The North American Development Bank has a successful 25-year track record helping public and private sponsors develop, finance and implement environmental infrastructure projects that help preserve, protect and enhance the environment and well-being of the people along the U.S.-Mexico border region.

Since 1994, NADB has financed 250 projects that are helping more than 17 million people in the region achieve a better quality of life in a variety of ways, whether it’s connecting homes to basic utility services, providing for the safe disposal of waste, preventing raw sewage discharges or recurrent flooding from storm water, or reducing air pollution through paved roads, less polluting buses or cleaner renewable energy sources.

NADB has leveraged its capital contributions from the governments of Mexico and the United States, as well as its very strong credit quality, to issue debt in international markets to support our lending operations. The issuance of our first Green Bond in 2018 represents a logical step in our evolution and our motivation to be at the forefront of innovation.

This 2018 Green Bond Impact Report is presented a year after the issuance of the bond and after full allocation of its proceeds to fund six renewable wind and solar energy projects in Mexico and the United States. The report adheres to the Green Bond Principles and to our own standards and commitments for transparency in the approval and financing of projects.

We are proud to present the results of the first green bond issued by the North American Development Bank.
ABOUT NADB

The North American Development Bank (NADB) is a binational financial institution established and capitalized by the Governments of the United States and Mexico for the purpose of financing infrastructure projects that preserve, protect or enhance the environment in order to advance the well-being of border residents, as well as providing technical and other assistance to support the development of such projects.

NADB was established in San Antonio, Texas, and began operations on November 10, 1994, with the initial capital subscriptions of the U.S. and Mexican governments. The scope of the Bank’s mandate—including the geographic jurisdiction and infrastructure sectors in which it may operate—as well as its functions and limitations, are defined in an agreement between the two governments (the Charter).

Projects that qualify as eligible infrastructure are those that will prevent, control or reduce environmental pollutants, improve the drinking water supply or protect flora and fauna, provided that such projects also improve human health, promote sustainable development or contribute to a higher quality of life. In addition, eligible projects must be located within 100 kilometers (about 62 miles) north of the U.S.-Mexico international boundary in the U.S. states of Texas, New Mexico, Arizona and California and within 300 kilometers (about 186 miles) south of the border in the Mexican states of Tamaulipas, Nuevo Leon, Coahuila, Chihuahua, Sonora and Baja California.

Eligible Sectors

- **WATER**
  Potable water supply, treatment and distribution; wastewater collection, treatment and reuse; water conservation; storm drainage and flood control

- **WASTE MANAGEMENT**
  Sanitary landfills, dumpsite closure, collection and disposal equipment, recycling and waste reduction, hazardous waste treatment & disposal facilities, industrial site remediation

- **AIR QUALITY**
  Street paving and other roadway improvements; public transportation; ports of entry, reduction of industrial emissions; methane capture

- **CLEAN AND EFFICIENT ENERGY**
  Solar, wind, hydroelectric, geothermal, biogas & biofuels; equipment replacement, building retrofits

- **BASIC URBAN INFRASTRUCTURE**
  Projects that consist of a mix of works from various sectors, such as street paving, installation of water and sewer lines, storm drainage and public lighting

BOARD OF DIRECTORS

NADB is governed by a ten-member Board of Directors with equal representation from each member country. The chairmanship alternates between the United States and Mexico each year. All powers of NADB are vested in the Board of Directors, which determines policy within the framework of the Charter and approves all programs and project proposals of the Bank.

**MEXICO**
- Secretary of Finance and Public Credit (SHCP)
- Secretary of Foreign Relations (SRE)
- Secretary of Environment and Natural Resources (SEMARNAT)
- Mexican border state representative
- Mexican border resident representative

**UNITED STATES**
- Secretary of the Treasury
- Secretary of State
- Administrator of the Environmental Protection Agency (EPA)
- U.S. border state representative
- U.S. border resident representative

MANAGEMENT TEAM

The Managing Director, Deputy Managing Director and the Chief Environmental Officer are appointed by the Board. The Managing Director, as Chief Executive Officer and legal representative of NADB, reports to the Board and is responsible for carrying out its directives, as well as for the organization and day-to-day operations of the Bank. The Deputy Managing Director serves as the Bank’s Chief Operating Officer and supports the Managing Director in fulfilling his/her duties. The Chief Executive Environmental Officer is responsible for verifying the environmental integrity of all operations of the Bank.

Alex Hinojosa
Managing Director

Calixto Mateos-Hanel
Deputy Managing Director

Salvador López-Córdova
Chief Environmental Officer
In June 2018, NADB issued its first Green Bond in the amount of CHF 125 million (equivalent to USD 126.4 million). This document presents the use and environmental benefits of this bond proceeds. The proceeds of the Green Bond are used and managed in accordance with the Bank’s Green Bond Framework, which is consistent with the Green Bond Principles (GBP) established by the International Capital Market Association (ICMA). The NADB follows the GBP and provides transparency, accuracy and integrity in the information that is disclosed and reported to stakeholders. The Green Bond Framework was reviewed by an independent third party, who issued a positive Second-party opinion.

**USE OF PROCEEDS**

The net proceeds from the issuance of this bond were used to finance or refinance eligible projects. The proceeds of the Green Bond have been fully allocated, including the reimbursement to the Bank of USD 53.06 million for the EDPR wind energy project in Mexico funded within 24 months prior to the bond issuance, as well as USD 73.36 million in financing for five new wind and solar projects in Mexico and the U.S. The projects selected for the Green Bond support NADB’s mission to finance environmental infrastructure projects that help preserve, protect, and enhance the environment of the U.S.-Mexico border region to advance the well-being of its residents.

**PROJECT EVALUATION AND SELECTION**

NADB finances projects that will prevent, control or reduce environmental pollutants, improve the drinking water supply or protect flora and fauna, so as to improve health, promote sustainable development or contribute to a higher quality of life.

NADB’s Green Bond Framework identifies eligible projects that may be financed with the proceeds of green bonds. These projects fall into one of four sectors: sustainable water and wastewater management, pollution prevention and control, renewable energy, and energy efficiency.

### CAPITALIZATION AND FINANCES

NADB was initially capitalized in equal parts by the Governments of the United States and Mexico for a total of US$3 billion, consisting of US$450 million in paid-in capital and US$2.55 billion in callable capital.1 After the funding by the governments of two domestic programs with 10% of the original funding, US$405 million of paid-in capital was received, with corresponding callable capital of US$2.30 billion.

In 2016, both Governments submitted letters of subscription for additional shares equivalent to US$3 billion, including additional US$450 million in paid-in capital and US$2.55 billion in callable capital. As of today, Mexico has made a first payment toward the paid-in capital of US$10 million.

### Partner Contributions

<table>
<thead>
<tr>
<th>Country</th>
<th>Paid-in Capital (USD Million)</th>
<th>Callable Capital (USD Million)</th>
<th>Total (USD Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>$212.50</td>
<td>$1,204.17</td>
<td>$1,416.67</td>
</tr>
<tr>
<td>United States</td>
<td>202.50</td>
<td>1,147.50</td>
<td>1,350.00</td>
</tr>
<tr>
<td>Total</td>
<td>$415.00</td>
<td>$2,351.67</td>
<td>$2,766.67</td>
</tr>
</tbody>
</table>

NADB leverages its funds by issuing debt in international capital markets or with other financial institutions for the purpose of financing its lending operations or refinancing existing borrowings. Its financial strength is based on its strong liquidity policy, prudent risk management and rigorous lending and oversight processes. NADB’s current ratings are AA/F1+ from Fitch Ratings and AA1/PRIME-1 from Moody’s Investors Service, both stable outlooks.

At the end of fiscal year 2018, NADB has leveraged its paid-in capital of $415 million into investments totaling US$8.65 billion in sustainable infrastructure. This means that every US$1 from NADB has leveraged US$21 dollars from other sources. NADB has also managed $660.2 million in EPA grants, bringing the total number of projects funded to 250 and total investment to $9.8 billion.

1 Paid-in capital consists of cash funds contributed to NADB by the two governments. Callable capital is composed of funds that are pledged to be provided to NADB from the two countries only if required to meet the bank’s obligations on borrows in funds for inclusion in its capital resources as specified in the Charter.
All projects selected for financing by NADB must go through a certification process based on technical, financial and environmental criteria, as well as provide public access to information, and must be approved by the Bank’s Board of Directors. As part of the environmental criteria, a project must demonstrate not only compliance with applicable environmental regulations and clearance processes but must also demonstrate a positive impact on the environment. The Green Bond proceeds were allocated entirely to renewable energy that avoid emissions of greenhouse gases and criteria pollutants.

MANAGEMENT OF PROCEEDS

As of December 31, 2018, The Green Bond has been fully disbursed as shown in the following chart.

<table>
<thead>
<tr>
<th>Project</th>
<th>Type</th>
<th>State</th>
<th>Country</th>
<th>Type of Financing</th>
<th>Green Bond Share of Project Costs (%)</th>
<th>Green Bond Proceeds Disbursed (USD Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDPR</td>
<td>Wind</td>
<td>Coahuila</td>
<td>Mexico</td>
<td>Refinance</td>
<td>15.13</td>
<td>$  53.06</td>
</tr>
<tr>
<td>Puerto Libertad</td>
<td>Solar</td>
<td>Sonora</td>
<td>Mexico</td>
<td>Finance</td>
<td>8.52</td>
<td>$  32.99</td>
</tr>
<tr>
<td>El Mezquite</td>
<td>Wind</td>
<td>Nuevo Leon</td>
<td>Mexico</td>
<td>Finance</td>
<td>5.53</td>
<td>$  17.45</td>
</tr>
<tr>
<td>Santa María</td>
<td>Solar</td>
<td>Chihuahua</td>
<td>Mexico</td>
<td>Finance</td>
<td>6.44</td>
<td>$  9.98</td>
</tr>
<tr>
<td>Orejana</td>
<td>Solar</td>
<td>Sonora</td>
<td>Mexico</td>
<td>Finance</td>
<td>6.11</td>
<td>$  8.49</td>
</tr>
<tr>
<td>SEPV</td>
<td>Solar</td>
<td>California</td>
<td>USA</td>
<td>Finance</td>
<td>26.01</td>
<td>$  4.42</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.26</td>
<td>$ 126.42</td>
</tr>
</tbody>
</table>

**TOTAL PORTFOLIO IMPACT**

NADB estimates the anticipated impacts of the projects to be financed before certification and approval. Furthermore, NADB routinely verifies project impact, particularly one year after the initiation of operation. The anticipated benefits of the projects partly financed by the proceeds of the Green Bond are summarized below. A detail description of each project is provided in the certification document. Links to these documents are provided in the Reference section.

<table>
<thead>
<tr>
<th>Project</th>
<th>Green Bond Share of Project Costs</th>
<th>Expected Impacts upon completion</th>
<th>Annual Emissions Avoided</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Installed Capacity</td>
<td>Annual renewable energy generation</td>
<td>Annual Equivalent Household Energy Use</td>
</tr>
<tr>
<td></td>
<td>MW</td>
<td>GWh/year</td>
<td>households/year</td>
</tr>
<tr>
<td>EDPR</td>
<td>15.13</td>
<td>199.5</td>
<td>699</td>
</tr>
<tr>
<td>Puerto Libertad</td>
<td>8.52</td>
<td>317.5</td>
<td>961.55</td>
</tr>
<tr>
<td>El Mezquite</td>
<td>5.53</td>
<td>250</td>
<td>890</td>
</tr>
<tr>
<td>Santa María</td>
<td>6.44</td>
<td>148</td>
<td>393.6</td>
</tr>
<tr>
<td>Orejana</td>
<td>6.11</td>
<td>125</td>
<td>353.5</td>
</tr>
<tr>
<td>SEPV</td>
<td>26.01</td>
<td>5</td>
<td>15.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9.26</td>
<td>1,118</td>
<td>3,312</td>
</tr>
</tbody>
</table>

2 Expected impacts of entire project. Greenhouse gases and criteria pollutants calculated based on 2017 state emission factors and expected generation at year of project certification. See appendix and Certification Documents in references.

3 Only project that has been in operation for more than a year. This project started operations on September 2017, thus expected impacts are based on the actual energy produced (699 GWh) on the first year of operation.

4 Electricity consumption per capita in 2017: SE for Mexico establishes 2,103.995 kWh and EIA for the USA establishes: 10,521.251 kWh. See appendix for average household size per state. See references for sources.

5 MW = Megawatts; GWh = gigawatt-hours; CO₂e = carbon dioxide equivalent; NOx = nitrogen oxides; SO2 = sulfur dioxide; PM10 = particulate matter 10 micrometers or less in diameter.
The projects financed by the NADB Green Bond were specifically selected to minimize the associated emissions arising from energy use and to displace electricity generated from the burning of fossil fuels. Moreover, these projects help to foster a cleaner energy mix in each state.

The Green Bond portfolio of renewable projects (solar parks and wind farms) account for a total installed capacity of 1,118 MW, it will avoid 1,457,461 tons of CO₂ per year, while providing clean energy for 1,568,763 people or 438,201 households.

The 6 projects financed in part by the NADB generated:

<table>
<thead>
<tr>
<th>Total Project Impact</th>
<th>Proportional Impact of Green Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,312 GWh of renewable energy, equivalent to annual energy consumption for the following households⁷</td>
<td>438,201</td>
</tr>
<tr>
<td>1.457 MMTCO₂⁶</td>
<td>37,635</td>
</tr>
</tbody>
</table>

Reduction in emissions, equivalent to taking the following cars off the road annually⁸

<table>
<thead>
<tr>
<th>Total Project Impact</th>
<th>Proportional Impact of Green Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>309,440</td>
<td>3,312 GWh</td>
</tr>
<tr>
<td>27,465</td>
<td>1.457 MMTCO₂</td>
</tr>
</tbody>
</table>

⁷ Million metric tons of carbon dioxide.
⁸ Electricity consumption of electricity per capita in 2017: SIE for Mexico establishes 2,103.995 kWh and EIA for the USA establishes: 10,521.251 kWh. See appendix for average household size per state. See references for sources.
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. The law specifies that the Mexican Ministry of Energy (SENER), in coordination with the Mexican Electricity Commission (CFE) and the Mexican Energy Regulatory Commission (CRE), must increase the use of clean technologies in power generation to at least 35% by 2024. In 2016 the Mexican National Center of Energy Control (CENACE) auctioned long-term renewable energy contracts and selected 23 proposals to build 2,871 MW of new renewable capacity. Component 1 of the Puerto Libertad project was selected in the auction.

The Puerto Libertad Solar Park project consists of the design, construction and operation of a solar park with a total installed capacity of 317.5 MW on approximately 1,194 hectares of rural land in the municipality of Pitiquito in the Mexican state of Sonora, approximately 191 km northwest of the city of Hermosillo and 196 km southwest of the US-Mexico border. The project includes the installation of approximately 1.2 million solar modules mounted on single-axis tracker arrays and the construction of a collector substation and a switchyard.

The electricity, Clean Energy Certificates (CELs) and generation capacity produced will be purchased by CFE pursuant to three long-term power purchase agreements and by a private off-taker and CFE Calificados S.A. de C.V., pursuant to two long-term power purchases, as well as sold on the spot market.

The project is expected to produce 961.55 GWh of electricity during the first year of operation, equivalent to the annual consumption to 130,575 households. The project is expected to help prevent the following emissions: 441,435 tons/year of CO\textsubscript{2}, 1,325 tons/year of NO\textsubscript{X}, 3,492 tons/year of SO\textsubscript{2} and 207 tons/year of PM\textsubscript{10}. The project will also promote the social and economic development of Pitiquito by generating approximately 500 temporary jobs during construction, as well as close to 50 permanent jobs during operation.
In September 2016, CENACE selected “El Mezquite Wind project” as part of the second auction conducted to build 2,871 MW of new renewable capacity worth US$4.0 billion.

El Mezquite Wind Energy Project is located in the municipality of Mina, Nuevo Leon, about 60 km northwest of the city of Monterrey. The wind project was developed by Cubico Sustainable Investments Limited and has an installed capacity of 250 MW with 100 turbines on approximately 4,893 hectares of privately-owned land.

The project is expected to produce approximately 890 GWh of zero-carbon electricity per year, equivalent to the demand of 114,325 households, while simultaneously preventing the emission of 343,777 metric tons of carbon dioxide (CO₂) per year, 711 metric tons of sulfur dioxide (SO₂) per year and 1,488 metric tons of nitrogen oxides (NOₓ) per year and 17 tons of particulate matter (PM₁₀) per year.

As a result of this project, wind energy will account for nearly 5.5% of electricity generation in Nuevo Leon.
Industrias Peñoles, the second largest mining company in Mexico, follows a strategy of energy self-sufficiency from renewable energy sources. For this reason, it supported the EDPR wind energy farm that would provide clean energy for Peñoles operations in the state of Coahuila, Mexico. In 2013, according to the Mexican Ministry of Energy (SENER), the generation capacity in Coahuila was 2,989.5 megawatts (MW), with 90% generated from coal. As a result of the EDPR wind project, renewable energy will account for almost 4% of gross power production in Coahuila, while the percentage of coal-fired power generation will drop from 90% to 87%.

The project comprises the design, construction and operation of a 199.5 MW wind farm with 95 turbines that will be developed in an area of approximately 4,753 hectares.

This project is expected to displace approximately 337,680 metric tons/year of carbon dioxide CO₂ and improve air quality by avoiding 2,312 metric tons per year of NOₓ, 1,696 metric tons per year of SO₂, and 160 metric tons/year of PM₁₀.

The electricity produced will provide service to the industrial, commercial and domestic sectors in the region. The wind farm has already produced in its first year 699 GWh of zero-carbon electricity, equivalent to the annual consumption of 89,791 households.
## EMISSION FACTORS

<table>
<thead>
<tr>
<th>State</th>
<th>Source</th>
<th>CO₂</th>
<th>NOₓ</th>
<th>SO₂</th>
<th>PM_{10}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coahuila</td>
<td>Based on PRODESEN 2018</td>
<td>483.09</td>
<td>3.31</td>
<td>2.43</td>
<td>0.23</td>
</tr>
<tr>
<td>Chihuahua</td>
<td></td>
<td>429.45</td>
<td>1.47</td>
<td>1.68</td>
<td>0.10</td>
</tr>
<tr>
<td>Nuevo Leon</td>
<td></td>
<td>386.27</td>
<td>1.67</td>
<td>0.80</td>
<td>0.02</td>
</tr>
<tr>
<td>Sonora</td>
<td></td>
<td>459.09</td>
<td>1.38</td>
<td>3.63</td>
<td>0.22</td>
</tr>
<tr>
<td>California</td>
<td>Based on EIA Electricity</td>
<td>215.2</td>
<td>0.32</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

## AVERAGE HOUSEHOLD SIZE

<table>
<thead>
<tr>
<th>State</th>
<th>Persons per Household in 2015</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coahuila</td>
<td>3.7</td>
<td>INEGI</td>
</tr>
<tr>
<td>Chihuahua</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td>Nuevo Leon</td>
<td>3.7</td>
<td>U.S. Census Bureau</td>
</tr>
<tr>
<td>Sonora</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>2.96</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES

PROJECT CERTIFICATION DOCUMENTS


EXTERNAL SOURCES

U.S. Energy Information Administration (EIA). Energy Consumption Estimates per Capita by End-Use Sector Ranked by State, 2017

https://www.eia.gov/electricity/state/california/

https://www.inegi.org.mx/app/areasgeograficas/?ag=26#tabMCcollapse-Indicadores


http://sien.energia.gob.mx/bdiController.do?action=cuadro&cvecua=16260001

https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=C

https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

World Health Organization (WHO), Ambient Air Pollution: A Global Assessment of Exposure and Burden of Disease, 2016 (p.68)

© A publication of the North American Development Bank

For further information about NADB’s Green Bond, please contact the Public Affairs department:
Jesse Hereford, Director of Public Affairs. Ph: +1 210.231.8000, E: jhereford@nadb.org

Photography: Cover and page 16: Courtesy of Acciona. All other photos: NADB

Design: Ildeliza Antonares

DISCLAIMERS

Background information only
The material in this document is general background information about the Bank’s activities current at the date of the document. It is information given in summary form and is not intended to be complete for analytical purposes.

No reliance
The material in this document is not intended to be relied upon as advice to investors or potential investors and does not take into consideration the investment objectives, financial situation or needs of any particular investor, which should be considered with professional advice when deciding if an investment is appropriate. This document does not constitute financial product advice.