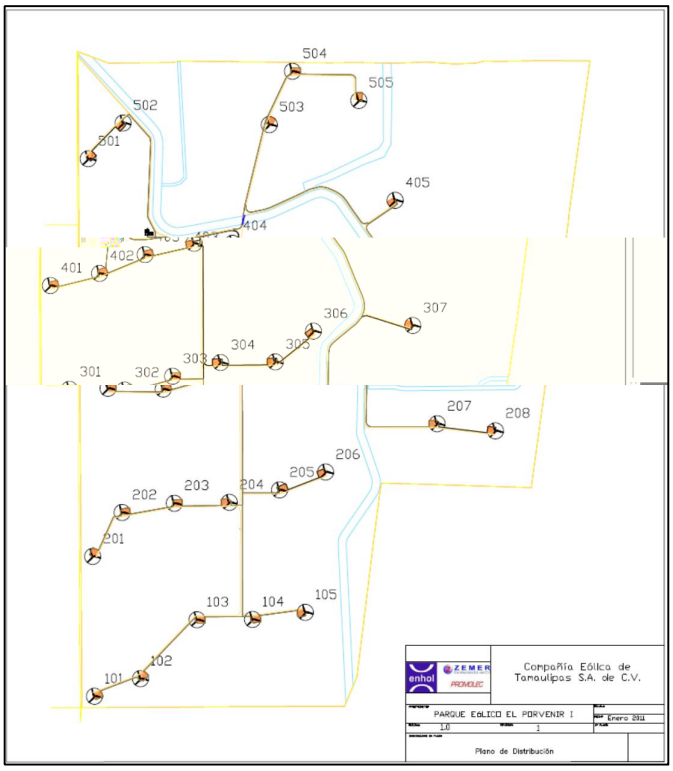
Displacement of NOx
(Target Ó 189.7 metric tons/year)
(Baseline: 1,846 metric tons)

None.

The project addresses a major human health and environmental issue.

The El Porvenir wind farm project is located within the *ejido* of the same name, 15 km south of the U.S.-Mexico border. This project plans to install wind turbines with a nominal capacity between 1.8 MW and 2 MW, to achieve up to 54 MW of installed capacity. The project will include a substation within the wind farm premises, to transfer energy to the authorized interconnection point, located 13.5 km away at CFEôs Aeropuerto Substation. The wind farm has been designed to maximize the use of available wind resources. The design conforms to current Mexican standards and applicable laws.

The main function of a wind farm, as previously stated, is to produce electricity through the use of wind. The above will be made possible with the construction of the wind farm and the necessary infrastructure to help supply and transfer the power produced to the existing grid.



To be made of reinforced concrete, sized to withstand overturning moments and sliding strength caused by the forces acting on the towers. The overturning moment is a determining factor, which implies that the foundations are projected to be slender, with a large footprint and reduced depth. The footings will be circular in shape, 18 meters from the inscribed circumference. On the footings, pedestals will be embedded in the towerôs foundation section where the tower bases are to be anchored. Additionally, the foundations will contain pipes for medium voltage, grounding, and optic fiber cables.

More than 20 km of roadways will be built and/or rehabilitated for this project, which will be used to access wind turbines and the Wind Farm substation. These roads will be used transport all the components, machinery, and equipment needed for the installation and commissioning of the wind turbines. Subsequently, during the operation phase, these roads will be used to access wind turbines and other facilities to conduct maintenance tasks.

It will be necessary to build a horizontal mounting platform approximately 40x35 m in size for each wind turbine. The function of the platforms will be to provide a space for the crane required to lift and install equipment components. The materials used for the construction of the platforms will come in part from material selected from nearby excavations and quarries, compacted to have a bearing capacity of more than 5 kg/cm^2, so as to ensure the stability of cranes.

These will be needed to accommodate the medium voltage, grounding, and communication lines that will connect the wind turbines to the transformer substation. They will be 1.8 m in depth, and will be covered by a layer of river sand and excavation materials compacted both manually and mechanically. Trenches will be marked with 140 cm high concrete milestones that will be installed every 50 meters and at direction change points. Most trenches will run parallel to the wind farmôs internal roads.

Each wind turbine includes a transformer whose function is to raise the voltage of electricity generated in order to reduce losses in the conductors that transmit it to the Wind Farmôs substation. Typically, these transformers are located in the wind turbine nacelle assembly. At the base of the wind turbine, the transformer is connected to the 34.5 kV switching cell. The medium voltage grid links the wind turbine transformers to the Wind Farm substation. The 34.5 kV line will be laid within 1.6 m deep trenches that will also be used to lay communication cables. The cable to be used will be 50 to 150 mm^2 aluminum

conductor cable ï as applicable in each sectionï , to evacuate the power generated by the wind turbines. The size of each cable section will be calculated based on the power they will transport, so that losses do not exceed 2% per circuit, taking into account that each conductorôs transport capacity does not exceed 80% of its nominal capacity. For this wind farm, the medium voltage grid will consist of five circuits that will include the corresponding short-circuit and overload protections, which will be attached to the wind farmôs substation through an independent connection cell.

A grounding system connecting each of the wind turbines to the substationôs grounding system will be installed using 50 mm^2 bare copper cable. This cable will be laid in the same trench that will house the medium voltage grid at a depth of 1.8 m.

This network will be used to operate the Wind Farm from the control center. It will have the same circuit sequence as the medium voltage grid. The fiber optic cables will be laid in the same trench that will house the medium voltage cables and the grounding system. The network will be connected to a SCADA system to monitor wind turbine operations and potential breakdowns.

The general layout of the plant facility has been planned so that incoming lines will be underground 34.5 kV dry cables and outgoing lines will be 138 kV aerial cables. All the elements of this substation will be located within a fenced area that, in addition to housing the substationôs appropriate control and protection equipment, will also include a closed building that will contain the medium voltage cells and low voltage boxes for measuring, control, and protection of the substation. The substation will consist of five medium voltage (34.5 kV) input cells to provide access to the wind farmôs five internal circuits, and a high voltage output position (138 kV) with an aerial evacuation line.

The electricity produced by the wind farm will be delivered through a 138 kV simple-circuit transmission line to the interconnection point located at the Aeropuerto Substation owned and operated by Mexicoôs Federal Electricity Commission (*Comisión Federal de Electricidad*). The transmission line will be 13.5 km in length. The path of the line was planned so as to minimize impacts, so it will run alongside federal areas already impacted by various infrastructures.

For this project, different types of technologies available in the

wind turbine market were evaluated. Current technologies allow for more efficient and reliable power generation, as well as more production at average wind speeds; this is partly due to an increase in size and improved blade designs. In the case of the El Porvenir wind farm, studies have been conducted to analyze different types of wind turbines, given the wind resources available in the area. Studies have been developed by leading technologists in the sector, including Vestas, Gamesa, General Electric, Acciona, Suzlon, and Enercon.

A meteorology tower was installed in June 2008 to study the resources available in the project area. Since then, data have been collected, including wind speed at different heights, wind direction at different heights, and ambient temperature, with the purpose of reviewing and modeling wind resources available in the area. Additionally, a nearby station has been used as reference point to correlate data and reduce uncertainties. Using all these data, internal reports have been prepared regarding the proposed project site. These reports have been endorsed by a specialized company that performs the review and validation of the collected data.

The El Porvenir wind farm will be installed within the *ejido* of the same name, in an area of approximately 9000 hectares. The *ejido* is located 15 kilometers south of the city of Reynosa, Tamaulipas. *Ejido* lands impacted by the project belong to two groups: common use lands owned by the *ejido,* and parcels privately owned by *ejidatarios.* The corresponding lease agreements have been signed in conformance with applicable laws and regulations.

The transmission line will be located on previously impacted land owned by different government agencies. In this case, no lease agreement is required, but the sponsor needs to obtain rights-of-way through the relevant government agencies.

The first construction tasks are intended to be launched in March 2012: earthwork, road construction, wind turbine foundations, mounting platforms, and substation foundation. The project will continue later with the installation of wind turbines and the construction of the transmission line.

It is estimated that the wind farm start-up will be in November 2012, and the project will be fully operational by March 2013.

The project borrower, CETSA, is a Mexican partnership registered in the Public Registry of Commerce. CETSA was established for the development of the El Porvenir wind farm, and it has the human, technical, and financial resources required for the projectôs appropriate management and administration.

The wind turbine vendor will be responsible for the wind farmôs maintenance.

Two contracts will be prepared for the operation and maintenance of the wind farm: there will be a contract for the wind turbinesô operation and maintenance, which will be executed with the manufacturer and includes scheduled maintenance for the wind turbines and their components, as well as unscheduled maintenance tasks. A second contract will involve the management, coordination, and supervision of maintenance and operation tasks to service the wind turbines and the rest of the Wind Farm infrastructures; it includes coordination of scheduled maintenance tasks with the vendor, compliance with guaranteed availability, and the development of monthly operation reports.

The following authorizations have been obtained for the construction and development of the proposed wind farm:

- Environmental Authorization issued by the Secretariat of the Environment and Natural Resources (SEMARNAT) for both the wind farm and the transmission line.
- Interconnection authorization issued by the Federal Electricity Commission (CFE) for the evacuation of up to 54 MW from the wind farm.
- Electricity generation permit under the self-supply modality, issued by the Energy Regulatory Commission (CRE). An updated permit is currently in process.
- Lease agreement registration in the National Land Registry
- Authorization from the General Directorate of Civil Aeronautics
- Power Purchase Agreement (PPA).

The following permits / licenses are required prior to the construction, but they have not been obtained:

- Local permits such as the construction license, Civil Protection approval, land use license, by the City of Reynosa
- Construction agreement and task scheduling with CFE
- Right-of-Way with the Secretariat of Communication and Transportation, Federal Roads and Bridges, National Water Commission, and Petroleos Mexicanos to obtain rights-of-way for the transmission line.
- Approval by the National Institute of Anthropology and History

The following permits / licenses are required and will be obtained prior to the start-up of operations.

- Interconnection Agreement, Transmission Agreement, and Facilities Construction and Transfer Agreement with CFE
- Operating License and Task Completion Certificate by the City of Reynosa
- Waste Generator Registration
- Electrical Facilities Verification Unit
- Wastewater discharge permit by CONAGUA

The following is a list of applicable reviewing agencies:

- *Ejidatarios* from El Porvenir
- Energy Regulatory Commission (CRE)*
- Federal Electricity Commission (CFE)*
- PEMEX
- General Directorate of Civil Aeronautics (DGAC)*
- BECC/NADB

* *Spanish acronyms*

None.

The project design and equipment comply with all applicable regulations and meet the technical requirements of the certification criteria. This project will help stimulate the growth of the wind energy industry in Mexico by demonstrating the feasibility of implementing wind technologies and other clean and renewable energy generation projects both locally and nationally.

	Off-taker Financial Statements, Sponsor and CETSAôs ownership information and Projectôs cash flow forecasts. The Projectôs expected revenue from the sale of electricity, based on the credit risk analysis performed by NADB, will be sufficient to cover: a) scheduled O&M expenses, b) funding of any reserve account, c) payment of debt service and, d) return to equity. Therefore the project is deemed financially feasible.
	The scope of the Project is to design, build and operate a 54 MW wind energy generation plant. The electricity generated will be bought by a major retailer. The equivalent in Mexican pesos of up to US$51.0 million.
	Revenues from the sale of electricity, through the Power Purchase Agreement signed by CETSA.
	CETSA will be the borrower for the project. CETSA has the legal authority to contract loan obligations. The project will be managed by the already created CETSA.

None.

The project meets all applicable financial feasibility criteria.

	The project is classified as a private sector environmental infrastructure project with exclusive impact. This category includes projects that intend to provide an environmental service. The impact of these projects is generally exclusive to the facilities, processes or services of the sponsor, although an indirect benefit for the community may exist. These projects are not expected to require increased revenue generation to be supported by the community-at-large for project implementation or operation and maintenance. For this project category, the *General Public Comment Period* shall apply as a minimum requirement to satisfy this criterion. BECC will release the Project Certification Document (PCD) for a 30-day public comment period beginning on November 24, 2011. To ensure the right to public participation and include the community in the projectôs evaluation, SEMARNAT made available to the public the projectôs environmental impact studies and EIS. No comments were submitted. Although a broad public participation effort was not required for the project, various opportunities to provide formal public access to project information occurred during the development of the project

CETSA will be responsible for the technical requirements of the project systems including design, operation and maintenance.

The project will generate a series of jobs, direct and indirectly, during its operation phase. During its construction phase, the proposed project will create approximately 250 indirect jobs, which will certainly benefit the local community and the regional economy. In addition, the operating entity intends to build the team responsible for the projectôs day to day operations using local community members who are familiar with the area. These jobs are expected to require innovative performance and involve a high degree of specialization. It is anticipated that training will be required.

The development of the proposed project will help promote the use of wind turbines in Mexico. The technology transfer and the use of local labor to perform electrical and mechanical maintenance tasks will also represent a significant contribution to area.

In addition to complying with Mexican environmental laws, the project also adheres to laws and regulations established by state and local agencies, the project meets the provisions of the Energy Regulatory Commission, which has approved and issued an electricity generation permit under the self-supply modality, to produce energy and distribute it to off-set the electricity use of its PPA partner. The project also complies with the Electrical Power Public Service Law, which establishes the statutes and modalities for the production of electricity in Mexico through conventional or renewable methods.

The El Porvenir wind farm will benefit surrounding communities in the U.S. and Mexico, as it will help improve air quality in the region and will prevent GHG emissions that can cause widespread impacts to the region and beyond.

The El Porvenir project, with an installed capacity of up to 54 MW, will prevent the release of 90,976 tons of CO_2/year into the air. In addition to the environmental impact, the project also creates and environmental benefit, since the primary energy source in the area is oil, and the generation of power through the use of this type of technologies will contribute to save a oil, which is a scarce, finite, and pollutant resource. Wind is a renewable

	and sustainable energy resource that may help the country gain independency from fossil fuel price fluctuations, and strengthen its position against the major oil producing countries that control the market. It will also minimize the use of water resources as wind energy does not use water for its operation.
	The development of this project will have a big impact in the community where the project is to be located, that is, in the El Porvenir *ejido.* The benefits for the community that will result from this project consist not only of improvements to existing environmental infrastructures within the *ejido,* but *ejidatarios* will also receive a monthly financial remuneration for the use of their land.

None.

The project meets sustainable development principles for certification.