



North American Development Bank

Banco de Desarrollo de América del Norte

Public Meeting of the Board of Directors

November 14, 2019
San Antonio, Texas

English Version

MR. HEREFORD: Good afternoon. Welcome to our Board meeting.

[TRANSLATED FROM SPANISH]¹

Welcome. Thanks for being with us, joining us, today for the Board meeting, public meeting.

[IN ENGLISH]

I'd like to first introduce our Board members, so you understand who is here joining us today.

We have...

[TRANSLATED FROM SPANISH]

...José de Luna Martínez, head of the Unit for Public Credit and manager of the Unit for International Affairs, Ministry of Finance and Public Credit.

[IN ENGLISH]

He also serves as our 2019 Board president.

We have Charles Moravec, director of Office of Multilateral Development Banks from the United States Department of Treasury.

[TRANSLATED FROM SPANISH]

Ambassador Mario Chacón Carrillo, general director for North America, Ministry of Foreign Affairs.

[IN ENGLISH]

Hugo Rodriguez, deputy assistant secretary from Mexico and Western Hemisphere Regional Economic Policy and Summit Issues; Bureau of Western Hemispheric Affairs of the United States Department of State.

¹ Text shown in blue indicates that the original comments were made in Spanish and were translated into English.

[TRANSLATED FROM SPANISH]

Rodolfo Godínez, head of the Unit for Coordination of International Affairs, Ministry of Environment and Natural Resources.

[IN ENGLISH]

Jane Nishida, deputy assistant administrator, Office of International and Tribal Affairs at the United States Environment Protection Agency.

The Honorable Jose Rodriguez, senator for the State of Texas.

[TRANSLATED FROM SPANISH]

Carlos de la Parra Rentería, director of EcoParque and research professor for the Department of Urban Studies and Environment at the Colegio de la Frontera Norte (COLEF).²

[IN ENGLISH]

Denise Moreno Ducheny, retired California state senator.

Calixto Mateos, North American Development Bank managing director, and Salvador López, North American Development Bank, chief environmental officer.

[APPLAUSE]

I would like to call up Consul Lluvia Ponce, Deputy Council for Economic and Community Affairs at the Mexican Consulate in San Antonio, to provide some welcoming remarks.

MS. LLUVIA PONCE: Thank you Jesse. Good afternoon. On behalf of the Consulate General of Mexico here in San Antonio and our acting Consul Norberto Terrazas, I want to thank NADBank for the kind invitation to be here today with you. And I want to take the opportunity to acknowledge the leadership and great work that Alex Hinojosa, Calixto Mateos and the team of NADBank are doing. I want to also recognize the presence here today of Ambassador Mario Chacón, Director General for North American Affairs at the Ministry of Foreign Affairs of Mexico.

So, for 25 years the North American Development Bank has played a key role in the development of environmental infrastructure towards the well-being of the border region with hundreds of projects under its belt and 17 million people benefitted throughout the work that they do.

It is very easy to lose perspective as to the impact of the Bank. That is why these meetings are always an eye opener. Just in the first half of 2019, US\$522 million were assigned in loans and grants among 48 projects in various stages of implementation. Of these funds, 76.5% have

² Mexican institute of scientific research and higher education specializing in U.S.-Mexico border issues.

already been disbursed to project sponsors. This sounds very easy, but it's a lot of follow-up, that's for sure.

What this extremely complex and sophisticated, *binational* institution and you are doing here today reshapes our communities. It actually improves our environment and saves valuable resources in benefit of both communities. Everything, one project at a time. It's a task that is just paramount.

As I commend all participants here for your efforts, I would also like to encourage you to keep up with the hard work and, furthermore, I do believe it's *fundamental* that you share your experiences and to be spoke—, outspoken sorry, as to the significant contributions generated through the NADBank funding. This is fundamental. We have to be a little bit more, let's say, vocal, as to what's being done here, so it's better known in both societies.

All of you play a key role in this continuous and necessary socialization process as a means towards—as actually a stronger organization in benefit of both societies. So, I look forward to the conversation that will take place here and thank you so much for the invitation.

[APPLAUSE]

MR. HEREFORD: I'd also like to take a second now to recognize some of you who traveled from far distances, some of the VIPs that are in the room with us.

[TRANSLATED FROM SPANISH]

Mayor of Zaragoza, Coahuila, Ángeles Flor Torres. Also, we have with us the mayor of Ciudad Acuña, Roberto de los Santos Vázquez. From the Municipality of Gustavo Díaz Ordaz, we have Mayor José Manuel López Hernández. We also have Leticia Peña Villarreal. From the Municipality of Ocampo, we have the mayor, Laura Mara Silva Fernández. From the Municipality of Guerrero, we have the mayor, Irasema Peña Ramírez. From Camargo, we have the mayor, Dr. Leticia Peña Villarreal. And then we have the councilman from the Municipality of Ciudad Juárez, Laura Rodríguez Mireles and councilman José Solís.

Thank you for joining us today.

[APPLAUSE]

[IN ENGLISH]

And with that, I will turn it over to our 2019 Board president,...

[TRANSLATED FROM SPANISH]

...José de Luna Martínez from the Ministry of Finance and Public Credit,...

[IN ENGLISH]

...for some introductory remarks.

MR. JOSÉ DE LUNA MARTINEZ: Yes. Thank you very much. Can you hear me?

UNIDENTIFIED VOICE: Yes.

MR. JOSÉ DE LUNA MARTINEZ: Okay. Well, first of all, let me say that it is a great pleasure to be here. This is the first time I come here, to this institution NADBank. Previously, I used to be responsible at the Ministry of Finance of Mexico for development banks, but now in my new role as head of the Public Credit Unit, I am responsible for international organizations. And for the Government of Mexico this is a very important institution. So I am really glad that this room is full because it shows that there is also, from your side, a lot of interest in the activities conducted by this institution.

Yesterday and today we had the Board meeting. We meet twice a year. And let me share with you a little bit some of the highlights of this Board meeting. The first one is actually very good news. We have a new managing director. And the new managing director is Mr. Calixto Mateos, who is here and whom I congratulate. And ask you to—

[APPLAUSE]

He is going to be the managing director for the next four years. So, we are very glad that we made this decision and now we are just formalizing this process.

Another good news is that today morning we approved seven projects, both in Mexico as well as the United States, that will provide additional infrastructure on both sides of the border. So, you will see more activities and you will see more projects being executed by this institution. So, it is really very good news.

And then also in the morning we looked at the performance of the institution. The Bank is healthy, it's sound, it's well administered, and we provided some recommendations in terms of monitoring and evaluation, in terms of its balanced scorecard, in terms of human resources, etc. So, we had a very productive session, and we also noted the fact that this institution is celebrating its 25th anniversary. And this is actually very good news for us because this is one of the few binational institutions that has been able to deliver well on its mandate.

Having said that, I would like to encourage you to participate in this meeting, to give us your feedback, your suggestions, also to pose questions, and to tell us what you think about this institution, and how this institution can better serve your communities. So, I really look forward to our conversations. Thank you very much.

[APPLAUSE]

MR. JESSE HERFORD: Thank you very much José.

I'd like to take a moment to recognize Jonathan Hyun, who represents U.S. Senator John Cornyn, who's been a big supporter of the Bank. Jonathan, please thank the senator for all his support in Washington.

And with that I will turn it over to our managing director, Calixto Mateos, for a brief status report on the Bank's 2019 activities. Calixto.

MR. CALIXTO MATEOS: Well, thank you Jesse. Thank you for joining us for today's North American Development Bank Board of Directors' Public Meeting. Your presence and involvement make this event even more meaningful as was mentioned. Before I provide an update on the Bank's activities, I would like to take a moment to personally extend my gratitude to the Board for naming me as managing director of the Bank. It is truly an honor and a humbling experience to know that with their guidance, we will continue to lead this fine institution in improving the lives of residents along the U.S.-Mexico border through the development and financing of environmental infrastructure. So, thank you, thank you very much.

And, I would go—and it's just a brief report of what the NADBank has achieved and a little bit of what was mentioned and how we're dealing with it as a bank.

If we go to the next slide, please. Oh, thank you. I have it.

[PAUSE]

Like that? Okay. So, the first thing is that the Bank is a healthy institution where we have almost a US\$2 billion balance. The cash and investments are above its minimum level. And the equity, in terms of the equity, the Bank is—the reserves are fully funded, and the undesignated retained earning balance increased to US\$83 million due to US\$25 million net income as of September. If we take a look at it in terms of how it's, you know, how we have developed in the past three years, you can see that it's been solid. There's been a continuous growth in the portfolio. There's steady capital, steady reserves and so, it's a very healthy institution.

Then if we take a look at our income statement, we have also very good results. The financial margin is expected to increase by US\$9 million due to loan and investment yield increase. The administration expenses are going to be according to budget, and provisions for loan losses account for the loan disbursements of the fourth quarter of 2019. There is a slight decrease in program expenses by US\$1.4 million due to a slower pace of grant disbursement. But those are under control—I mean—it's just the timing of it. Then if we see it in terms of the graph, you can see that mostly our income comes from the interest on our loans. We do have some income on our investments, of course, and some income related to fees that we charge for our services. And in terms of expenses, the biggest expense is the interest we pay for the funds we borrow in the market. The operational margin remains fairly stable. And then we have other expenses related to the programs, etc.

Our rating is a solid rating. It was reaffirmed this year by Fitch and Moody's, AA by Fitch and Aa+—but only 1 for Moody's. So, we're really healthy and very happy with this.

In terms of the results we've obtained, we have... Over these 25 years we have funded around 260 projects, which if you see it most of them are in water, if you see the number of projects on the first pie chart. Then if we see it in terms of the project cost, we have a little bit more projects in terms of clean energy because those projects are bigger. And in terms of the

investment we've done, it is about 50% in energies and like, 70... 80%... well other 40% in the water sector.

If we go to the capital that we have been entrusted with by both governments, we have been able to leverage the capital almost 20 times because the projects that we have been able to fund with this—we have provided loans for about US\$2.46 billion out of the US\$400 capital we have. And we have had, the value of these projects, I mean, the investment in those projects, is up to US\$8.65 billion. So that's one of the results.

As it was mentioned in this session, the Board approved seven projects, which will mean US\$168 million in financing, and the total investment of the projects is around US\$386 million.

In terms of the results, we've had over these years, we have had it in several sectors that we deal. Here's just a few examples. We had a project in Presidio, a project in Magdalena, another one in Gustavo Díaz Ordaz, another in Vinton, in Chihuahua, in Tijuana. And those have, in terms of water, you can see here how many people have been benefitted, how many miles of the waterline have been prepared, and you know how many connections, what are the water rights involved. And that's for each of the sectors. As you can see, we have delivered, as it was said on our mandate, and we keep investing in the border. This is the same in terms of clean energy and in terms of waste management, which are our sectors.

So, this is my report. I thank you. And let's get to the public meeting that I am pretty sure you want to express and give us some ideas. Thank you.

[APPLAUSE]

MR. JESSE HEREFORD: Thank you very much Calixto for that update.

I also would like to recognize, I saw Javier Salinas and Cassandra Mead from Senator Cruz's office, so thank you for joining us as well here today.

Now we get to the public comment section for the Board meeting today. I will call on the registered participants. If you haven't registered yet, please fill out a form so we can get you registered to speak. I'd like to remind all the participants to keep their comments to three minutes. And we have a microphone over there, on that side of the room, if you'd like to speak from the microphone.

So with that, I'd like to call on...

[TRANSLATED FROM SPANISH]

...the mayor of Camargo, Tamaulipas, Leticia Peña Villarreal, for comments.

We have the mic—ahh, yes, you can come through here.

MS. LETICIA PEÑA VILLAREAL: Good afternoon. My name is Leticia Peña Villarreal. I am the mayor of Ciudad Camargo, Tamaulipas. First, I want to thank NADBank for the financial

support it gave Camargo, to our municipality, for a wastewater treatment project, which is already in process. This construction work is already 20% complete. Everything is going very well. We are very happy with all this support that you have given us. I thank you on behalf of my municipality with all my heart. God bless you. Thank you.

[APPLAUSE]

MR. JESSE HEREFORD: Thank you very much.

[IN ENGLISH]

Next, I'd like to call on Phil Reeves, Director of Development from esVolta.

MR. PHIL REEVES: Hi, good afternoon. Thank you for having me here. José, thank you for the invitation to present here. I've got a couple slides. And I am here to talk about energy storage and specifically battery energy storage connected to our electrical grid.

So, esVolta is a relatively young company, 100% focused on grid connected energy storage. And we stay in projects for the full cycle. So, we originate finance, construct, operate and act as asset manager for energy storage projects. Right now, we have a couple projects operating, two projects going into construction—about US\$7 million investment for those—and about \$140 million to \$150 million worth of projects that are in late-stage development, and quite a large pipeline in earlier-stage development.

esVolta is committed to being an active member of the growing energy storage market and takes on the responsibility, with our competitors and other market participants, to really help establish regulations and good practices. Our projects support clean energy, and we're trying to help support clean energy with more clean projects with battery storage projects.

There is a lack of regulations just because the technology is so new, and this use of it is relatively new. So, we're helping, trying to help form common sense, good practices, for the adoption of energy storage resources as they become more and more common on our grid.

There's a lot of different things that energy storage can do, but the three main things it can do is: 1) you see a lot of solar projects—a lot of your investments are in solar projects and renewables. Solar is great at producing carbon-free megawatt hours, but a lot of times it's misaligned. It's producing energy when the grid doesn't need it. So, what battery energy storage can do is save it when it's being produced but not needed and then inject it into the grid later in the day. Solar produces a lot of energy right between—right in the middle of the day, between 11 a.m. and 1 p.m. And one use is to shift that energy into later in the afternoon when there's a higher need on the grid.

Separately, energy storage can act as a replacement for a gas-peaking resource. So, what I mean by that is there's a lot of relatively inefficient peakers that come on when it's right in the middle of the summer when grid need is really, really high. And a storage resource is usually only needed for a couple of hours, and so a battery energy storage resource can come on right between peak-need—between usually 3 and 7 p.m. or 4 and 8 p.m.

Another use that is being used more and more frequently is to replace investment in wires. So, instead of building new transmission assets, you can actually place a battery strategically to fix a grid need.

This slide just really shows what happens when the cost of goods is dropping, and the grid and a need is, and demand is growing. So the market projections are quite lofty. This is already being actualized. And over the next few years I foresee a lot of energy storage project, project opportunities to invest coming across your desks.

In California this is especially pronounced due to the large amount of renewables that both policy and economics have driven. You can see that the green line is what solar is producing on a typical day. The orange line that kind of peaks up to the right is what currently is really the main tool to levelize the grid and produce the energy that's needed when solar drops off. So, you can see that the orange line is producing. That's generally not carbon-free energy whereas the green line is.

Right across the bottom down here, this is what a battery is doing. So, a lot of times it's just smoothing what the solar is doing. But you can see in the late afternoon, right down here, the gas and the solar are counterbalancing each other, and so there's a grid operator trying to make sure the lights stay on. And so, the battery can be dispatched very, very quickly to levelize the grid and help the lights to stay on, and the voltage and the frequency stay balanced.

And a little bit about a project that we're going to bring your way here before the end of the year called Don Lee. It's in Escondido, California. The project is actually going to be located in an existing warehouse. So, it's a mixed-tenant warehouse. We'll just take a portion of that warehouse. So, there's really negligible environmental impact. We don't have to disturb any undeveloped land. We literally just take up space in the warehouse, install our batteries and make our connection to the grid. It's a 6 ½-MW project. It has a four-hour system duration in Escondido, California. It's about US\$8 million worth of CAPEX all in. And we have a ten-year off-take contract with San Diego Gas & Electric.

Thank you very much.

[APPLAUSE]

MR. JESSE HEREFORD: Thank you very much for that. The next public comment speaker is Jorge Romero, accounting manager from Muriel Renovables.

MR. JORGE ROMERO MURIEL: Hello everyone. Buenas tardes a todos. Thanks to NADBank for allowing me to be here presenting a project that we've been preliminarily assessing in the last months.

So, the project is about a combined heat and power project, which has been developed in partnership between Muriel Renewables in Mexico and our local partner, Grupo Chihuahua. Basically, it will supply electricity and steam to our client, which is a candy manufacturer in

Ciudad Juárez. It is expected to achieve COD by the end of 2020.³ The project is basically a 4-MW project. The CAPEX is a little bit over 4.5 million. It is considered distributed generation, so it avoids distribution and transmission fees and, therefore, the losses associated with that distribution and transport. It will generate basically 27 gigawatt-hours of electricity, which 75% will go to our client and 25% will go to the Mexican market. And in addition to that, we will have 11 gigawatt-hours of heat producing in form of steam, which allows our client to reduce their natural gas consumption in a 25%. In addition to that, it's considered efficient cogeneration under Mexican law and is entitled to receive a certain amount of clean energy certificate.

So, during this period in which we were assessing the project with the NADBank team, we were comparing the project with the actual Mexican electric market, and we observed that the net emissions of the project are over 30% under the average of the market. And the amount of energy that we are required to generate a megawatt-hour of electricity is around 20, below 20% of what the average Mexican market requires.

So, why were we speaking, assessing this project with NADBank? Basically, the technology seems to be under the NADBank eligibility criteria. We've observed that there is a number of emission reductions, which could be interesting under those NADBank requirements. And it lies obviously under the eligibility area of the NADBank. The project would be probably too small to be financed by a commercial bank under a project financing scheme. And what we've observed—and I want to thank the NADBank team—is that the team has been very proactive during the assessment of the opportunity, assisting us on the project assessment for the financing part.

So, this is all about the project. Hopefully we can bring it, and it will be on the list in the next session. Thank you very much.

[APPLAUSE]

MR. JESSE HERFORD: Before I go on, I'd like to take a moment to recognize from Congressman Hurd office, Stacy Arteaga. Stacy, thank you for being here. Congressman Hurd has been a big proponent of the Bank and a good friend to us as well.

Continuing along, I'd like to introduce...

[TRANSLATED FROM SPANISH]

...Javier Ferrero, who is representing the Government of the State of Chihuahua,...

[IN ENGLISH]

...to come up and say a few words.

[TRANSLATED FROM SPANISH]

³ COD stands for commercial operation date.

MR. JAVIER FERRERO: Thank you. On behalf of the state government, of the State Water and Wastewater Board, we wanted to thank NADBank for all the support they gave us, especially with the approval of the loan that was made to the company Aguas de Reuso y Energías Renovables, who won the bid for the rehabilitation of water treatment plants in the city of Chihuahua. This loan is going to allow us to advance in a much clearer way in this important project for the city of Chihuahua. Also, to thank Dr. Mateos for joining us in Ciudad Juárez for the start-up of construction of the sewer project in Loma Blanca a couple of months ago. We are very grateful to you for being there with us.

But above all, to invite the Bank to continue participating with the Government of Chihuahua, mainly in four projects that we are proposing: one, the wastewater collection system in downtown Ojinaga; the sewer mains in Ciudad Juárez—we would be working with you hand in hand; improving public transportation in Ciudad Juárez—there is a challenge there with environmental issues; and finally, this Monday, we initiated the project to design a stormwater management utility where the Bank is providing significant support for technical advisory services, and we want this utility to be important for Ciudad Juárez and this significant or big problem we have in managing rainwater, that it helps us stop it. Thank you. We look forward to working together with you.

[APPLAUSE]

[IN ENGLISH]

MR. JESSE HEREFORD: Next up is...

[TRANSLATED FROM SPANISH]

...councilwoman from Juárez, Chihuahua, Laura Yanelly Rodríguez Mireles.

MS. LAURA YANELLY RODRÍGUEZ MIRELES: Thank you. First of all, I want to thank you for the opportunity to participate and congratulate NADBank for the work it does. There are many problems to address and, well, few resources, so their work is of the utmost importance and of great help to everyone.

Ciudad Juárez is considered one of the most polluted cities in Mexico, according to the needs assessment for the development of the ProAire program. The neglect or care of this region, well, directly affects neighboring cities such as El Paso, Texas, and Sunland Park, New Mexico.

The artisanal brick industry in Ciudad Juárez is a fixed source that affects the air quality of both cities. Among other pollutants, it emits greenhouse gases that impact climate change. In this micro-industry, there has been no modernization of the production processes, in addition to using fuels that greatly impact the environment in rudimentary artisanal ovens, the vast majority, with very low energy efficiency.

Currently, the census was just updated by the Autonomous University of Ciudad Juárez. There are 169 brickmakers operating in 199 kilns scattered over nine sectors. Of those nine, seven are located within the urban area, generating close to two tons of particulate pollutants

affecting the health of the most vulnerable population: children, pregnant women and the elderly.

For more than 25 years efforts have been made to address this problem. Several projects have been tried, for example, gas ovens were tried in '94, circular ovens in '98, green ovens known as MK2 in 2000. Currently, 20 of them are in operation. However, today we see that brickmakers are not adopting technologies the way they should, perhaps because of the lack of regulation and also due to the lack of awareness of how their work affects the environment.

For that reason, we have decided to participate in the Border 2020 program call for proposals, by proposing to implement a community environmental education program with specific actions to introduce the use of new work technologies in the brick industry that will allow us to minimize air pollution through the adoption and joint work of the community.

Environmental education represents an alternative to the socio-environmental problems found in the brickmaking industry. That is, through educational processes aimed at people knowing, understanding and perceiving the ways in which their geographical spaces interact, their causes and consequences, in order to act in a unified manner above all and bring about changes in society with practices compatible with protecting and improving the environment, with an ethic that guides the educational process towards building sustainable societies. We welcome the opportunity to initiate these actions that may solve the aforesaid problem. May this be the start of a series of projects. Thank you.

[APPLAUSE]

MR. JESSE HEREFORD: Now we call on Councilman José Ubaldo Solís, also from Juárez, Chihuahua.

MR. JOSÉ UBALDO SOLÍS: Good afternoon everyone. I am very grateful for the invitation and congratulations to the North American Development Bank. My proposition is that we have to change the palette of vegetation in Juárez because it is greatly impacting our water consumption. One of the biggest challenges we have as a municipal government is, without a doubt, to improve the natural and ecological environment around us.

Today, to survive in this desert area, one of the greatest challenges we must address is supplying water to more than one and a half million residents, in addition to our flora and our fauna. To accomplish this huge task, we need to extract water from the Bolsón del Hueco, which supplies the sister cities of Ciudad Juárez and El Paso, Texas, with this vital liquid.

Currently, the region is characterized because of the urban parks our city has that cover large tracts of land and are divided into public and private parks, walkways, gardens, medians, existing trees native to our region now—such as the male mulberry, lilacs—consume large volumes of water, in addition to the natural grasses that we use. To keep our flora alive, we must extract more water than we should because those plants consume water, too much water, in the summer. There is a popular belief that these trees provide more shade, but they also cause allergies, respiratory problems in infants, adults and the elderly.

As a city we seek to improve the palette of vegetation, along with green infrastructure. This infrastructure has been implemented in Phoenix, in Tucson, in Hermosillo, Sonora, in Tijuana, Baja California. We urgently need to implement or gradually begin to change our palette of vegetation, in Ciudad Juárez, along with, a green culture where all Juárez residents may improve the quality of life and this, without a doubt, is about survival.

One approach will be to amend the regulations for parks and gardens in order to succeed in replanting our flora. Our suggested flora would be the red oak, the Russian olive, greenwood, Italian wood, sorry, Italian pine, weeping willow, which are those that use water every other week. It is worth noting that our neighboring City of El Paso has established and regulated the cultivation and preservation of endemic plants, that are from a desert region. Without a doubt, it is interesting that we may soon be able to implement these changes, which will support the reduction and extraction of water and the health of the residents of Juárez and El Paso. Thank you.

[APPLAUSE]

[IN ENGLISH]

MR. JESSE HERFORD: Next, I would like to call on Joanna Eagen and Collin Goddard from Zero Mass Water.

MR. COLLIN GODDARD: Hi, good afternoon. My name is Colin Goddard. This is my colleague, Joanna Eagan. We're with Zero Mass Water. Thank you for the opportunity to give a few remarks.

So, stepping back a little bit, I think many people in this room know how important clean drinking water is to humanity, right? And the challenges that we face are growing even more acute with fundamental water scarcity, significant contamination and challenges to infrastructure. And it is with this problem statement that our company was formed.

So, we have made such massive progress in elements of communication, of energy, to leapfrog traditional centralized infrastructure systems and push this to the edge of the grid, push this to decentralized systems exactly where it is needed. And yet with water we're still essentially living in the Roman era. We wait for rain to fall, for snow to fall, into the mountains, to go into streams, to go into the ground, to be pumped into centralized treatment stations and then distributed into a pipe network. Right, all these steps in this supply chain cause so many opportunities for a change in climate, for aging infrastructure, to challenge that water and make it undrinkable to humans at the end. And again, this is where we have come in.

What we have developed is a new category of technology called a hydropanel. So, it looks like a solar panel, but instead of making electricity, it creates its own water supply using the power of the sun and the humidity in the air. So, again, this is not cleaning dirty water. This is making new clean water under its own power without any external power connections or water connections. You point these towards the sun, and you have your own drinking water supply.

So, you do not need any existing infrastructure to establish these panels and locate them. All you need is clean access to the sun. These can be put in dense urban areas. They can be put in the middle of the desert and create your own clean drinking water supply. And these are applicable in a broad variety of environmental conditions, even in very, very dry and arid locations. We are based in Phoenix, Arizona. We say if we can make water in the middle of the Sonoran Desert, we can make water anywhere.

And to date, we have executed hundreds of projects in 35 countries around the world—everything from small two-panel residential systems to cover the drinking water for a family to large-scale water farms to cover entire communities, and have been partners with USAID, Conservation International and the Asian and Interamerican Development Banks.⁴

Next slide.

And so the community water farm is what we are here to talk more about, right? This can provide a community its own means of water supply. They can have this locally, independent of any external systems. And so, this is particularly compelling for communities that are struggling to leverage sufficient economies of scale to justify massive capital projects, where this can be a small, nimble, distributed, decentralized system providing them their own water supply. So, while this looks like a regular solar farm, this is actually making water. This one is in the middle of the Arabian Desert, outside of Dubai.

MS. JOANNA EAGEN: So, as I am sure many of you in this room are well aware of the challenges that many of the *colonias* face with the lack of infrastructure.⁵ And so, what that means is not only do they have a challenge with water access, but it poses negative health outcomes as well. So many of the traditional solutions, including infrastructure development plans, can be very costly and require multiple years of development. And so, the traditional and the current solution that many turn to in the *colonias* is to go procure bottled water. In addition to that, they're going to haul water, as well as turning to private wells that pose a threat from a water contamination perspective, as well as a resiliency perspective in times of drought.

So, what we propose to do, as it relates to the *colonias*, is provide our source hydropanels as an immediate solution. So, we have the ability to deploy and install and complete a project within a matter of weeks. So even if there is a long-term infrastructure development plan in the works, we serve as that short-term solution, although the technology is a 15-year life, and so we see it as a long-term solution as well.

Like Colin mentioned, it is a really high-quality water. Whereas we are not taking a dirty water and purifying this to make it clean. It's a pure water from the start. On top of that, there is a technology inside each of the hydropanel's reservoir that allows for real-time monitoring. So, we can tell the exact performance and the water quality real time to add that level of unprecedented transparency.

⁴ U.S. Agency for International Development (USAID).

⁵ *Colonia* refers to housing developments in the U.S. border region that lack basic public services, such as water, wastewater, electricity, paved roads and public lighting.

And then from a resiliency perspective, it is resilient in the face of natural disasters. So, we are providing that water every single day despite other economic and environmental conditions. It's cost effective. It is dramatically cheaper than an infrastructure plan, and typically much more affordable than the alternatives, including bottled water today. And finally, it allows for that local aspect of community ownership and allowing for the *colonias* to provide their own water supply.

So, this is a project we've been working on in Webb County for about two years now with two *colonias*, specifically Santa Teresita and La Presa. And we have been scoping this out. We have already done two pilot projects at the community centers. And what we've understood from the community is they loved the solution. They loved the water. We now are looking for ways to scale that throughout both of these *colonias* and additional *colonias*. So, we are seeking support from institutions like the North American Development Bank, specifically the CAP program, to be able to scale this. And so what we're looking to do is to provide a centralized location such as at the community center where residents have a very convenient option to go fill up their drinking water. So, just to give you an example, about 200 hydropanels in an individual *colonia* will produce about 700 liters of water per day. And that can be scaled up. You can do about 1 million liters of water on about an acre of land. So, for about a half a million dollars, we have the ability to provide all of the drinking water needs for an entire *colonia* and that can be completed within a matter of just a few weeks. So, we see it as an immediate solution, and we hope to replicate this throughout the *colonias* with banks and partners such as the NADBank.

So, finally, just to touch on a project that is interesting for two reasons: 1) being the local aspect that Patty Mills from the San Antonio Spurs partnered with the NBA and Zero Mass Water to bring clean drinking water solutions to indigenous communities in Australia.⁶ So, many of these communities face the exact problem that the *colonias* face, with lack of infrastructure and water contamination threats. So, he's already scaled this into six communities in Australia, very similar to what we're looking to do in the *colonias*.

And that's it. Thank you very much for your time.

[APPLAUSE]

[TRANSLATED FROM SPANISH]

MR. JESSE HEREFORD: Now we call on Adrián Fernández Garza, Secretary of Development for the City of Guadalupe, Nuevo León.

MR. ADRIÁN FERNÁNDEZ GARZA: Thank you very much. Thank you NADBank members on the dais. Good afternoon everyone. I come on behalf of Mayor Cristina Díaz Salazar, Mayor of Guadalupe, Nuevo León. And for those who do not know where this city is, here we have three very important icons. One is a natural monument, which is the Cerro de la Silla.⁷ Another is the most modern stadium in Latin America, the BBVA Stadium, home to the Monterrey Rayados,⁸ and the other is the La Silla River, which is what I have come to talk to you about.

⁶ National Basketball Association (NBA).

⁷ Distinctive mountain range in the shape of a saddle located outside the metropolitan area of Monterrey, Leon.

⁸ Rayados de Monterrey are the local soccer team.

The La Silla River is the only live river in the Monterrey metropolitan area. It runs through the city of Guadalupe for about 13 km. In it we can find more than a thousand junipers that are over 300 years old, and we can also find more than 60 species of fauna. There are four parks along the entire length of this river: Río la Silla Park, Tolteca Park, Ecological Park and Pipo Park. So far, so good. But what happened in 2010 with Hurricane Alex? And what happened this past September with the storm Fernando? The river has been filled up with materials that disrupt its natural course. We really need to dredge it to give it the necessary depth and, in the event of a storm, keep the water from overflowing, like has already happened.

By securing a loan, or any type of support, the plan would be to form a trust or install a board to regulate and protect the project. Thinking of a strategy to make the project sustainable, we could study plans that have been successful in other cities. Such as for example here in San Antonio with the Riverwalk.

The benefits we are seeking is improving spaces that generate clean air in the middle of an urban city; freeing up the course of the river and thus, preventing overflows in the event of a storm; attracting tourism and generating employment; and increased value of neighboring properties.

And here are some images of the river, of all the damage that has been caused by storms or hurricanes. Since 2010, we have been making constant improvement, but the attributes and financing of a municipality are not sufficient for a project of this magnitude. We are talking about, at best, a project of about US\$20 million.

Well, okay. Here we are, interested in raising our hand and going through necessary formalities to submit this project that will provide many benefits for residents and for all the visitors to the city of Guadalupe and the entire metropolitan area of Monterrey.

On behalf of Mayor Cristina Díaz Salazar, thank you very much everyone for your time and have a nice afternoon.

[APPLAUSE]

[IN ENGLISH]

MR. JESSE HERFORD: Next I'd like to call on Jose Portillo, city administrator for the City of Presidio, Texas.

MR. JOSE PORTILLO: Thank you very much Jesse. Board of Directors, let me first say: thank you. My name is Jose Portillo, I am the city administrator for the City of Presidio. Presidio is in Presidio County, far west Texas; better known for the parks: Big Bend, state and federal. Nestled off in that little desert is a little town called Presidio, right on the Texas-Mexico border, Rio Grande. Our neighbors is Ojinaga, Chihuahua, Mexico.

The project that you approved for us—again, thank you—is, actually started out as a *colonia* project. And if you were to drive down US 67 on your way to Presidio, every once in a while

you'd see a pickup truck or you'd see an old, beat-up car pulling a trailer and it'd have a water tank on it. They would come—they would drive down from the mountains, come into Presidio, pick up their water—drinking water and other, shower, to water their plants—and then they'd go back up the hill. This initially started with the BECC looking at the *colonia* itself.⁹ But when they look at it—Presidio's never been an easy place to do anything—they went and saw a bigger picture. They started asking us for more information. And the more we talked, and the more we realized we had a water loss problem. We didn't have...we only had one water tank. The water tank was 30 years old. So we had... and we had water pressure issues. So, each one kept tumbling over. The good thing with the BECC and the NADBank and EPA—which all three have come together to help us with this project—they have found a solution for it. And, again, I thank you.

We look forward to this project, to its start and its completion. And if it wasn't for institutions like yourself, we couldn't make this happen. So again, from all the residents in Presidio County, thank you very much.

[APPLAUSE]

[TRANSLATED FROM SPANISH]

MR. JESSE HEREFORD: Now I would call on Mr. José Abel Palacios Martínez, Director of Urban Development for Mier, Tamaulipas.

MR. JOSÉ ABEL PALACIOS MARTÍNEZ: Good afternoon everyone. Mier is a town on the border of Mexico and the United States. It does not have an international bridge. Probably no one knows it. But yes, all of our drinking water services are based on the Rio Grande. That's where we get our water. And at the same time, wastewater discharges are not discharged directly into the Rio Grande, they are discharged into the Alamo River, which flows into the Rio Grande 2 km downstream. Right now, we have a very serious problem, as our general collector—which conveys this wastewater to the general lift station and then from the lift station, it is pumped to an oxidation pond for treatment—the collector collapsed on us. We've been enduring this problem for four years. We have tried to fix it in various ways. The resources of the Municipality are insufficient. And the truth is that we are concerned about the pollution that we are causing in the Rio Grande, right?

I know this... I would have liked to bring you information, locations, issues, photographs. I have everything. And I'm going to leave it on a memory stick, a USB. But I would like to establish contact, right, with whoever could help us to solve this, which concerns all of us. Thank you.

[APPLAUSE]

MR. JESSE HEREFORD: I now call on Jorge Herrera, Technical Operations Manager of COMAPA-Reynosa, Tamaulipas.¹⁰

⁹ Border Environment Cooperation Commission (BECC).

¹⁰ Local water utility, *Comisión de Agua Potable y Alcantarillado (COMAPA) de Reynosa, Tamaulipas*.

MR. JORGE HERRERA BUSTAMANTE: Good afternoon. Jorge Herrera Bustamante from Reynosa, Tamaulipas. I am personally representing Mr. Luis Pinto Covarrubias, the general manager of the Tamaulipas state water commission.

I want to tell you that before entering this meeting, I received a call from the Governor of our state, Mr. Francisco Javier García Cabeza de Vaca. He asked me, very specifically, three points: number one to congratulate the Board of Directors of the Bank for this great work, for this example of success that Tamaulipas has experienced with the Bank for 25 years. He was also informed by Mr. Pinto of the projects that have just been approved and asks that the projects under analysis, that are in certification for the benefit of Tamaulipas, may subsequently continue to be approved.

Proof of this success in Tamaulipas is the projects that are currently being carried out. We have in Reynosa the construction of two wastewater lift stations that are very important: No. 1 and No. 278. These stations will help to completely clean up the area closest to the Rio Grande in order to discharge the water to our Wastewater Treatment Plant No. 1.

There is, as our mayor of Camargo, Tamaulipas rightly stated, a very important project for that city under development, which is also related to wastewater treatment, the construction of a lift station with a force main and some wastewater treatment ponds. In the near future, here with us our mayor of Díaz Ordaz is about to initiate a project similar to that of Camargo, but extremely important, to treat wastewater and not pollute the Rio Grande.

I want to—it's not a commercial for the Bank—but the truth is that he strongly urged me to congratulate the Bank for all the support that the state has received. And not just in the border municipalities. A project is about to start up in a municipality in the middle of the state that is a purely dedicated to livestock, but with drinking water problems, and a drinking water project is about to start, to drill a deep well in the municipality of Soto la Marina. He wants to thank you very much for all your support for the state of Tamaulipas.

And okay, well, speaking specifically of Reynosa, right now we have, as I said, two projects under development for the municipality of Reynosa. But we also have projects in the process of being submitted for certification, to rehabilitate all the sewer mains and lines in downtown Reynosa. We have been participating in coordination with the state government and the federal government, specifically with the National Water Commission to carry out these projects and complete our treatment plants.

Reynosa is the largest city in the state. We treat 1,800 liters per second of wastewater daily. The problem of drinking water is a problem that, in the coming years, is going to become a crisis for many municipalities, especially on the border. Our supply sources are very limited. This year, for our next early agricultural cycle, which is 2020 for District 025, there will be no irrigation for those lands due to very low levels in the La Falcón Reservoir. The water is mainly allocated for urban use, and the... the owners of the water rights are increasingly demanding that we, well, that we don't waste it. They say: 'You don't give it to us to irrigate our land, and yes you throw it away and waste it.'

So, we have projects to be become more efficient in treating water. The governor has just announced a very important investment for three water utilities in Tamaulipas—Tampico,

Ciudad Victoria and Reynosa—which have water supply problems, and in the next few days he’s going to announce, he’s going to invest more than \$600 million pesos in these three utilities, in projects, with 90% going to supply drinking water in these cities.

In addition to that... and sharing information as I mentioned with the federal government, they are about to certify the project for Treatment Plant No. 2 in Reynosa. We are working with you, with the Bank, to be able to find a solution for an incomplete project in the city of Río Bravo, Tamaulipas. Considerable progress has been made on the issue, and we hope that the Bank will soon decide to complete this important infrastructure project that has not been able to move forward.

I also want to express the gratitude of the mayor of Reynosa, Dr. Maki Esther Ortíz Domínguez, whose personal representative I was expecting but who has not arrived. I’m doing it on his and her behalf, for the projects that are coming to fruition in Reynosa. Thank you very much for your attention and congratulations on these 25 years of work.

[APPLAUSE]

MR. JESSE HEREFORD: Now I would call on Dr. Leticia Peña Villarreal, mayor of Camargo, and Mr. Omar López Gutiérrez, manager of COMAPA, for a brief presentation.

MR. OMAR LÓPEZ GUTIÉRREZ: Yes, good afternoon. Here we are going to present the problem of a subdivision that we have, that flooded. But what I want to see is—right now we have a project that is about to start up, which is the oxidation ponds and a lift station. So, what we want is to expand that project that the Bank already has, which is already under construction, right now the lift station for both wastewater and storm water, and we want to pipe that water, get that water out of that neighborhood and convey it through that same canal. But we need to make an adjustment to the project that is already about to start up.

Those are the problems in our subdivision. The water has, well, practically no outlet. The water remains stagnant there. There is no outlet anywhere. These are the images.

So, we have a lot of problems, right? Because they are, it’s health, economical and the sewage because it is also still there. So, what we want right now is to adapt the project that is already in place, which is already under construction, and try to improve it so that it can remove the stormwater from that neighborhood and convey it to the river, okay. More than anything, what we want is to adapt the project that is already exists for the oxidation ponds, which also includes the lift station and force main. That's all. That's the cost of the construction, okay? Thanks.

[APPLAUSE]

[IN ENGLISH]

MR. JESSE HEREFORD: Is there anyone else who would like to make a public comment?

[TRANSLATED FROM SPANISH]

Is there anyone else who would like to make a public comment here in the Board meeting?

[PAUSE]

[IN ENGLISH]

Okay, seeing none, we're going to get—

[TRANSLATED FROM SPANISH]

Ah, can you please come up?

UNKOWN FEMALE VOICE: Good afternoon. Thank you so much for the invitation. From Ocampo, Coahuila, the largest municipality in the state of Coahuila and the third largest in Mexico. I would like—it is the first time that we have attended this meeting, and we would very much like you to consider any projects that we might be able to present.

We border the United States through El Ejido Boquillas del Carmen, across from Big Bend Park. So, for us it is very important to support the border area through projects that have to do with water, with electricity, because there is no electricity, very little water, and we also have the issue, in the center of the municipality, of drainage...of drainage both in Laguna del Rey and in the municipality of Ocampo.

Therefore, I thank you very much for allowing us to be here. And hopefully you will give us the opportunity to present the needs of our municipality to be considered as an opportunity for the development of our communities. Thank you very much for this opportunity.

[APPLAUSE]

[IN ENGLISH]

MR. JESSE HEREFORD: Is there any other—

[TRANSLATED FROM SPANISH]

Come on up please.

MR. JOSÉ MANUEL LÓPEZ: Good afternoon. I am José Manuel López Hernández. I am the mayor of Gustavo Díaz Ordaz and, first of all, I want to thank the entire Technical Board, the Board of the North American Development Bank, because Gustavo Díaz Ordaz, for those who don't where it is, it borders the United States and there is, we cross with a ferry.

I want to tell you that we are very happy about the approval of a wastewater project that is about to start up. This large project, uh,... and basically its importance lies in the fact that this project will, undoubtedly serve to clean up something that had been under consideration for a long time and that is just about to be carried out.

Thank you very much. I want to thank you all because I know that you all did everything possible to make this project a reality. We are very happy that it is about to start up... the supervision for the—the start-up even of the construction work. And we are tangible proof that your work is coming to fruition and is being done for the benefit of this great community, of this great U.S.-Mexico border. Thank you very much everyone.

[APPLAUSE]

[IN ENGLISH]

MR. JESSE HERFORD: Is there anyone else that'd like to make a public comment before we close the public comment period for the meeting?

[TRANSLATED FROM SPANISH]

Anyone else?

[IN ENGLISH]

Okay. With that, we're...

[TRANSLATED FROM SPANISH]

UNKNOWN VOICE: One more, Jesse.

MR. JESSE HERFORD: Oh, another one? Please.

[LAUGHTER]

MR. GREGORIO IBARREN: Hello, good afternoon everyone. My name is Gregorio Ibarren. I'm from Frontera, Coahuila. Frontera, for those who do not know where it is located, is approximately 250 km from the border with Eagle Pass. I just, I'm par—I am First Councilman of Frontera, Coahuila. I have the drinking water portfolio. I assumed the public service function in January.

So, Frontera has a totally polluted stream. It is 6,000 meters long. The entire 6,000 meters run through the entire city. Nearby companies, Altos Hornos de México, well—I don't know why they haven't been sanctioned. They, all the companies, discharge, well, all the brush. So, I've worked these seven months with my doctorate colleagues. We are presenting a project for the proper [unintelligible] and desilting of this stream. The cover, why the cover? Because with a cover, obviously you do not have contact with the brush and with diseases. I also did a preliminary study of the bank of the entire stream. So, the project will cost \$520 million pesos. A federal representative from my district, Representative Melva Farías, just called me 10 days ago and told me that it has now been approved.

So, well, I would like—I'm taking the opportunity you have given me here—in the event the Mexican Congress does not approve in any other way, well, I wanted to speak so that I could present this project to you. I have it completely done. There are 187 pages, like a master's or

doctoral thesis. It has all the specifications, the seven phases of each of the projects that are needed, everything, all the measurements.

So, well, thank you and congratulations. By the grace of God, I'm here,... uh to,... to thank you and well thank you very much. And I would like—well, I took the floor, no? At the end. I wasn't going to raise my hand anymore. But now thanks to—you hadn't seen me but here they saw me. So, thank you, congratulations and may God continue to bless all of you and everyone to promote projects and so that we may continue growing as human beings and as a joint community in different countries.

[APPLAUSE]

MR. JESSE HEREFORD: *Anyone else?*

[IN ENGLISH]

Anyone else?

[LAUGHTER]

Going once... Twice... All right.

As was mentioned, this is the 25th anniversary of the creation of the North American Development Bank. As you know, the Bank was created by the Governments of the United States and Mexico in a joint effort to help preserve, protect and enhance the environment of the U.S.-Mexico border region in order to advance the well-being of border communities. The NADBank Board and Management are pleased to take this opportunity before we close the meeting, to commemorate the 25th anniversary with a very brief ceremony.

So with that, I would like to turn it over to our Board president...

[TRANSLATED FROM SPANISH]

...José de Luna Martínez, from the Ministry of Finance and Public Credit, for a few words.

[IN ENGLISH]

MR. JOSÉ DE LUNA MARTÍNEZ: Thank you.

For us it's actually, very important to be here because in... in addition to listening to you and approving projects, we really wanted to take the opportunity to celebrate the 25th anniversary of NADBank.

And as you know, this institution was created in 1994. At that time the relationships between Mexico and the United States were different. At that time, we signed the North America Free Trade Agreement—Mexico, U.S. and Canada. And just to give you an example, at that time the exports of the United States to Mexico amounted to only US\$57 billion. Today the latest figures indicate that exports from the U.S. to Mexico amount to more than US\$280 billion,

which mean that in 25 years exports from U.S. to Mexico have increased by more than five times. And a similar story has happened, has occurred in the exports from Mexico to the United States. So, we have a lot of new trade activities, but we also have more investments, more remittances, and also the mobility of people has increased. Actually, there are towns in Mexico where we have a growing number of retirees from the United States who actually go and enjoy the sun. And [chuckles] I can fully understand why, why they go.

[LAUGHTER]

But in this context of what has happened in the past 25 years, I think NADBank is part of this transformation and it's part of also these successes. As we've been hearing, NADBank has been financing around 270 projects in different activities: water, waste management, transportation, clean energy, etc. So, I think NADBank has done very well, and I want to congratulate the staff, the management and everybody for helping to make this a success story.

Also, we think that looking forward, there are various challenges. There is also—there is a need for more investments, and we've been hearing in this public meeting different proposals. And they are in a wide range of activities and sectors and regions. So, we want to see a NADBank that in the next years continues to grow and continues to become more sophisticated and serving the needs of the communities on both sides of the border.

So, I hope that that enthusiasm, the efforts, will continue. And again, I congratulate the management, I congratulate the staff, and I congratulate you for having such a great institution. And again, congratulations on your 25th anniversary. Thank you very much.

[APPLAUSE]

MR. JESSE HEREFORD: Thank you very much José. Chuck, would you like to say a few words on, as co-chair? Okay. Thank you.

Then next, I would call on our managing director, Calixto Mateos. He wants to deliver a memento to the Board members now.

[PAUSE]

MR. CALIXTO MATEOS: This is just a memento that we prepared for the 25th anniversary, but I'm also giving you the one we had for the 20th anniversary as well, as the Board is ever-changing, and you weren't there, but you are part now.

[PAUSE]

MR. JESSE HEREFORD: And now I would like to call on José de Luna Martínez and Charles Moravec to do the unveiling of the plaque, recognizing the 25th anniversary of the North American Development Bank. And if the other Board members could stand with them please. That way we can have a good picture, Jonathan.

On the count of three— is everybody, well, we'll wait until everybody lines up.

And then, José and Chuck, just up and over.

All right. ONE, TWO, THREE.

[APPLAUSE]

Thank you very much. With that we adjourn the meeting, and we will have a reception downstairs on the first-floor atrium, so we hope that you can all make it. Thank you again.

[MEETING ADJOURNED]