

2020

GREEN  
BOND  
IMPACT  
REPORT





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# MESSAGE FROM MANAGEMENT

For over 25 years, the North American Development Bank (NADB) has been an innovator in the development and financing of environmental infrastructure projects throughout the U.S.-Mexico border region. Since 1994, NADB has financed 275 projects benefitting more than 18.5 million people.

Over this period, de-carbonizing the economy and tackling climate change has become a greater global priority, and environmental, social and governance (ESG) considerations have become increasingly important for capital market participants. Issuers and investors are increasingly looking for ways to make a positive impact through their investment decisions. NADB recognizes that green bonds often serve as an entry point for these efforts and is committed to transparent reporting of its green financing.

The NADB Green Bond Program—to date composed of three issuances—is part of our commitment to bring climate and other environmental projects to private investors. The 2020 Green Bond Impact Report is our second update to stakeholders and covers the allocation of proceeds and environmental impact from NADB’s three green bonds. Our goal is to share with our investors how the Bank is working in the dynamic U.S.-Mexico border region in green and climate-related investments and delivering results. As with the prior report, this report adheres to the Green Bond Principles and NADB’s own standards and commitments to transparency and making a positive environmental impact.

We are proud to present the results of the NADB Green Bond Program in our second Green Bond Impact Report covering our three green bond issues.



  
 Calixto Mateos Hanel  
 Managing Director



  
 John Beckham  
 Deputy Managing Director



  
 Salvador López Córdova  
 Chief Environmental Officer

## ABOUT NADB

NADB is a binational financial institution established and capitalized by the Governments of the United States and Mexico with the mandate to finance environmental infrastructure projects that preserve, protect or enhance the environment in the U.S.-Mexico border region.

NADB is headquartered in San Antonio, Texas in the United States and has an office in Ciudad Juarez, Chihuahua, Mexico. It began operations on November 10, 1994. The mandate of the Bank is defined in an agreement between the two governments (the [Charter](#)).

The projects financed by NADB must be located within 100 kilometers (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 (186 miles) south of the border in the Mexican states of Tamaulipas, Nuevo Leon, Coahuila, Chihuahua, Sonora and Baja California.

Each project undergoes a thorough certification and approval process that takes into consideration environmental, technical and financial criteria, as well as ensures public access to information. Each project must demonstrate compliance with all applicable environmental regulations, as well as help prevent, control or reduce environmental pollutants, improve the drinking water supply or protect flora and fauna, so as to improve human health, promote sustainable development or contribute to a higher quality of life.



# NADB GREEN BOND PROGRAM

Since 2018, NADB has issued three green bonds totaling US\$478 million that have supported 12 projects to date. All infrastructure projects financed with the proceeds of the green bonds are consistent with the Bank's [Green Bond Framework](#), first developed in 2018 and updated in 2020. The NADB Green Bond Framework is consistent with the rules established by the International Capital Market Association in the Green Bond Principles and received a positive [second party opinion](#) from an independent reviewer.

Projects financed through the program fall into one of four categories:



## Renewable Energy

- Wind
- Utility-scale solar
- Distributed solar



## Sustainable Water and Wastewater Management

- Water supply, treatment and distribution
- Wastewater collection, treatment and reuse
- Water conservation
- Storm drainage & flood control



## Energy Efficiency

- Municipal and commercial building upgrades
- Retrofitting
- Efficiency upgrades



## Pollution Prevention and Control

- Industrial emission reduction
- Waste treatment & disposal
- Site remediation

NADB's first green bond was a CHF 125 million bond maturing in 2026, issued in July 2018. All of the net proceeds from this issue, equivalent to US\$126 million, were allocated to six renewable energy projects.

NADB has issued two additional green bonds: a CHF 180 million bond maturing in 2028 and a CHF 160 million bond maturing in 2033, equivalent to US\$186 million and US\$166 million, respectively. Both were issued in 2020, and the proceeds are currently being allocated. As of December 2020, US\$185 million from these two issues have been allocated to 11 projects.

**Table 1: NADB Green Bond Allocation Summary**

Green Bond Issue	% Allocated	No. of Projects Supported	Greenhouse Emissions Avoided (CO <sub>2</sub> tons/year)
CHF 125M maturing 2026	100	6	1,580,609
CHF 180M maturing 2028	92	7	1,378,211
CHF 160M maturing 2033	13	4	819
<b>Total*</b>		<b>12</b>	

\* Five of the 12 projects have received allocations from more than one bond.

As of December 2020, renewable energy made up the largest portion of the green bond eligible projects—about 92% of the proceeds allocated to date. This allocation is consistent with the expertise the Bank has developed in renewable energy projects in recent years. Water projects are the second largest portion, in line with the historical priorities of the Bank.

**Table 2: Allocation by Sector**  
(USD Million, as of December 31, 2020)

	Renewable Energy	Sustainable Water & Wastewater Management	Energy Efficiency	Pollution Prevention and Control	Total Allocation
CHF 125M maturing 2026	\$ 126	\$ -	\$ -	\$ -	\$ 126
CHF 180M maturing 2028	160	11	-	-	172
CHF 160M maturing 2033	-	6	5	3	13
<b>Total</b>	<b>\$ 286</b>	<b>\$ 17</b>	<b>\$ 5</b>	<b>\$ 3</b>	<b>\$ 311</b>

**The Orejana Solar Park in Sonora, Mexico, is helping prevent the emission of an estimated 163,808 metric tons/year of CO<sub>2</sub>**



# USE OF PROCEEDS

This section presents the use of the green bond proceeds, to date, for each of the three bonds, including the financial allocations and the anticipated environmental benefits.

## Green Bond maturing 2026 (CHF125 million, equivalent to US\$126 million)

All the proceeds of this issue have been allocated to six renewable energy projects in Mexico and the United States. The table below summarizes the use of proceeds.

**Table 3: Green Bond Maturing 2026**  
**Summary of Allocation of Proceeds and Anticipated Impact**

Project	Sector	State, Country	Expected Impacts <sup>1</sup> GHG Emissions Avoided <sup>2</sup> (CO <sub>2</sub> tons/year)	Allocation to Bond (USD Million)	Share of Bond (%)	Bond Share of Project Costs (%)
EDPR Wind Farm	Renewable energy	Coah., Mexico	381,424	\$ 53	42	16
Puerto Libertad Solar Park	Renewable energy	Son., Mexico	440,390	34	27	9
El Mezquite Wind Farm	Renewable energy	N.L., Mexico	428,787	17	14	5
Santa Maria Solar Park	Renewable energy	Chih., Mexico	161,881	10	8	7
Orejana Solar Park	Renewable energy	Son., Mexico	163,808	8	7	7
SEPV Imperial Solar Park	Renewable energy	CA, USA	4,319	3	2	18
<b>Total</b>			<b>1,580,609</b>	<b>\$ 126</b>	<b>100</b>	

<sup>1</sup> Expected impact of entire project.

<sup>2</sup> Targets from the respective project certification and financing proposal.  
CO<sub>2</sub> tons/year – Carbon dioxide in tons per year, GHG – Greenhouse gases

### Green Bond Maturing in 2028 (CHF180 million, equivalent to US\$186 million)

Proceeds from this bond issued in May 2020 are still being allocated. As of December 2020, US\$172 million of the proceeds had been allocated to seven projects, including committed amounts that are still being disbursed. Some of the projects received allocations from the 2026 bond as well.

**Table 4: Green Bond Maturing in 2028  
Allocation to Date and Anticipated Impact**

Project	Sector	State, Country	Expected Impacts <sup>1</sup>			Allocation to Bond (USD Million)	Share of Bond (%)	Bond Share of Project Costs (%)
			GHG Emissions Avoided <sup>2</sup> (CO2 tons/year)	Wastewater Treatment Capacity <sup>2</sup> (lps)	Wastewater Served Population <sup>2</sup>			
Don Diego Solar Park	Renewable energy	Son., Mexico	169,443			\$ 100	54	77
El Mezquite Wind Energy	Renewable energy	N.L., Mexico	428,787			21	11	7
Santa Maria Solar Park	Renewable energy	Chih., Mexico	161,881			17	9	12
Orejana Solar Park	Renewable energy	Son., Mexico	163,808			16	8	13
Chihuahua WWTPs	Wastewater treatment	Chih., Mexico	9,583	2,375	809,232	11	6	76
SEPV Imperial Solar Park	Renewable energy	CA, USA	4,319			5	3	30
Puerto Libertad Solar Park	Renewable energy	Son., Mexico	440,390			1	1	
<b>Total</b>			<b>1,378,211</b>	<b>2,375</b>	<b>809,232</b>	<b>\$ 172</b>	<b>92</b>	
Pending allocation						\$ 14	8	

<sup>1</sup> Expected impact of entire project.

<sup>2</sup> Targets from respective project certification and financing proposal.

CO<sub>2</sub> – Carbon dioxide in tons per year, GHG – Greenhouse gases, lps – Liters per second, WWTPs – Wastewater treatment plants

## Green Bond Maturing in 2033 (CHF 160 million, equivalent to US\$166 million)

Proceeds from this bond issued in May 2020 are still in the process of being allocated. As of December 2020, US\$13 million from this issue had been allocated to four projects, including committed amounts that are still being disbursed.

**Table 5: Green Bond Maturing in 2033  
Allocation to Date and Anticipated Impact**

Project	Sector	State, Country	Expected Impacts <sup>1</sup>				Allocation to Bond (USD Million)	Share of Bond (%)	Bond Share of Project Costs (%)
			GHG Emissions Avoided <sup>2</sup> (CO <sub>2</sub> tons/year)	Water Treatment Capacity <sup>2</sup> (lps)	Water Served Population <sup>2</sup>	Solid Waste Management Capacity <sup>2</sup> (tons/day)			
Don Lee	Energy storage	CA, USA	819				\$ 5	3	63
Jim Hogg County	Drinking water	TX, USA		44	4,558		4	2	94
Maverick County	Solid waste	TX, USA				130	3	2	73
Presidio	Drinking water	TX, USA			4,000		2	1	33
<b>TOTAL</b>			819	44	8,558	130	\$ 13	8	
Pending allocation							\$ 153	92	

<sup>1</sup> Expected impact of entire project.

<sup>2</sup> Targets from the respective project certification and financing proposal.

CO<sub>2</sub> – Carbon dioxide in tons per year; GHG – Greenhouse gases; lps – Liters per second

**Wastewater Treatment Plants in Chihuahua, Mexico, have the capacity to treat 2,375 liters per second and serve a population of 809,232**



# ELIGIBLE PROJECTS AND IMPACT

Detailed information for all NADB financed projects, including the certification documents, is available on the NADB website.<sup>1</sup> NADB estimates the impact of the projects to be financed before certification and approval. Furthermore, NADB routinely verifies project impact after the initiation of operations.

The expected environmental impacts deriving from all the projects funded to date with the proceeds of the three NADB green bonds is summarized below.

## Renewable Energy



-  Installed capacity – **1,173 megawatts (MW)**
-  Annual energy production – **3,690 gigawatt-hours (GWh)**
-  GHG emissions avoided – **1,760,454 tons CO<sub>2</sub>/year**

## Sustainable Water and Wastewater Management



-  Drinking water treatment capacity – **44 liter per second (lps)**
-  Wastewater treatment capacity – **2,375 lps**
-  Water savings – **346 m<sup>3</sup>/day**
-  Served population – **817,790**

## Pollution Prevention and Control



-  New solid waste management capacity – **130 tons/day**

<sup>1</sup> Web links to the projects funded by the green bonds are provided in Tables 6 and 7.

This report contains project summaries and impact indicators for the 12 eligible projects that have been allocated funds as of December 31, 2020.

The projects are organized by sector and the data provided include the NADB loan amount, the total project investment cost, the amount of green bond proceeds allocated to each project and results indicators of anticipated environmental benefits.

Key indicators have been selected and quantified for each project type. The expected results are based on many well-researched assumptions, including anticipated production rates, state energy matrices and emission factors, and anticipated project scope. NADB has a Results Measurement System in place, which tracks and evaluates project performance with respect to targets for environmental results anticipated during the approval process. Due to the level of due diligence performed by NADB during project certification, the actual results of most projects are reasonably close to those anticipated at approval. Aggregate actual results tend to closely follow expected target results. However, the actual results of individual projects may show some level of positive or negative deviation from the expected results established during project certification.

The following tables describe the eligible projects financed by NADB green bonds.

**Table 6: Renewable Energy + Energy Efficiency**

Project	Country	Project Description	Expected Impacts <sup>1</sup>							Allocation to Green Bonds						
			Installed Capacity (MW <sub>ac</sub> )	Energy Production (GWh/yr)	GHG Emissions Avoided (tons CO <sub>2</sub> /yr)	Wastewater Treatment Capacity (lps)	Drinking Water Treatment Capacity (lps)	Water Savings (m <sup>3</sup> /day)	Water & Wastewater Serviced Population	Solid Waste Management Capacity (tons/day)	Total Project Cost (USD Million)	NADB Loan (USD Million)	2026 (USD Million)	2028 (USD Million)	2033 (USD Million)	
<a href="#">EDPR Wind Energy</a>	MX	Design, construction and operation of a wind energy farm of up to 199.5 MW in General Cepeda, Coahuila for a private purchase agreement.	200	699	381,424							340.3	89.8	53		
<a href="#">Puerto Libertad Solar Park</a>	MX	Design, construction and operation of a 317.5-MW solar park in Pitiquito, Sonora. The electricity, Clean Energy Certificates and generation capacity produced by a 180-MW portion are being purchased by CFE and the rest by other off-takers.	318	962	440,390							385.2	660	34	1	
<a href="#">EL Mezquite Wind Energy</a>	MX	Design, construction and operation of a 250-MW wind energy farm located in Mina, Nuevo Leon.	250	890	428,787							317.1	740	17	21	
<a href="#">Santa Maria Solar Park</a>	MX	Design, construction and operation of a 148-MW solar park in Galeana, Chihuahua. The electricity and Clean Energy Certificates generated by the project are being purchased by CFE.	148	394	161,881							138.4	27.3	10	17	
<a href="#">Orejana Solar Park</a>	MX	Design, construction and operation of a 125-MW solar park in Hermosillo, Sonora. The electricity and the Clean Energy Certificates generated by the project are being purchased by CFE.	125	354	163,808							124.0	24.3	8	16	
<a href="#">SEPV Imperial Solar Park</a>	US	Design, construction and operation of two solar facilities: SEPV Dixieland West (3.0 MW) and SEPV Dixieland East (2.0 MW) in Dixieland, CA. The electricity generated by the project is being purchased by Imperial Irrigation District.	5	15	4,319							17.3	11.0	3	5	
<a href="#">Don Diego Solar Park</a>	MX	Design, construction and operation of a 125-MW solar park in Benjamin Hill, Sonora.	125	369	169,443							130.0	100.0			100
<a href="#">Don Lee Energy Storage</a>	US	Clean energy project related to energy storage in southern California.	1.5		819							8.0	7.0			5

CFE = Mexican Federal Electricity Commission; MW<sub>ac</sub> = Megawatts in alternating current

**Table 7: Sustainable Water and Wastewater Management + Pollution Prevention and Control**

Project	Country	Project Description	Expected Impacts <sup>1</sup>							Allocation to Green Bonds				
			Installed Capacity (MW)	Energy Production (GWh/yr)	GHG Emissions Avoided (tons CO <sub>2</sub> /yr)	Wastewater Treatment Capacity (lps)	Drinking Water Treatment Capacity (lps)	Water Savings (m <sup>3</sup> /day)	Water & Wastewater Served Population	Solid Waste Management Capacity (tons/day)	Total Project Cost (USD Million)	NADB Loan (USD Million)	2026 (USD Million)	2028 (USD Million)
<a href="#">Potable water improvements in Jim Hogg County, TX</a>	US	Water infrastructure to address natural arsenic build up and replacement of water meters in the service area of Jim Hogg County, Texas.					44	43	4,558		4.3			4
<a href="#">Potable water improvements in Presidio, TX</a>	US	Construction of basic water infrastructure for Las Pampas Colonia, including water supply lines, a booster station, a storage tank and a transmission line.					303	4,000			4.5	1.5		2
<a href="#">Wastewater Treatment Plants + Cogeneration in Chihuahua</a>	MX	Rehabilitation and upgrade of the North and South Wastewater Treatment Plants (WWTP) with combined average capacity of 2,375 lps. Includes cogeneration power facility in the South WWTP.	1.3	8.5	9,583	2,375		809,232		14.7	11.2		11	
<a href="#">Landfill expansion in Maverick County, TX</a>	US	Expansion of the landfill by opening a third cell to provide capacity for managing the solid waste generated in the service area.									3.4	3.0		3

# PROJECT SELECTION AND ALLOCATION PROCESS

All NADB projects go through a certification process to ensure compliance with all applicable environmental regulations, as well as to ensure that the project will help prevent, control, or reduce environmental pollutants, improve the drinking water supply or protect flora and fauna, so as to improve human health, promote sustainable development or contribute to a higher quality of life.

The process includes the evaluation of technical, financial and environmental criteria, as well as ensuring public access to information, and the projects must be approved by the NADB Board of Directors, which includes representatives from the Mexican Ministry Environment and Natural Resources (SEMARNAT) and the U.S. Environmental Protection Agency (EPA). As part of the environmental criteria, all project financed by NADB must demonstrate not only compliance with applicable environmental regulations and clearance processes but must also demonstrate a positive impact on the environment. External consultants and risk advisors are retained for project evaluation when appropriate. During the approval process, NADB publishes the project proposal to receive feedback from the public and identify support or potential issues that may need to be addressed.

In addition to these requirements, the projects financed with the proceeds of green bonds must comply with the NADB Green Bond Framework. To this end, specialists at the Bank review the projects to identify those that meet the eligibility criteria established in the framework.

## Green Bond Framework

NADB uses its Green Bond Framework to select among its projects those that may be financed with the proceeds of green bonds. The Green Bond Framework requires projects that:

- a. Contribute to one or more of the high-level objectives of the 2020 Green Bond Principles (climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation and pollution prevention and control).
- b. Are in one of following four sectors: sustainable water and wastewater management, pollution prevention and control, renewable energy, or energy efficiency.
- c. Have had a disbursement in the 24 months preceding the issue of the green bond or will be financed following the issue date.

The NADB [Green Bond Framework](#) and the [second party opinion](#) are available on the Bank's website.

# NADB FINANCIAL SUMMARY

NADB is capitalized by the Governments of the United States and Mexico. As of December 31, 2020, the Bank is capitalized at US\$6 billion, of which US\$5.1 billion is callable capital and US\$475 million is paid-in capital.

**Table 8: NADB Capital<sup>1</sup>**

	2018	2019	2020
Total subscribed capital	\$ 6,000	\$ 6,000	\$ 6,000
<i>of which</i>			
Callable capital <sup>2</sup>	5,100	5,100	5,100
Qualified	2,493	2,493	2,238
Unqualified	2,607	2,607	2,862
Paid-in capital	415	415	475

<sup>1</sup> *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 guarantee obligations or obligations on borrowings of funds for inclusion in its capital resources as specified in the charter.

<sup>2</sup> *Qualified* capital shares are subject to the necessary legal requirements of each subscribing country. *Unqualified* capital shares have either been funded or authorized for purchase by the subscribing country.

NADB increases its ability to fund projects by issuing debt in international capital markets or with other financial institutions. At the end of 2020, NADB had US\$1.1 billion in debt.

Rating agencies recognize the strength and stability of NADB's financial indicators, its prudent credit management and conservative financial policies, as well as the support of its shareholders. Its current rating from Fitch is AA, underpinned by the Bank's excellent capitalization metrics, shareholder support and low risk profile. Also, Moody's Investor Service rates NADB at Aa1, reflecting the Bank's high capital adequacy and liquidity and strong support from its shareholders.

At the end of 2020, NADB had leveraged its US\$475 million in paid-in capital into US\$2.7 billion in financing for sustainable infrastructure projects. NADB has also managed US\$683.4 million in EPA grants, bringing the total number of projects funded to 275, representing a total investment of \$10.2 billion.



# APPENDIX

## Emission Factors

State	Source	Emission Factors in 2017 (tons/year)			
		CO <sub>2</sub>	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>
Coahuila		483.09	3.31	2.43	0.23
Chihuahua	Based on <a href="#">PRODESEN 2018</a>	429.45	1.47	1.68	0.10
Nuevo Leon		386.27	1.67	0.80	0.02
Sonora		459.09	1.38	3.63	0.22
California	Based on <a href="#">EIA Electricity</a>	215.20	0.32	Reported as 0.0	Not reported

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If you would like to learn more about NADB in general and our commitment to sustainability and green bonds, you will find detailed information at [NADB.org](http://NADB.org) or you can contact the Public Affairs Department:

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#### **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. These should be considered with professional advice when deciding if an investment is appropriate. This document does not constitute financial product advice.



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