



Comisión de Cooperación Ecológica Fronteriza y
Banco de Desarrollo de América del Norte

Border Environment Cooperation Commission and
North American Development Bank



Public Meeting of the Board of Directors December 8, 2011 San Antonio, Texas California

VERBATIM VERSION / VERSIÓN LITERAL

MR. FLORES: Good morning, everyone and welcome to this semi-annual meeting of the Board of Directors of the Border Environment Cooperation Commission and North American Development Bank. We want to welcome everyone present.

Buenos días a todos. Una bienvenida. Para nuestros consejeros y el público, personas que han viajado de varias distancias, les damos una especial bienvenida.

At this time, I want to recognize the agencies that integrate into the Board of Directors of the North American Development Bank. They are the U.S. Department of the Treasury; the Secretaría de Hacienda y Crédito Público, Hacienda as it's known; Secretaría de Relaciones Exteriores; the U.S. Department of State; the Secretaría de Medio Ambiente y Recursos Naturales, SEMARNAT by its acronym; and the U.S. Environmental Protection Agency.

At this time, I would like to turn it over to our chairman pro tem, Mr. Eduardo Baca, in representation of the Secretaría de Relaciones Exteriores.

SR. BACA: Gracias. Muy buenos días. En nombre de los Consejeros mexicanos queremos darles la bienvenida a esta reunión pública del Consejo Directivo de la Comisión de Cooperación Ecológica Fronteriza y del Banco de Desarrollo de América del Norte.

Me es muy grato estar aquí el día de hoy en el cierre de un año más de trabajo; que si bien nos ha presentado retos, el día de hoy tendremos el gusto de presentar importantes avances y logros. Nos encontramos en una nueva etapa, con nuevas administraciones, tanto en el Banco como en la Comisión, cuyo liderazgo y visión, sin duda, han empezado a repercutir de manera positiva en el desarrollo de la frontera.

Durante este año la excelente coordinación entre las entidades federales que integramos este Consejo Directivo y ambos organismos, nos ha permitido avanzar hacia la adopción de nuevas políticas que resultarán en una labor mucho más eficiente de certificación y financiamiento de proyectos. Estamos trabajando en iniciativas importantes a través de las cuales aumentarán los beneficios tangibles para las poblaciones fronterizas, que es nuestra prioridad, y que redundarán en la mejora del medio ambiente en la frontera. Así mismo, nos encontramos en la expectativa de

implementar nuevas políticas que doten de una mayor capacidad de financiamiento al Banco y faciliten la certificación de un rango más amplio de proyectos en sectores innovadores. La búsqueda de un rango de acción más amplio del Banco y de la Comisión coincide plenamente con los objetivos prioritarios de los Gobiernos Federales de México y de los Estados Unidos al aportar un impulso adicional a la modernización y sustentabilidad de la frontera.

Sin mayor preámbulo les reitero la bienvenida y le cedo la palabra a nuestra colega y amiga Karen Mathiasen.

MS. MATHIASEN: Thank you. Good morning, everybody, welcome. This is an excellent opportunity for those of us in Mexico City and Washington, D.C., to hear directly from the Bank's clients and consumers, and we very much appreciate your traveling here to San Antonio to talk about your experiences and your vision for the Bank.

This meeting is a little bit unusual in the sense that it is taking place ahead of the meeting of the Board. We will all be convening immediately following right next door. So we're not in a position to share with you the conclusions of the meeting for today, although there will be a press release at the end. That said, I think I can preview a few things for you, and I would like to start by saying that on behalf of the United States Board Members, we are coming into this meeting with tremendous confidence in our new leadership of the BECC and the NADBank, and we remain very impressed and very pleased with the direction that the institutions are going.

In fact, one of the big themes for today will be to talk about how the Bank and the BECC can continue with a very robust pipeline, which has increased by over 90% since 2006, while maintaining sound financial management. Fortunately, we have before us today several policies that will ensure that sound financial management is sustained in the coming years, and so we look forward to discussing and approving some of those, in addition to our usual business which is to take a look at some of the new projects before us that are designed to help the people along the border benefit from improved environment, whether wastewater, paving, and other sectors.

So with that I want to thank you again for being here, and say that we all look forward to your own interventions this morning. Thank you.

MR. FLORES: Thank you, Eduardo and Karen. Members of the Board and of the public, the North American Development Bank is very fortunate to be hosted in this building—in terms of our office space—by the City of San Antonio, a city that, as you can see, considers itself at the crux of the U.S.-Mexico relationship and a very international city, and so it is only appropriate that we would have some welcoming remarks on behalf of the City, and so here with us today on behalf of San Antonio Mayor Julian Castro, Mr. Robbie Greenblum—who we must make the side note is a native of the border region, a native Laredoan, and someone who recognizes and appreciates the importance of the work we do. Robbie, thank you for being here.

MR. GREENBLUM: Thank you very much, Juan Antonio. Quickly you stole a little bit of my thunder, but there are several of us here from Laredo, and so I think, as you say, I mean, within the mayor's office, I'm here on behalf of Mayor Julian Castro, the Mayor of the City of San Antonio. For those of you who don't know, we're the 7th largest city in the

United States—some people are surprised by that—but we are the 7th largest municipality in the United States, and I would just like to thank y'all, to the BECC and to the NADBank, for having your meeting here in San Antonio. I would especially like to welcome Karen Mathiasen from the Department of Treasury, Matt Rooney, Department of State; and Neilima Senjalia from the EPA; I'm pleased to have you here in San Antonio with us. Thank you very much.

Y también, por parte del alcalde Julián Castro, bienvenidos a todos ustedes que han llegado aquí a San Antonio a tener esta reunión muy importante del Consejo Directivo del NADBank y de la BECC, especialmente a Eduardo Baca Cuenca de la Secretaría de Relaciones Exteriores; Armando Yáñez Sandoval de SEMARNAT y también a Roberto Zambrano Villarreal de PRONATURA, que me parece es vecino de nosotros en Monterrey. Bienvenidos a todos ustedes.

As I mentioned we're proud to have you here in San Antonio because we get that the work being done by the NADBank, and by BECC, which is very important to the border communities on both sides, both in Mexico and in the United States, that the stronger the infrastructure projects and the stronger the communities on both sides of the border, the stronger San Antonio. And it fits with...it fits with the vision of the mayor, who's... We recently embarked on a citywide visioning process that some of you here in San Antonio know about, which is called SA2020. And through SA2020 we decided what kind of San Antonio do we want to be in the year 2020? So we identified a number of...11 subject matter vision areas in terms of achieving greatness and excellence, really, which included the areas of education, included the areas of transportation, included the areas of economic competitiveness, for example, the biomedical sciences, information technology and security, aerospace, and so the truth is that fits, what we're doing in San Antonio is a fit with the work that y'all are doing.

And also when the mayor...when Mayor Castro speaks, he speaks about San Antonio being a vibrant, brainpower community in which we have a great and improved quality of life. And in this brainpower community here, we envision San Antonio as being the intellectual capital for the United States and for Mexico and for the Americas, and precisely to have these sorts of meetings where folks from Washington, D.C., Mexico City, the borders of Mexico and the United States, come to San Antonio to talk about really difficult, tough issues. And we have the brainpower here, it congregates here because in San Antonio, it's sort of—as Juan Antonio was mentioning—there are many of us here who have natural ties between the United States and Mexico. I think there's a natural understanding culturally; there's a natural understanding of the business. And so being a child of the border, like some of us, 'este, siendo el hijo de la frontera, hijo de la frontera, les tengo que decir...' I need to tell you all that my family, we were taught to learn three languages at a high level and very formally. We were taught that we should speak English well. We should speak Spanish well. And we were also, frankly, native speakers 'del puro pocho'.

[LAUGHTER / RISA]

So I don't know what the translation for that is everybody, but probably I get the sense everybody in here understands 'puro pocho'. And that is actually, frankly, ultimately the blending of the two cultures in a sort of a seamless way that the border itself—which is

what NADBank and BECC recognize—*itself* is an entity with special needs and concerns.

I would also like to say that, in light of the brainpower that Mayor Castro is attempting to build here in San Antonio, that we understand, well, que aquí en San Antonio tenemos una verdadera estrella del mundo del gobierno y de la política en Gerónimo Gutiérrez y la verdad ya hemos empezado a trabajar juntos y gracias por todo y me imagino que vamos a seguir con la marcha en camino igualmente. Muchas gracias.

Y también quiero decir que también tenemos un Cónsul General, que va a dar algunas palabras en un momentito, que también el Cónsul General Armando Ortiz Rocha ha hecho un trabajo en San Antonio *excelente* para nosotros. Ya hemos trabajado muy unidos, especialmente en un viaje, nos fuimos a la capital de México, hasta que... queremos tener una reunión en Los Pinos. Gracias por todo.

So with that, on the behalf of the City of San Antonio and on behalf of Mayor Julian Castro, I'd like to welcome all of you to San Antonio, I thank you very much. We look forward to supporting the mission of the NADBank, the mission of BECC, and anything we can do, let us know at City Hall. Thank you.

[APPLAUSE / APLAUSO]

SR. FLORES: Muchísimas gracias Robbie. En seguida nos da mucho honor, nos complace mucho al reconocer, como comentaba Robbie, a un muy buen aliado del Banco y la COCEF, un muy buen aliado de la Ciudad de San Antonio, del Estado de Texas, de los Estados Unidos, en representación del Consulado General de México en San Antonio, el Cónsul Armando Ortiz Rocha. Por favor, Señor Cónsul.

SR. ROCHA: Muchas gracias Juan Antonio. Es un gusto estar aquí con ustedes. No esperaba esos comentarios de nuestro amigo Robbie Greenblum, a quien mucho le aprecio. Debo agradecer al Lic. Gerónimo Gutiérrez su amable invitación para acompañarlos en esta sesión inaugural de tan importante reunión anual. Aprovecho la oportunidad para transmitirles un saludo muy cordial que les envía el embajador Arturo Sarukhan con sus mejores deseos por el éxito de la reunión.

Como todos sabemos, el trabajo realizado por el Banco de Desarrollo de América del Norte y por la Comisión de Cooperación Ecológica Fronteriza durante los últimos 15 años en la atención de los problemas ecológicos de la región fronteriza entre México y Estados Unidos representa un singular modelo de cooperación entre dos países. Seguramente, no existe en otra parte del mundo un esfuerzo bilateral semejante.

Nuestras dos naciones deben sentirse muy orgullosas de contar con estas instituciones, las que, con base en un sólido soporte técnico y un eficiente desempeño financiero, han logrado desarrollar cientos de proyectos estratégicos en materia de infraestructura que son cruciales para preservar el equilibrio ecológico y ambiental en la amplia frontera que compartimos.

La celebración de esta reunión pública del Consejo Directivo del Banco y de la Comisión es una inmejorable ocasión para reconocer una vez más las valiosas aportaciones de los miembros del Consejo, así como del experimentado y muy

profesional cuerpo directivo y técnico de ambos organismos, por su labor y esfuerzo en la ejecución de proyectos que, sin duda, mejoran la calidad de vida de alrededor de 12 millones de personas que habitan en las comunidades fronterizas de nuestras dos grandes naciones. Nuestro sincero agradecimiento por su visión, compromiso y liderazgo para hacer esto posible. Muchas felicidades y mucho éxito.

[APLAUSO / APPLAUSE]

MR. FLORES: Muchas gracias Señor Cónsul. At this time, proceeding with the order of business of our public meeting, we will hear a status report on behalf of the General Manager of the Border Environment Cooperation Commission, Maria Elena Giner, and the Managing Director of the North American Development Bank, Gerónimo Gutiérrez.

MR. GUTIÉRREZ: Muy buenos días a todos. Very good morning to everybody.

Let me...first of all, I would like to thank all of the potential project sponsors and border stakeholders that join us here—amigos de la frontera. They are really the...the border communities are really our purpose of being, and therefore, I would like to thank you on behalf of the Bank, the BECC and certainly the Board, for your interest in being here and we certainly look forward to all of your presentations.

I also obviously would like to thank my bosses—the Board of the Bank, the BECC—for being here. It's really wonderful to have... we have wonderful relations with the Board, and I would like to thank you for all the support that you have shown throughout this year for both institutions.

I'd also like to thank, very briefly, Robbie for being here. Please thank Mayor Castro. I'll just say that we, both personally and I think institutionally, everybody at the Bank doesn't think we could find a better place to be in than in San Antonio and that will certainly remain the case. And...

Quiero saludar también y agradecer al Cónsul Armando Ortiz Rocha por su presencia y porque ha sido siempre un aliado de ambas instituciones. Y por favor le solicito que transmita un agradecimiento al Embajador Sarukhan quien también a lo largo de este año ha mostrado mucho apoyo para nuestra institución y ha puesto mucho interés en lo que han estado haciendo ambas instituciones.

What I will do, if you'll allow me, is— Where are we and where do we think we are going? We've been instructed by our Board to give you a brief status and talk a bit about our perspectives, and I will share the presentation with my good colleague, Maria Elena Giner. We are indeed working very close together, so we now do it '*al alimón*,' as they say in Mexico. We will share the presentation, and I hope you enjoy it, and I hope it summarizes what we're doing. Please, the next slide.

As you know, we basically have the mandate to preserve, protect and enhance the environment in the border region. We do that... our main tool for achieving that purpose is developing and financing environmental infrastructure projects on the border. So this year, as of October 31st, we basically closed projects, infrastructure projects, that account for roughly US\$810 million.

Why would I highlight this? First of all, that we did the first major loan for a renewable energy project in the Bank's and the BECC's history; it is the construction of a 23-megawatt plant in Niland, California. That is equivalent of servicing around 14,000 homes—electricity for 14,000 homes—and the electricity, the off-taker is Imperial Valley Irrigation District. It is a milestone for our institutions because indeed it is the first—not...it's the first renewable energy, not the first clean energy, project that we're involved in, and we feel very happy for the support that we got from our Board and very proud of the work that was conducted by the team both at the BECC and the Bank to close this first renewable energy deal.

Water is a priority for both institutions, for our Board and certainly for the border. We were able to close deals on three water treatment plants with a capacity approximately of 300, 3,000 liters per second, 71.5 million gallons a day of wastewater. Similarly, we were involved in four water and wastewater projects, mainly through the Border Environment Infrastructure Fund grants that we manage and that are put forward by the Environmental Protection Agency of the United States, both for the United States and for Mexico, it's a wonderful project, and those four projects really involve water and wastewater improvements that will benefit, we estimate, around 26,000 people at the border. And finally, we also closed two important air quality projects in street paving that will benefit around 200,000 people.

In terms of certification, the BECC, our colleagues at the BECC, and all of Maria Elena's team, have certified 185 projects. This is very important because that implies that the certification is a process by which we ensure that the projects that we're involved in will indeed prove beneficial for the environment at the border region, or they will help mitigate an important environmental risk. They will improve health, they will have clear health benefits for the people, and also they will improve the quality of life.

Throughout our existence as institutions, the BECC has certified 185 projects, around 100 of them in Mexico and 85 in the United States—and I will talk a little bit more about those numbers in the future. And there, on the slide, what you have is the distribution by the states and also the amount that has been certified. And we certainly feel proud of that. And I'm happy to report to the Board that as you know, we are working much more closer, the BECC and the Bank, also in the certification process, meaning that we are understanding better how we can complement each other and take advantage of that important process. And as you can see, the fact that I am, in fact, presenting and talking about the certification process and not Maria Elena is proof that we are indeed getting along very well.

The next... talking a bit about the numbers, as of October of this year, as I mentioned, we closed deals for US\$111 million that has been contracted; 105 have been in loans for two projects and around 5 million in grants, as I mentioned, from the Border Environment Infrastructure Fund. So far we have disbursed US\$90.5 million throughout the year: 77.4 in loans, and 13.2 million in grants.

We have so far, both institutions, financed throughout our existence 152 projects. The total cost for those projects is estimated at around US\$3.3 billion. That is important because it means that we are indeed helping to catalyze investment from private or public sectors, other banks, into the border region. As you can see, we have contracted US\$1.3 billion in loans and grants, but the projects that we have been able to push

forward in terms of the total investment are almost three times that figure, and I think this is important because the drafters of our mandate did envision having our institutions as a catalyst for other institutions to participate—either through loans, investment, private capital, technical assistance—in the projects that we're involved in.

Out of those US\$1.3 billion that have been contracted, around 668 million have been in loans; around 570 have been in the grants through the BEIF program. This is important because, as we have been evolving, that figure has tipped the balance. We initially started doing much more grant projects, and we are moving more right now into loans, which I think it was important because that is the intended purpose, in the end, of the Bank. We have disbursed 9., around 10 million in the SWEP program, which is the solid waste program specifically designed for solid waste; and water conservation, improving water conservation, both in the United States and in Mexico, around US\$80 million.

I have to say that, out of those 152 projects that have been financed by both of our institutions, we have... 108 have been fully implemented—that is not on the slides, but I can certainly give you the figures—37 of them are in various stages of construction; six of them are in the bidding or design stage, and only, in fact, one of them has been cancelled, and I think that is a fairly good batting rate.

I have to say, as I mentioned earlier, that we are in a crossroads—both the BECC and the Bank—in the sense that we are moving... first of all, we are increasing our lending operations and also we are moving into new sectors, recently, over the past years, as renewable energy is becoming an increasingly important topic and also into border infrastructure, more specifically ports-of-entry, where we're beginning to do the very first projects in that regard, and the demand, I know it's, well important for border communities improving the flow of goods and people in a way that is environmentally conscious and also secure and also efficient.

In terms of sector, those US\$1.3 billion are... we continue to be, you know... are distributed, a vast majority around 60% of it in water and wastewater. We have 6% in water conservation; around 6% also in storm water; and 22%, roughly, or 21% in air quality, which is basically at this point street paving and also ports of entry projects; solid waste, 1.3%; and clean energy, finally—as I was mentioning the first renewable energy project has increased that—we are now in 7%.

And finally—the next slide—on my part, I would just like to mention that our present pipeline involves around 28 projects throughout the border region that, for the BECC and the Bank, show potential, both for certification and financing. These projects, as you know, are distributed in an area, one point 300 kilometers south of the borderline and 100 kilometers north. We will certainly be looking throughout the day in greater detail at some of these projects.

Of these 28 projects, we are currently working on 11 that we anticipate will be certified and contracted by the close of, certainly 2012, and I hope that even earlier. Those involve around US\$500 million in loans. Four of those projects of the 11, we expect to close by the first quarter of 2012, and they represent 140 million in new loan financing. Finally, I want to mention that these projects that you see here are well-distributed, also, in terms of their nature or their properties. It involves renewable energy projects, paving projects, a lot of water projects also, and I think—am I missing one more?—I think solid

waste, we might have one or two there. They're also... we do acknowledge the fact that water continues to be a very important issue of the border, and we are looking next year at finalizing several water projects, and again going into renewable energy that is certainly of great importance.

And I want to thank you for being here throughout the day. We can certainly go deeper into any of these topics. And I would like to thank... I would like to give the floor to Maria Elena, not before saying something, if some of you saw the sky today early this morning, I think God did a wonderful favor for us because he really painted the sky beautifully and I think that is a good omen for this meeting. Thank you.

[APPLAUSE / APLAUSO]

MS. GINER: Good morning, everybody. As my colleague presented, we typically do this presentation, one slide Gerónimo, one slide myself, but since we didn't have a mic, we really didn't want to look like we were at the Academy awards, you know passing off the script between us, so as a quick result or solution to the problem, my colleague said let's just divide up the presentation, which exactly demonstrates the collaboration between the two institutions.

Many of you know me because I've been with the institution almost fifteen years, and to me it really is amazing where we've been and how we really now are in a situation to build upon past administrations and jump into a new period for both institutions. I know Karen, our president, talked a little bit about how we're exploring opportunities for our two institutions to continue implementing our mandate of preserving, protecting and enhancing the environment, and at the same time, being able to use such a *valuable* asset that we have for the border, which is our Bank, our North American Development Bank.

And so I'm here to talk about some of the work that *we're* doing, in particular with BECC technical assistance—for us BECC's technical assistance has been the pillar of a lot of the work that we've done; in fact, about 56% of our personnel budget goes to developing projects, and we in 2011 provided a million dollars' worth of technical assistance. About 800,000 of that was from our great advocate, the Environmental Protection Agency, for water and wastewater. And so again, water and wastewater still continues to be an important element for what we're doing, and as we know, many communities really rely on that technical assistance to develop projects.

This brings our total technical assistance to about 40 million that has been given out, and one of the things I like to highlight about the technical assistance that we've done—we've actually recently been audited on where our technical assistance—what has it accomplished—and we were fascinated, we were very pleased, to see that 85% of the technical assistance that we have provided has gone to projects that have been implemented, mostly by our greatest asset, the North American Development Bank, and some by other institutions, and in partnership with other institutions. So it does continue to be an effective program that's benefited 155 communities along the border.

This year... this last year we did a call for applications for the U.S.-Mexico border program, and we added—based on that we received 200 applications, about US\$800 million worth of water and wastewater needs—and we added, of those 200 applications,

about 23 applications, to our pipeline, which amount to about US\$200 million worth of construction. Some of those projects were in our upcoming pipeline, some of those projects we will need a little longer time for development, but it does again continue to emphasize that.

Can you go to the next slide, please? One of the other elements that we provide to our border stakeholders, the BECC and the Bank, is training programs. The BECC's training program really focuses on the operator level type of training. We've done some... this year we had five events and we had over 300 participants. Our solid waste training workshop in Sonora and Tamaulipas; in fact, we were able to partner with the State of Texas, in particular with the TCEQ,¹ for the state of Tamaulipas, and we did take operators into a U.S. community—I believe it was McAllen—where they saw the operations of the landfill. So again that's a model of bilateral collaboration that we as an institution are able to partner with many institutions to do this. We've also done, in the state of Sonora, a water and wastewater utility training, and across the border, we did two workshops on climate action planning process. Mexico is working towards having climate action plans for all 30 of its states. In the United States, just to give you an idea, there's about 35 climate action plans of the 50 states, and Mexico is working toward getting 100% of their states with climate action plans.

Next slide, please. With respect to the UMI, which is the Bank's... one of the Bank's pillars of technical assistance, they actually provided 29 million in retained earnings investments; 220 institutional strengthening project and development studies that have been funded for 116 communities—very similar to ours Gerónimo—1,834 water utility professionals were trained in 188 communities. That is something that has really evolved within the Bank. They used to have their UMI here, and now they take it on the road and they take it to the communities and they have a significant amount of attendance, and they've also published seven informational manuals on utility management.

Now, for those of you—I see a lot of engineers in the audience, a lot of dark-suited engineers—and so these are some of the bricks and mortar that we've actually built in the last fifteen years. Not too long ago, I was meeting with somebody and it still amazes me that people don't realize that in fifteen years, we've actually built 54 wastewater treatment plants along the U.S.-Mexico border, 28 of those are in Mexico; 73 wastewater collection systems; 20 drinking water treatment plants; 32 drinking water systems; 16 landfills; and closed 16 open dump pits; and have actually paved over 6 million square meters of pavement.

And for those environmentalists, these are the environmental and social benefits that have come with this infrastructure. In the water conservation efforts, we've saved almost 372,000 acre-feet of water per year, which is equivalent to serve a city like Los Angeles; 6.8 million square meters paved, which have benefited 3.5 million residents reducing air exposure, air pollution of PM₁₀, which as many of you know deposits into the lungs and causes asthmatic conditions; 187 kilometers of roadway improvements which have facilitated traffic and have been able to ensure that CO₂ reductions; 16 landfills, which have averted 1,550 tons per day of improperly disposed waste, benefiting 3 million residents; one port of entry with the reduction of idling times—and

¹ *Texas Commission on Environmental Quality (TCEQ)*

actually that is not a statistic that is up there, but it actually reduced about 20% of the emissions coming from the port of entry associated with this movement of traffic.

Go to the next one. In the case of water, we've actually increased... influenced the increase of water from 91% to 96% in border households, and we have 55... almost 56,000 households to receive water for the first time. That's almost... that's over 200,000 people that are receiving water that did not receive water along the border.

Increased wastewater treatment in Mexican border regions: this is probably our... what I call our pillar achievement, where on the border, communities, we've actually increased wastewater treatment coverage in Mexico from 27% in 1995 to 80% now in 2010. That's 400... almost 400 gallons per day of raw sewage that was not appropriately treated. And so those are... that's raw sewage that was discharged into shared water bodies that is now being properly disposed of. And this has also brought along 302,000 new sewer connections, which is almost for... over one million people now have sewer where they did not previously have sewer.

Let's go to the next one, please. The Border 2012. Border 2012 is an EPA-SEMARNAT initiative. It is a model for bilateral collaboration at the federal level, and right now we are about to conclude this Border 2012. We do have a Border 2020, which EPA and SEMARNAT drafted along with various stakeholders, including tribes and states. And these are some of the support that the BECC has provided to them. We've actually managed about US\$10 million worth of technical assistance that have benefited 11.5 million residents. We've actually... this is a process that is very stakeholder-based. It involves work groups and task forces, and in 2011 there was 28 events. We had 1,606 participants in these events with an investment of US\$115,000. And this is an opportunity for us to hear from our stakeholders as far as what their needs are—these are cities, these are tribes, these are academia, this is the private sector; this is a true stakeholder-based process. And as you can see, the goals of the Border 2012 program addressed all of the median of water, air and land. They also include environmental health, emergency response and environmental performance.

Let's go to the next one, please. The other pillar of what BECC does is institutional capacity-building. We've got our training, which I've already gone over some of those elements of it, but the other thing that we've also been requested by many communities is for publications that assist in them making decisions and public policies. And these are some of the publications that have actually been emitted—they are available on our website—and we've done a paving needs assessment with satellite images for 13 cities and as well as border-wide, so we were able to quantify the paving needs for many of our communities. We've done two manuals for green building practices and technologies, for sustainable buildings in schools and homes. And this is something that we've seen that many of the... some of the states have taken and are actually starting to adopt in some of their legislation. We have also have an assessment of investment needs in basic infrastructure of water and sewers, and we've actually determined that in Mexico there are still about US\$1.5 million...US\$1.5 billion worth of water and wastewater needs for first time service and about US\$14 billion on the U.S. side for water and wastewater service for first-time needs. And this is information that we're working with the states on crafting projects that could access the various NADBank programs, as well as the U.S.-Mexico border program.

We recently received a grant from the World Bank to do an assessment of the utility performance for Mexican operators, I'm sorry, Mexican water and wastewater utilities. We've just finished the study, and what it does is it gives us a lot of information to be able to identify energy efficiency opportunities, water conservation opportunities and financial management indicators for improvements in appropriate financial management.

And this is the CAP, the Community Assistance Program. As many of you know, the NADBank and the BECC recently launched the NADBank grant program, which is funded through the retained earnings of the Bank, for critical environmental infrastructure projects in low-income communities along the U.S.-Mexico border. It was launched on November 1st. It's intended to help fund small and rural communities or low-income communities with their basic infrastructure of water, wastewater, solid waste. The due date is February 15th for the applications for those of... for people in the public, please be aware of this application date. And projects may receive up to a CAP grant of up to US\$500,000.

And this concludes our presentation. Thank you.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you very much, Gerónimo and Maria Elena. Moving along with our program, board members, we have reserved a little bit of time at this time for any questions from members of the press that are present. I believe we do have David Hendricks, a business writer with the *San Antonio Express News*. David, do you have any questions that you want to ask? Please.

MR. HENDRICKS: I guess to the Board or to the Managers, will NADBank issue more bonds in the foreseeable future for loan capital?

MR. GUTIÉRREZ: Thank you, David, and thank you for being here. We will be presenting to our Board later throughout the day the 2012 borrowing program of the North American Development Bank for their approval. That program has essentially two objectives: to provide sufficient resources in a timely manner that will enable the Bank both to commit to new lending and also to comply with its liquidity policy.

We envision... we're presently—markets are not precisely their best of the days nowadays—so a very competent team on the finance department is analyzing all of the alternatives that essentially include a public issue, again, as we did in 2010. Also a private placement is one of the possibilities; and also lines of credit.

I would add, taking advantage of your questions, that with the authorization and the instruction of the Board, we have been moving forward with lines of credit, with other important international institutions, such as KfW, that will provide a line of credit for water projects at what we believe are very favorable conditions, and also with lines of credit from other banks or institutions. So, we don't necessarily, will go again to the markets; that will depend on what are the best options, and again, our finance team is working precisely on that analysis. I'll take advantage also to say that Alex Hinojosa, the new managing director of the Bank, has a vast experience, has been working essentially as a CFO for many years, so that experience is certainly helping the Bank,

and Hector Camacho, who was the central player at the first... our first issuance is certainly here, and they are basically the two leading people in analyzing what are the best options that we will be later on discussing with our Board. And in terms of numbers, we are looking to request authorization for our borrowing program of around US\$490 million, US\$490 million, for next year. That takes into account what we have available, what we would need for future projects and our liquidity policy. That's basically a summary of our borrowing program that will be later on throughout the day discussed. Thank you, David.

MR. HENDRICKS: One more question, for the EPA representative. Would it be accurate to say that the BEIF program is now dead with the administration's recommendation to eliminate that budget item after several years of US\$10 million in funding per year?

MS. SENJALIA: The border program is actually an important program for EPA. Just like it has been said before, protecting the North American environment is one of our priorities for EPA, and the funding for the 2012-2013 fiscal year is still at US\$10 million, the request is, so we'll have to work sticking to those numbers for now.

MR. HENDRICKS: Thank you.

MS. SENJALIA: Thank you.

MR. FLORES: Thank you, David. Very well. Moving along, then, we will begin with recognizing members of the public who have signed up to make comments, and we will begin with Mr. Salvador Treviño Garza, gerente general de la Junta de Aguas y Drenaje de Matamoros. Bienvenido.

SR. TREVIÑO GARZA: Muy buenos días. Agradezco al Consejo Directivo, el Departamento del Tesoro, el Departamento del Estado y la Agencia de Protección del Medio Ambiente al igual que a nuestra contraparte mexicana, la Secretaría de Hacienda y Crédito Público, la SEMARNAT y Relaciones Exteriores por el apoyo incondicional a este tipo de proyectos que es bastante necesario para casos de éxito en la frontera.

A nuestros socios, socios incansables, la Comisión de Cooperación Ecológica Fronteriza, el Banco de Desarrollo de América del Norte, gracias María Elena y Gerónimo, por el apoyo incondicional a los proyectos en todos los sentidos, no solamente económicos. Creo que el caso de Matamoros es uno de los que, en cada uno de los programas que se mencionó, ha participado y ha obtenido asesoría para beneficio de la comunidad.

Me voy a permitir presentar el proyecto integral de la Junta de Aguas y Saneamiento de Matamoros, Tamaulipas. Un proyecto ambicioso; un proyecto que iniciamos en el 2000, donde obtuvimos fondos para hacer los estudios necesarios para ver cuál era la problemática en nuestra ciudad; una problemática que dio como resultado un déficit de infraestructura de más de \$420 millones de dólares.

En el 2003, nos certificamos la primera etapa, una etapa de agua potable y de saneamiento, como se puede ver en la parte amarilla, donde Matamoros, no solamente benefició su infraestructura de agua potable con tanques elevados, con circuitos, con

tomas de agua potable, donde obviamente, es parte de los indicativos y los índices de agua potable, como marcaba María Elena, donde crecimos de un 91% a un 96% al día de hoy de suministro de agua potable; sino por otro lado, también nos vimos beneficiados en esa zona con un sistema de saneamiento con estaciones de bombeo, interceptores y la primer planta de tratamiento de aguas residuales en la ciudad de Matamoros. Matamoros con un saneamiento de 0% en su tratamiento de aguas residuales realizó una primera inversión para en este momento tratar el 24% de las aguas residuales; una inversión, en esta primera certificación que se obtuvo, de cerca... de poco más de \$76 millones de dólares con el apoyo obviamente de los Directivos del Consejo a través de la Agencia de Protección del Medio Ambiente; con el apoyo, obviamente de nuestra contraparte mexicana y por supuesto a través de la COCEF y del Banco de Desarrollo de America del Norte. Un proyecto que ha concluido en el 2009 y que ahora está operando a satisfacción de los ciudadanos de Matamoros.

Ahora la segunda etapa, misma que es uno de los proyectos que se contempla para el 2012, como bien lo comentaba el Lic. Gerónimo Gutiérrez. Es una etapa donde el saneamiento de Matamoros aumentará de un 24 a un 60%; proyecto importante en saneamiento, donde ya hemos obtenido las cartas de autorización de tres etapas... Si me permite la segunda, gracias... Un proyecto de certificación donde incluye tres diferentes áreas que es el saneamiento de la zona oeste de Matamoros,... perdón, en donde implican estaciones de bombeo, así como más de 17 kilómetros de un interceptor para llevar a la nueva construcción de la planta de tratamiento del lado oeste de la ciudad. Un importante proyecto donde obtuvimos dos oficios de certificación y aprobación a través de la Comisión de Cooperación Ecológica para poder certificar el próximo año; proyecto que hemos iniciado en este momento con el apoyo, en 2011, del gobierno mexicano, tanto del gobierno federal a través de CONAGUA,² parte de la SEMARNAT, como del gobierno del estado, con la construcción de las estaciones, la remodelación de la cuatro, la cinco, la diez y con un kilómetro y medio ya de los 17 del interceptor. Lo importante, pues solamente, la aportación de la nueva planta de tratamiento de 540 litros por segundo del lado oeste de la ciudad.

De igual forma,... la siguiente por favor...obtuvimos también la autorización de la factibilidad del proyecto para la zona suroeste de la ciudad en donde contempla, como bien lo dijeron aquí, un área importante para drenaje sanitario para las colonias, 38 colonias de la ciudad de Matamoros con una población mayor a los 24 mil habitantes que tendrá drenaje sanitario por primera vez, así como el interceptor para poder llevar estas aguas residuales con sus estaciones de bombeo a la nueva planta de tratamiento de aguas residuales del lado sureste de la ciudad de Matamoros. Adelante, por favor.

¿Qué necesitamos? Pues obviamente la certificación del proyecto. Nosotros en la Junta de Aguas entregaremos la documentación en enero, la poca documentación faltante, tanto legal, como tenencia de la tierra, como de lo técnico, para que podamos certificar esta fase número dos importante para Matamoros en una inversión mayor a los \$670 millones de pesos, en los cuales el día de hoy, pues ya contamos con el apoyo del gobierno federal. Tenemos a través del presupuesto de egresos de la federación ya los recursos autorizados, tanto de gobierno federal a través de la CONAGUA, como de parte del gobierno del estado. Y obviamente contar con el apoyo invaluable de este Consejo Directivo para la aprobación de los recursos no reembolsables que a través de

² Comisión Nacional del Agua (CONAGUA).

nuestras dos instituciones hermanas pudiéramos completar. Éste es en sí la segunda etapa del proyecto integral de Matamoros.

Importante mencionar el seguimiento que nos dan nuestras dos instituciones hermanas, la COCEF y el Banco de Desarrollo de América del Norte. Inicie comentando que es un proyecto a 20 años por más de \$420 millones de dólares de necesidades de inversión para poder dar una mejor calidad de vida a los matamorenses. Importante que del 2000 al 2011 hayamos podido, con ellos, llevar a cabo estos proyectos y dar seguimiento a una segunda etapa para obviamente tener una mejor calidad de vida para los matamorenses. Importante fortalecer a estas dos instituciones de parte del Consejo Directivo y a sus niveles superiores porque de otra forma, probablemente seguiríamos en el 0% de saneamiento, cuando ahorita ya estamos viendo muy cerca llegar a un 60% de saneamiento, que, si bien es cierto, está bajo todavía, de los índices y que ya estamos trabajando en una tercera fase, importante el apoyo que hemos tenido de todos ustedes. Muchas gracias por su atención.

[APLAUSO / APPLAUSE]

SR. FLORES: Muchas gracias Salvador Treviño Garza. En seguida nos complace llamar al señor Edwin Maldonado Delgado, jefe del Departamento de Saneamiento de la Junta Central de Agua y Saneamiento del Estado de Chihuahua.

SR. MALDONADO DELGADO: Buenos días a todos ustedes. Quiero agradecerles la invitación. A nombre del Ing. Raúl Enrique Javalera Leal, presidente de la Junta Central de Agua del Gobierno del Estado de Chihuahua, órgano normativo central de todo el estado, quiero hacer alguna referencia y algo histórico. Hace 10 años la cobertura de saneamiento a nivel estatal estaba oscilando alrededor de los 30% mientras que en la frontera de Chihuahua con Estados Unidos la cobertura era del 0%, hace 10 años. Toda el agua era descargada a drenes, acequias que finalmente llevaban sus aguas residuales al río Bravo, al río Grande, contaminando notablemente esta cuenca tan importante bilateral.

Con el apoyo de la Comisión de Cooperación Ecológica Fronteriza, BECC, y con el Banco de Desarrollo de América del Norte hemos estado trabajando muy estrechamente, hace muchos años, precisamente comentaba María Elena su estancia en COCEF hace 15 años que es el mismo tiempo que tengo de conocerla. Hemos venido trabajando muy estrechamente y en colaboración total para llegar a certificaciones, el número de certificaciones arriba de 20 proyectos que hemos implementado desde 199...4, alrededor del 94 a la fecha. Y haciendo un poquito de remembranza, del 93 al 94 se certificaron cuatro proyectos donde se destaca la certificación de las plantas de tratamiento de Ciudad Juárez, la Norte y la Sur, y la planta de tratamiento para Ojinaga. En el 2006 logramos certificar otra planta de tratamiento para la colonia Anapra, una colonia aledaña a Ciudad Juárez. En el año 2007 logramos certificar seis proyectos en diferente comunidades rurales del Valle de Juárez, localidades menores a cinco mil habitantes. En el 2008 logramos certificar otro proyecto, adicionalmente para la recolección de las aguas residuales y su conducción a la planta de tratamiento en Barreales y Juárez y Reforma. En el 2009 certificamos tres proyectos adicionales, destacando la ampliación de la planta de tratamiento Sur de Ciudad Juárez, logrando con esto llegar a una cobertura en Ciudad Juárez de alrededor del 86%.

En este año 2011 logramos la certificación, el día de hoy, del proyecto de agua potable para la comunidad de Praxedis G. Guerrero y, en representación también del presidente de la junta municipal de Praxedis G. Guerrero, quisiéramos agradecer el haber logrado esta certificación tan importante para esta comunidad que contaba con un servicio muy deficiente de agua potable, con poca infraestructura; logró incrementarse, estadísticamente logrando un 100% de su cobertura; abasteciendo con esto el servicio del agua potable con la ampliación de la red, la sectorización, nuevas tomas de agua y beneficiando alrededor de cinco mil habitantes de esta comunidad fronteriza; y agradeciendo a nombre también del presidente de esta junta municipal, el apoyo brindado por parte de la COCEF, por parte del Banco.

Actualmente, con estos proyectos que acabo de mencionar tenemos una cobertura a nivel estatal del 72% de saneamiento. Pero quiero destacar que la cobertura en la frontera de Chihuahua con Estados Unidos, de ser del 0% hace diez años, estamos logrando un 85% de cobertura con el apoyo logrado y estrecho del Gobierno del Estado de Chihuahua con instituciones bilaterales como COCEF y BANDAN y obviamente con el apoyo de la Comisión Nacional del Agua.

Quiero señalar también que, como parte del apoyo que queremos hacer notar a COCEF y al Banco, es seguir apoyándonos. Seguir apoyándonos para lograr la certificación de proyectos adicionales porque el Gobierno del Estado de Chihuahua quiere lograr su meta de tener arriba del 90% de cobertura en la frontera de Estados Unidos y Chihuahua. Para ello en la pasada priorización, se solicitaron 11 proyectos para ser susceptibles a priorizar, de los cuales no logramos ninguno. Entonces, es por eso que muy amablemente queremos solicitar su apoyo para que a través de estas dos instituciones hermanas y tan importantes reconsiderar esta priorización o que en la nueva priorización nos lleguen a apoyar para lograr estos 11 proyectos adicionales y completar arriba del 90% de cobertura del servicio de agua potable. Muchas gracias.

[APLAUSO / APPLAUSE]

SR. FLORES: Muchas gracias. En seguida le llamamos al señor Arturo Llamas Díaz Curiel, representante de la Secretaría de Comunicaciones y Obras Públicas del Estado de Chihuahua.

SR. LLAMAS DÍAZ CURIEL: Buenos días. Agradezco la invitación a esta reunión pública del Consejo Directivo Consultivo, a nombre del Lic. César Horacio Duarte Jáquez, Gobernador Constitucional del Estado; del Ing. Javier Garfio Pacheco Secretario de Comunicaciones y Obras Públicas; y de sus habitantes del estado de Chihuahua.

Por mi conducto, agradecen a la Comisión de Cooperación Ecológica Fronteriza, su administradora Ing. María Elena Giner, al Banco de Desarrollo de América del Norte, a su Director Gerente Lic. Gerónimo Gutiérrez Fernández, por el apoyo incondicional otorgado al Estado de Chihuahua en diferentes acciones por lo que en nombre del Gobernador del Estado Chihuahua, reitero su agradecimiento por la exitosa gestión lograda ante diferentes empresas de Estados Unidos, de la República China y España por la donación, suministro e instalación del equipo generador de energía eléctrica con capacidad de 250 kilowatt a base de paneles solares fotovoltaicos, los que se instalarán

en el Hospital Infantil de Especialidades en la ciudad de Chihuahua, mismos que generarán anualmente aproximadamente 450 mil kw-hora. El área de cobertura de este hospital atenderá a 57 municipios de los 67 que tiene el estado, cuya población aproximada es de un millón 900 mil habitantes, de los cuales son 350 mil niños con edad menor de 16 años.

También reitero este agradecimiento a las siguientes empresas: a la empresa *Suntech Power Holdings*, quien dona los paneles solares; a la empresa *Schneider Electric*, quien dona los inversores; a la empresa *SunEdison*, quien es la responsable de efectuar el estudio del proyecto, diseño y construcción y puesta en operación; al Banco de Desarrollo de América del Norte y a la Comisión de Cooperación Ecológica Fronteriza, que contribuyen con fondos no reembolsables de esta asistencia.

Con la próxima instalación e inicio de operaciones de este sistema fotovoltaico, el Hospital Infantil de Especialidades obtendrá beneficios económicos y tecnológicos, además se logrará reducir la emisión de gases de efecto invernadero por el orden de 300 toneladas de bióxido de carbono. A continuación les presentamos algunos datos informativos de la cobertura del Hospital Infantil de Especialidades.

Chihuahua cuenta con un potencial importante de recursos solar con una irradiación entre 6 y 7 puntos por ciento. El área, la superficie que tiene el estado de Chihuahua son de 247 mil kilómetros cuadrados, de los cuales se pueden aprovechar 60 mil kilómetros cuadrados para la aplicación de parques eólicos y granjas solares. Ahorita lo que está consumiendo el estado de Chihuahua, tanto en su industria como en toda la parte de vivienda, es aproximadamente... en granjas se tendrían que instalar 250 kilómetros cuadrados, con un costo aproximado de \$152 mil millones de pesos.

Acciones para impulsar el sector solar en el estado: Durante el año del 2011 organizamos dos foros regionales sobre energías renovables en las ciudades de Juárez y Chihuahua, respectivamente, con amplia participación de diferentes instancias de gobierno, empresas, centros de investigaciones, instituciones educativas, organizaciones internacionales y la sociedad. A través de la Secretaría de Comunicaciones y Obras Públicas, participa periódicamente en las reuniones de seguimiento de los gobernadores fronterizos relativas al sector de energía. Gestiona entre industrias, Comisión Federal y empresas del sector, esquemas de eficiencia energética, a la vez, el uso de energías renovables, con menos costos para el usuario y amigables con el medio ambiente. Con este contexto, el proyecto piloto de energía fotovoltaica se constituye en un proyecto insignia, no sólo para Chihuahua sino para todo el país, dadas las características del mismo.

En ésta, podemos ver donde la ubicación del Hospital Infantil de Especialidades de Chihuahua que se encuentra cerca del centro de rehabilitación infantil teletón y de la deportiva sur. En la siguiente podemos ver la ubicación de los edificios A, edificio B, edificio C, edificio D, de la plaza de acceso, el acceso de recibido, vestíbulo principal, estacionamiento y áreas verdes. En la siguiente se pueden ver varias panorámicas donde ya está totalmente terminado el hospital, próximo para su inauguración.

Descripción del proyecto... características físicas del hospital: La construcción del Hospital Infantil de Especialidades de la ciudad de Chihuahua consiste en una construcción de un centro de atención de segundo nivel, el cual está construido en 55

mil metros aproximadamente; el edificio del hospital son 11 mil metros; el edificio de gobierno de 2,939 metros y los camellones y estacionamientos 40 mil metros.

Población: La población objetivo a ser atendida por la Secretaría de Salud en el área de influencia del hospital registró un incremento de 748 mil personas en el 2000 hasta un total de 840 mil individuos en el año 2010. El grupo de edades va de 0 a 4 años, el total son 89,248; de 5 a 9 años son 86,855; de 10 a 14 años son 85,775; de 15 a 19 son 95,400. Total, la cobertura será de 357 mil, de los cuales son 177 mil mujeres y 180 mil hombres.

Descripción del proyecto: El proyecto piloto de energía solar busca fortalecer al Estado de Chihuahua en su capacidad para promover e impulsar el sector de energía renovable; desarrollar, diseñar e implementar un proyecto piloto solar fotovoltaico con una capacidad de 250 kilowatts. La Universidad Tecnológica de Chihuahua llevará a cabo investigaciones haciendo uso de la instalación solar. La electricidad generada será utilizada por el Hospital Infantil de Chihuahua. Las empresas participantes, ya las mencioné, son: *SunTech Power Holdings*, *Schneider Electric*, *SunEdison*, la COCEF y el BANDAN.

El Origen: El Banco de Desarrollo de América del Norte aporta el 33%; la Comisión de Cooperación Ecológica el 5.6%; SunTech el 38.9%; Schneider el 16.6%; y SunEdison el 5.6%; lo que nos da el 100% por una inversión aproximada de 900 mil dólares.

Beneficios estimados: El hospital regional, beneficiando a una población de miles de niños, generará capacidad en el estado de Chihuahua para el desarrollo, implementación e investigación de proyectos de energías solares renovables. El hospital infantil de Chihuahua será beneficiado por medio de un ahorro del 10% en su gasto de electricidad y el desplazamiento de emisiones de gases invernadero. El proyecto piloto es un esfuerzo de entidades públicas y privadas. Ahí se pueden ver unos colectores solares que ya están instalados para el agua.

Conclusiones: El Hospital Infantil de Especialidades de la Ciudad de Chihuahua, brindará una atención innovadora con la puesta en operación de los 250 kW con paneles solares fotovoltaicos generando aproximadamente 450 mil kW-horas, además de ser un detonante a nivel nacional en proyectos de energías limpias y renovables, logrando la sustentabilidad que todo proyecto busca obtener. Muchas gracias.

[APLAUSO / APPLAUSE]

MR. FLORES: Muchas gracias. At this time I would like to call on Dave Rennie, the C.E.O. of SunPeak Solar.

MR. RENNIE: Buenos días a todos. My name is Dave Rennie. I'm the C.E.O. of SunPeak Solar. You would have seen earlier that the NADBank has done a US\$77.4 million dollar financing with us for the construction of a 23-MW photovoltaic project in Niland, California. SunPeak is the developer of renewable energy resources around the world. We've developed over 700 megawatts of wind and solar in North America and in Europe. Through that process we've been exposed to a syndicate of over 14 banks and have done financings in the aggregate... aggregate of over a billion dollars. Through all

of that I can tell you that our experience has been with... that NADBank is one of the most professional teams we've ever dealt with and for that we're very appreciative.

We were approached... I think Dean Hull approached Matthew, my son, originally last year when we were awarded the contract to commence the process of putting together a credit facility, and I want to report to you that initially we went through the process with—and Renata, I'm going to apologize; I can't pronounce your name, Renata Manning-Gbogbo; I can't say it, I'm sorry. She did one of the most thorough, technical, proficient and, from our perspective, efficient environmental reviews, and we were just very, very pleased with that process, and you're a credit to your institution.

Gerónimo, you put together one of the better financial teams I've ever seen. I think I've probably been exposed to everybody in the Bank through this process. Although I can tell you that we've learned several things. One is that Dean Hull is relentless. Esaul Ramirez is one of the most proficient people we've ever met in the Bank. I learned a fourth language from Oscar Cabra who I regret to hear is retiring soon, I think. But he taught me how to say "thang", which is a word I didn't know.

In any event, we've commenced the construction of our project at the beginning of 2011. We expect to be able to hit commercial operation in March of 2012. I don't know, Dean, do you have some slides that we could...?

MR. HULL: Yes, they're right here.

MR. RENNIE: Perfect. The project is well advanced in construction. It's about 60% complete at this point in time. It's on 123 megawatts, or 123 acres of land in Niland, California. I think the Bank can be very proud to know that with the generation of 45,000 megawatt-hours per year of electricity, which is far in excess of the needs of Niland, California, the Bank has probably financed the only solar city, arguably, in the world, which is a very interesting statistic.

Some of the things you're looking at in those slides, it's a photovoltaic project. Those are SunTech modules that are... have been imported from China, in part, and some from New Jersey as well. That's our Chief Operating Officer Charley Austin who is standing there opening those cartons. There are 99,360 panels that are being constructed. That is a PV inverter building. It weighs 78,000 pounds; there are 25 of those that are being installed on site. Presently there are 12. They're set on pads. Each one is on a concrete pad and services 46 different PV systems. They all come from Colorado and are manufactured by Schneider Electric. That is... well, that is an actual picture of the racking that was put together by a company out of Cincinnati, Ohio, called RBI Solar. Each one of those racks will hold 100 panels, roughly. In any event, that's the back end of a panel. You can see that they're erected and are ready for combiner boxes to be attached and will be operational in March. ...I think that's the front end of the panel; that's what each system looks like.

And in terms of where we are today, we are very happy that the project is working very well, with very few glitches, and we continue to pursue other renewable energy projects in generally the NADBank territory, working with Imperial Valley, California, quite extensively. We're pursuing other projects in Baja, Mexico, and we are just very thankful to be working with you and your team, and it's been a great pleasure for us. Thank you.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you, David. Now it's my pleasure to call to the podium Mr. Nelson Balido, president of the Border Trade Alliance.

MR. BALIDO: Muchas gracias. Thank you very much. Good morning. Buenos días a todos los que están aquí con nosotros esta mañana. It's good to be with friends from the NADBank and from the Board.

The Border Trade Alliance is America's largest border advocacy organization that advocates on issues that affect the border. We have members from Southern California all the way to Brownsville, Texas. And one of the things that we very much get involved with is border infrastructure.

You know in America today is, you know, in America, we're going through some various dips and valleys with funding, especially when it comes to infrastructure. The quality of life on our borders, for many of the projects that you, that you heard this morning, is... very much depending on infrastructure. Trade with Mexico continues to grow. We do feel that the quality of life will continue to expand on both sides of the border by having those expanded relationships and the funding that is necessary to get there.

And with that said, I think the future of the NADBank also we see as playing perhaps another role with that infrastructure, and again because it would help not only the free flow of commerce, but very much the quality of life for the millions of people on both sides of the border. So the Border Trade Alliance stands behind the NADBank and its partners in looking at possibilities of expansion and obviously fulfilling its mission, any which way we can. I appreciate the opportunity and thank you very much for your partnership, and we look forward to working with you. Thank you.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you very much, Nelson. En seguida le llamamos al Sr. Eduardo Martínez en representación de CETSA. Bienvenido.

Y antes de que empieces, te aviso, las láminas se pueden controlar allí del podio...

MR. MARTÍNEZ: Gracias. Buenos días. Good morning and thank you very much for your time in allowing me to make this brief presentation of our project El Porvenir. I would like to start by thanking the NADBank's Board of Directors, Mr. Gerónimo Gutiérrez and all of his team from the NADBank, as well as Ms. Maria Elena Giner and all the BECC team for all the time and effort that they have spent on this project, and for their commitment in supporting the development of the border region.

I would like to continue with a brief presentation of who we are. CETSA is a Mexican company, which was created in 2008 for the purpose of promoting, developing, building and operating projects in Mexico related to the generation of energy from renewable sources. CETSA is the product of the integration of two groups: Group Enhol and Grupo E. Group Enhol is a Spanish private company with over 20 years of experience in the renewable energy sector. Headquartered in Navarra, Spain, Group Enhol has over 80

employees managing wind farms built in 12 countries and three different continents. Group Enhol's current installed capacity exceeds 360 megawatts. As part of their diversification strategy in 2008, Enhol incorporated its operations in Poland, France and India into Fersa, a publicly-traded Spanish company, becoming its main shareholder. Grupo E, it's a Mexican company that has been measuring wind and hydraulic resources for several years. They are pioneers in the sector since they installed the first wind turbine in Mexico. Grupo Enhol and Grupo E joined strengths and formed CETSA. Together we have the necessary expertise, knowledge and relations in order to bring projects as challenging as El Porvenir to a successful completion.

We currently have several projects at different stages of development. Their completion would add over 1,000 megawatts of clean energy to Mexico's generation capacity. Most of these projects are located in the border region, being El Porvenir the closest to start construction.

El Porvenir will be located in Reynosa, Tamaulipas, a state which is in the northeast of Mexico. It is conveniently located ten miles south of McAllen and the Reynosa Park International Commerce Bridge. This wind farm will have an installed capacity of 54 megawatts with 30 turbines positioned over an extension of 2,000 acres. El Porvenir has a capacity factor of over 40%, which is above average for these projects.

Many factors need to be considered for the selection of the wind turbine to be used on a specific site. For this project, we have selected Vestas generators, more specifically their V100 model, which is their flagship, as they have added to its proven design, the newer and more efficient rotor. It is important to mention that Vestas will also operate and maintain the turbines for the life of the project in order to ensure their best performance.

Vestas, headquartered in Denmark, has over 25 years of experience building world-class generators. Up to 2010 it was the largest turbine manufacturer in the world with an installed capacity in excess of 46,000 megawatts. Group Enhol has worked with Vestas in several projects. They currently have an installed generating capacity of 102 megawatts with Vestas technologies.

The selected V100 turbine's normal power is 1.8 megawatts. The total estimated production for this site is 195 gigawatts-hour, as stated by Garrad Hassan, a world-class wind resource certifier.

As you may know, it takes years of work, research and analysis before a decision can be made to proceed with the construction of a wind farm. Among other things, wind measurements need to be constantly taken and verified. Agreements need to be reached with the land owners. Environmental permitting is required. There needs to be an interconnection feasibility study and an agreement to have it built. A large number of permits need to be obtained, and most importantly there needs to be a power purchase agreement, or a PPA, in place. For El Porvenir, the PPA has been signed with Grupo Soriana, the second largest retailer in Mexico after Walmart. Most of this work has been completed and the due diligence has been initiated.

There is a very important trend worldwide to increase the electricity generated from renewable sources, such as wind, solar, geothermal and hydraulic. It is very important not only for the economics but also for environmental and sustainability reasons.

Currently, Mexico generates most of its electricity burning gas, oil and coal. It's been stated in several forums that Mexico has the potential to produce over 70,000 megawatts from wind energy. To put this in perspective, the United States and China currently have an installed capacity of over 40,000 megawatts, while in Mexico it is under 1,000 megawatts.

Mexico's federal government, through President Calderón, has set very ambitious goals in an effort to promote the generation of clean energy. Mexico's goal for 2012 is to have an installed capacity of wind-generated energy of 2,200 megawatts. A longer term goal is to have at least 35% of Mexico's energy generated from renewable sources by the year 2024. This goal is achievable. Let's all work together and make it happen.

The construction of El Porvenir will bring many benefits not only for the state of Tamaulipas or Mexico, but for all the communities in the area. During the construction of the project, over 300 direct jobs will be created. There will be permanent jobs for operation and maintenance of the wind farm. This project will also bring a source of income for the owners of the land previously unproductive or with very limited activity. The positive environmental impact that this project will have is also very important. By generating this electricity with wind turbines, we are preventing the release of 100,000 tons per year of CO₂ into the atmosphere.

I would like to close stating that this is the first project of its type in the north of Mexico developed 100% by private companies. We have been meticulously working all these years to make sure that we have done everything properly, that no aspect has been overlooked, that nothing was left behind, and that we are creating a sustainable company that will contribute to both countries' long-term goals. We have made a very important investment because we believe in Mexico and we share your vision that developing the border region between the United States and Mexico will greatly benefit the two countries. Thank you very much.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you very much. Next, it's my pleasure to call to the podium Ms. Catherine Hollowell (?), representing the Tribal Board of Directors of the Sault Tribe of Chippewa Indians, along with Merle St. Claire, Tribal Chairman, Turtle Mountain Band of Chippewa, and Allen Cadreau—pardon me if I've mispronounced your last name—the CEO of Indian Energy, LLC.

MR. CADREAU: ... off reservation so you're right on the money.

Buenos días. Good morning. *Boozhoo*.³ *Nookizad Odeying Ndshinikaz*, soft-hearted one I am called by, *Ndodem Ajjak*, of the Crane clan, *Anishinaabe*, from Sugar Island, Michigan, Sault Ste. Marie. Our reservation is between the...or near the Sault Ste. Marie, Ontario border of Canada and Sault Ste. Marie, Michigan. I'm honored to be here, Mr. Hull, BECC, North American Development Bank, a team to which many, many thanks. It's an honor to be able to be up here and speak and share a little bit of what's happening within the Indian country. I'd like to introduce again our councilwoman, Catherine Hollowell, from my tribe, the Sault Ste. Marie Tribe of the Chippewa Indians, and our

³ The italicized words are in the Ojibwa language.

tribal chairman for the Turtle Mountain Band of Chippewa, which is our 8(a) partnering tribe.⁴

The vision—we also have another distinguished guest here, Mr. Roberto Placio from the Baja tribal nation, Cucapá. I'd like to just take a quick moment and introduce our vision with regards to Indian Energy's role and commitment to uniting tribes that are banked from our gaming side of things that had a desire like ours to diversify into the renewable energy field. The partnering of those with large land-based tribes that have mineral resources, land resources, renewable energy resources, and pairing them to bring energy to not only the United States, Mexico, but also bordering nations of Canada.

The excitement within Indian country—we now possess the skill sets that allow us to be able to bring utility-scale development to the table. The commitment to having our youth, along with our elders, and the focus of having Indian country bringing the skill set is a very exciting path. The 8(a) opportunity with regards to sole-source, set aside work—a big part of our vision is going after the United States military worldwide, energy supplies to the military bases. We're in the process of setting up meetings with the Secretary of Energy and the Department of Defense to discuss that issue. There's many bases here along the U.S.-Mexican border that fall into that category. We're currently developing projects of 150 megawatts in the regions of Baja California that involve the ejidos, the first of its kind. We've generated or created a union with the 'ejidos' there; also with the Cucapá, 150-megawatt plant of PV.

The Turtle Mountain Tribe, our 8a partnering tribe, has a 150-megawatt wind farm that we're developing; it's got 50 megawatts worth of 12-month data already established, and Vestas, too, is one of our lead wind turbine suppliers. So with that, I'd like to just turn the mic over here and share a little bit with... or ask Catherine to share a little bit of what's going on with our tribe.

MS. HOLLOWELL: Allen stole all of my thunder; he pretty much said quite a bit of what I was going to try to focus on, but I did want to just introduce myself. I'm Catherine Hollowell and a tribal board member for the Sault St. Marie Tribe of Chippewa Indians. We can see Canada outside my kitchen window, so I'm very fascinated with what's going on here. And if we weren't invested in Allen's vision, which is our vision, our people wouldn't have an opportunity to come out and see best practices, and we're maybe a little bit below the curve, or behind the curve, when it comes to funding environmental solutions along the border—because we are on a border, too—and so I'm very excited to go home and talk to our own people about opportunities that we need to start looking at.

But basically, as Allen said, we've been a casino-gaming economy for quite a while now, and that's been good, but, you know, there's a limit and a saturation to a market, and we have... our needs are growing, and I don't know that our revenues will stay up with it. As well, we have a mandate, much like your mandate, and I think all indigenous people share it, and that's a seventh generation commitment to environmental concerns and protecting our waters and our lands for our people, so we have sustainable lifestyles.

And the opportunity to be able to verge into new diversified economies that support that vision is pretty much what convinced our people to go ahead and take this very first tiny

⁴ Native 8(a) Business Program, part of the Small Business Administration's 8(a) Business Development Program.

baby step for us into an economy other than gaming, and obviously Allen is our... is our son, is our brother, that helps all his relatives live at home—so we've got a real close eye on him, but we've also did quite a bit of thorough due diligence, and then also because we are a government, because we are a nation, we had to convince our people that this was the right thing to do, because we are trustees of our assets, rather than just a business entity, and we actually took it to a vote of our 40,000 member tribe, and the mandate was to go forward with this, so we feel very excited for this opportunity.

MR. ST. CLAIRE: Thank you. Hi, I'm Merle St. Claire. If you think about North Dakota, we are on the Canadian border, so—I think the windchill was about 12 below this morning, so it's, you know...and so... But we like to think we're the center of North America; we are the heart of North America. Right in the middle is Turtle Mountain, and, you know, we are looking to diversify our economy as much as possible. We are looking at energy—energy is one of them. Of course, gaming is part of it. We're looking at oil. In North Dakota right now there's, I believe 20 to 30 new millionaires every month with all of the oil activity, fracking—and I think we all know about that. Of course, we are worried about fracking—how it's going to affect the water. We are hoping... it's coming to Turtle Mountain. It's just a few miles away, so we're trying to hold it off... hold it off for a little bit longer until we know exactly how it's going to affect the water. Not only... not only oil, but water, frack sand.

We have a lot of... there's a lot of opportunity, I guess, that we're looking at so... We're... I'm down here to learn, develop relations, relationships, and just explore all opportunities, the Mexican border and the American border. It's exciting that... I'm just now learning about it, and I'm hoping at some point the Canadian government and the American government will also take a look at what's happening down here, so I'm here to learn, like I said, but also to explore all the opportunities that are down here as well, so...

With that, I will teach you some Ojibwa today in my language. It's real easy. '*Mino-giizhigad*'—like a little fish minnow—'*mino-giizhigad*' means it's a nice day, and then there's no goodbye, so we say '*giga-waabamin*'; I will see you again; we will talk again. So '*miigwech*' thank you.

[APPLAUSE / APLAUSO]

MR. CADREAU: I'd like to just close with this brief comment with regards to the historical nature of what's occurring here within Indian country. We have nations partnering with nations that are really not paying attention to border regions. As we mentioned, we have relatives on the other side of the Canadian Sault St. Marie River side of things. We have an expression, and I hope that it's politically correct here... that it gives us this freedom to do what it is we're doing now; that is, we didn't cross borders, borders crossed us. And so this opportunity to be able to deal with the Baja tribes of Baja Norte is part of that, as well as the Mississaugas Nation across the river from us.

So we're again very honored and very thankful, Dean, for the opportunity to come and share, and we look forward to potentially working together and doing business. I'll be very clear that we're building financeable entities, so we're doing the due diligence.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you all very much. Next, it's my pleasure to call Mr. David Pearson, the Dean of the Imperial Valley Campus of San Diego State University. Welcome.

MR. BROTHERS: There's actually three of us that are going to present. Good morning. Buenos días. Me llamo es Jeff Brothers, and my Spanish-speaking friends call my 'Jefe Hermanos'. I kinda like that.

I'm going to open with a short, personal story and then give you a little comments as to how I started my company and what we do and then pass the mic over. But about six years ago, I did a process determining my personal mission statement; about a two-day process—kind of arduous—and you had to boil your personal mission statement down to five words and I ultimately came up with 'champion of sustainability.' I tell you that, because it has a reason for why I started my company and also gives you a reason why I really like the mission statement of the entities here.

I studied renewable energy after deciding that my ag career in this bank that I started weren't going to fulfill my champion sustainability mandate. I studied renewables. I looked at geothermal, carbon credits, gasification, biomass, biofuels, waste energy, wind and solar, and ultimately decided on solar. I just thought that the big curves were going the right direction, costs of installation were going down, mandates were going up.

I was fortunate to secure 50 megawatts of power purchase agreements with San Diego Gas & Electric, and we've got about 20 different projects that we're pursuing in eastern San Diego County; a 20-megawatt PPA from the IID—Imperial Irrigation District; a project that Dean Pearson is going to speak about here shortly that I'm particularly proud of, a 5-megawatt community solar project; and then I'm currently pursuing three projects in Mexicali. And I'm also attempting to draw a solar manufacturing company into Mexicali. So I work in San Diego, Imperial, and in Baja, Mexico, and I can't think of three better places to work. I claim that I work in two countries, and I look forward to working in a third, and that would be the State of Texas.

MR. DANIELSON: Good morning. I'm not on the list. My name is Paul Danielson. I represent a firm, which is the second largest electrical firm in the United States, Rosendin Electric. We've worked with Sol Orchard and their team for quite awhile on each of the projects he just outlined. We're about a hundred-year-old electrical firm and about a billion dollars in revenue. We're bonded to a billion dollars. We've worked in all the different verticals, but now embrace renewables to the degree that we're proud to say we've installed 8 gigawatts of wind across the U.S., inclusive of a lot in Texas. We've done about 45 megawatts of distributed generation in solar, and we have about 100 megawatts currently under development. So we've embraced it in a big way. I think our core competency in the electrical environment has allowed us to really bring economies of scale. The beauty of working with Dean and the team in the Bank here is it allows us to bring the economics to a much more competitive environment as well, so we're very, very pleased to be working with Dean and the team to bring basically cheap, electrical, clean electricity to the communities which we're involved with.

The projects that we're doing are all—you see my little, some of the different technologies. I'll give you a very quick little rundown of what we're deploying. We tend to find out the best levelized cost of energy, though we find that we're going to be dealing with basically a single-axis tracker technology because it increases the production of the

efficiencies of the panels which we deploy—because it's always bottom-line driven. So we're doing single-axis trackers throughout, and we've also done a fair amount—and I'll let David talk with some of the CPV technologies⁵—some of the new technologies coming out which enhance the productivity in areas where you have great DNI, and certainly where we are along the border, we've got tremendous DNI.⁶

So we look forward to working with you guys. I think the fundamentals of what you bring to the table—the economies, the low cost of capital from a debt standpoint—allows us to really maximize it. We're thrilled about the opportunity. Look forward to expanding it in the future.

MR. PEARSON: Paul, thank you. I'm David Pearson, Dean of San Diego State University's Imperial Valley Campus. I'm also a Texan or a recent Texan. I was the vice-president for partnership affairs at the University of Texas at Brownsville, and so it's great to see... to be able to see our colleagues from Matamoros. And Matamoros does need some assistance in the area of drainage, having spent many, many post inundaciones en la ciudad de Matamoros, necesita bastante ayuda por allá.

Folks, what I want to present to you is a vision statement. I'm not... I'm not a technician; I'm a sociologist by vocation. But I'm also someone who can see the need in the Imperial Valley; someone who can also see the direction in which we can direct those needs. As you may know, the Imperial Valley—in southeastern California—the Imperial Valley has one of the highest unemployment rates in the country. In fact, many times the calculation is we have the highest unemployment rate. We also have a powerfully Hispanic population. It's an area with a substantial amount of poverty. It's also a place of extraordinary opportunity.

When I arrived in the Imperial Valley from Brownsville, the first thing that was evident to me, there were tremendous activities going on in the area of renewable energy, but they were all somehow discordant. They were unconnected. There seemed to be no center of gravity. There seemed to be nothing to take and to rope these very considerable efforts as entrepreneurs, the businesses, the dollars together in some way which would make a coherent case for the economic, the social and educational development, of California's Imperial Valley and also the Mexicali Valley, because we tend to think cross-border.

San Diego State University, you may know, is a major research institution. We have in our departments of education, we have in our departments of engineering, and in the sciences, folks who are dedicated to developing, in a basic sense, renewable energy technologies; we have interest in algae.

The pieces began to come together as I talked to folks in the industry; I talked to folks at the Imperial Irrigation District; I talked to folks at San Diego Gas & Electric and realized what was really needed was some sort of center of gravity, something to take and something to orchestrate all of the renewable efforts that are going on in the areas of solar, in the areas of wind, in the area of geothermal.

⁵ Concentrated photovoltaics (CPV).

⁶ Direct Normal Irradiance (DNI).

What we came up with—and I'll present to the members of the Board in a moment—is a vision piece, a vision piece in which the Sol Orchard project is a major first step. A vision piece which says we're going to be creating a center of excellence, for San Diego State, a renewable energy center, which will take and allow us to focus efforts, not only academic efforts but also industry efforts.

We have in the city of Brawley 200 acres. On those 200 acres we currently have one classroom building, a parking lot and about 195 acres of Bermuda grass production. I was able to go to my bosses in San Diego and say, let's begin to think about a way to create this center of gravity here in what I consider to be ground zero for renewable energy development in the United States; a center of excellence, which would include classroom training, for folks both in industry, and academic training; that is partnering with the local community college, we'd be able to offer everything from entry-level certificates to high-level management training to training for industry.

So a training center. Obviously education is our business. But we see more than just that. We see a series of proof-of-concept projects, and we also see a few anchor projects, demonstration fields much like the one Mr. Brothers is proposing to us, to bring 25 to 30 acres of solar to our campus, which we'll be able to use for training, as well as producing energy, which would allow us to be a net-carbon-zero campus.

But there's still more than that, ladies and gentlemen. We also want to be able to bring and create a field station, a field research station for the scientists and the engineers from the main campus in San Diego, to be able to bring the Masters students, the doctoral-level students, the faculty research projects, the post docs, which will allow us to help our partners in industry advance the renewable energy industry.

But there's still more. We want to be able to have a demo— not a... an exposition center where all of the major players in the Imperial Valley, in renewable energy, can find a focus, can find a home. And by that I mean San Diego Gas & Electric and the IID,⁷ but also all of the firms who are doing business, the Ormats, the CalEnergys, the folks in solar, that there can be a place where we can engage in, what my friend Mr. Brothers calls, renewable tourism.⁸

But we see more than that as well. We also see a technology park where there can be a business incubator, as well as a presence from major... from firms who want to be able to take advantage of the research and the intellectual synergies that happen at this type of place.

Finally, and most prospectively, we're hoping to have a conference center, a world conference center, where folks from around the world in industry, folks from around the world in the academy, can come and learn about renewable energy, at a hub, and then take their field trips to the wind farms in the western part of the Imperial Valley, to the hydroelectric plants in the eastern part of the Imperial Valley, to the geothermal plants both in Mexico, in the Imperial Valley, and in the Coachella Valley, and to the solar panels which soon will be located all over the Imperial Valley.

⁷ Imperial Irrigation District (IID)

⁸ Ormat Technologies, Inc. is an international leader in geothermal power development; CalEnergy Generation is an international leader in geothermal, natural gas and hydroelectric power development.

California requires all of public utility providers to have one third of their energy portfolio in renewables by the year 2020. The race is on, as everyone here knows. San Diego State proposes to be a major player, a major broker, a major facilitator in that development, so that we can add materially, both in San Diego County, but more importantly in the Imperial County, to the economic, the social, the educational development to the benefit of all of us. Thank you, folks.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you all very much. We will now call Mr. Octavio Ramos Muñoz, Director de Macro Proyectos, URBI.

MR. MUÑOZ: Thank you. Thank you very much. Thank you, members of the Board. Maria Elena and Geronimo, thank you for having us here. I'm going to be presenting URBI. URBI is a home and a land developer in Mexico. We're the third largest home developers in Mexico. We've been listed in the stock market for fifteen years, and we're right now starting a new vision of what a city development, or a city... yeah a city development should be.

So let me start by putting us on a framework. Mexico will have to build new cities to accommodate at least 25 million new homes during the next 20 years. Right now we have around 27 million homes, which were built during the 20th century, so we'll have to double that in just 20 years. That's one fifth of the time.

Migration is inevitable; migration not only in Mexico, around the world. And this comes with very high costs in terms of economic, social, and also environmental aspects.

The Solution. The solution we think is simple. We have to build better cities, but we have to build them with better rules. And it's not only rules about behavior, but also rules about design, building infrastructure, using our resources, and we have to... and we must use rules which have already been proved to be right.

Our cities will continue growing; migration will be taking part of it, and people are going to be moving, looking for an improved quality of life. We've done some anthropology studies, and we found what we called the three E's. People are looking for employment; people are looking for education and for entertainment. They're not looking for houses; they're not looking for cars; they're not looking for money. What they're looking for is education, employment, and entertainment.

What happens when they move in? And let's talk about cities like, for example, Tijuana, right on the border between Mexico and the United States. When they move in, they move into a place that has already some rules. But whoever sets the rules—I mean whoever pays is going to set the rules. So what we're having here is the people come... this person coming to Tijuana finds that the one paying is the street, and the street is giving him the job; then what we're going to find is rules with no values, bad habits, indifference and that is going to definitely lead us to family disintegration, poverty and injustice.

But what happens if the society and the government provide those rules and those rules are proven to be right? Well, those rules are based on values and principles, education,

encouragement and support to those less needy. This is definitely going to lead us to an opportunity to grow as a family and as a community.

We have a big challenge right in Baja California. Baja California's population growth is twice as big as Mexico's population growth. So people are migrating to Baja California, and specifically to Tijuana. Tijuana's population will double during the next 20 years, and that's going to create the demand of more than 21,000 hectares of urban land and housing. Right now Tijuana is 30,000 hectares, and every day it grows 1.5 hectares, just to put a little bit in context.

This is Tijuana... Tijuana is a reality. Fifty-four percent of current urban area was generated in irregular settlements. And at the beginning, I was not sure of putting this picture, because this might mislead us, thinking that this is Tijuana. Well, this is not Tijuana, actually. This is not 54% of Tijuana right now, because it has to be converted. And every year we invest a lot of money to try to keep up the pace of a growing city on the irregular settlement. So if this is not Tijuana; what we're doing is spending a lot of money trying to cope with this growth. How much money? Well, eight times more money than if we had planned the city. So in an unplanned city like Tijuana, we spent eight more times the infrastructure than we should in a planned city.

The Mexican Federal Government has come up with a solution in terms of regulations; these are the DUIS, which are the Sustainable Integral Urban Developments. It's an initiative that has been taking place with... around all of the different instances in the federal government, and what we're...and what this is is simple, it's just trying to obey some rules for an integrally planned, ordered and sustainable urban development. And sitting on the table, all of the different... all of the different actors that have some influence into these urban developments. These rules are being set not only for housing; they're set for infrastructure, public services, commerce, education, health, industry, recreation, everything. This is a city. And as a city, it has to have all of these different aspects.

This is a collaborative project, of course. It's the federal government, along with the state government and also—very, very important—with the developers, with the private initiative. We're all construction... under a structured policy of urban development. We're setting the right rules to start a city.

This project I'm talking about, it's Valle San Pedro; Valle San Pedro, we'll see just in a minute a video. We're sponsoring it in the private sector. But it's not only us; it's not only URBI, of course. There's SEMARNAT—which has been playing a very important role in the project—SEDESOL, Banobras—which has already invested money into the project—the state government, the municipal government, and many other federal institutions have been working in setting this new city for Tijuana.

URBI is...we're proudly... Can you just set the next slide, please?

Thank you. URBI... we're the first home developer with a DUIS certificate project; that is in Valle San Pedro, Tijuana. And I would just like take a look at the very short video, if we can go forward, please.

[VIDEO PLAYS / INICIA EL VIDEO]

[This is our land. This is our home. The one we will inherit to our children and grandchildren. Over the last decades our planet has suffered climate changes due to the careless use of natural resources.

In Mexico, a third of the water is lost in rain gutters. Today, in this country, 4 out of 10 persons do not have access to decent housing. By the year 2030, Mexico's population will be nearly 130 million. During this period there will be a 40% increase in the number of cities in the country, and we must build the same amount of houses that we built in the whole country during all the 20th century.

Tijuana constitutes an extreme case of the national condition. More than half of its urban area had its origin on irregular settlements. In the following 20 years, its population will double, generating a high demand of urban soil and housing. In order to face this great challenge, Valle San Pedro, the first integral sustainable urban development certified in Mexico, emerges in the region of Valle las Palmas in Valle San Pedro, which will consolidate Tijuana as a competitive metropolitan area at a global scale. With an area of 13,400 hectares, Valle las Palmas is a project with a grand vision, constituting an ideal environment for building an innovative city of more than one million inhabitants for the year 20—

This is our land—...San Pedro foresees that its inhabitants will enjoy a sustainable city that— ...area, infrastructure, community facilities and urban image, legal aspects and economic feasibility. Once the territorial assessment concluded that the area known as Valle las Palmas was the one with the best competitive advantages to host Tijuana's future growth and after a comprehensive planning exercise, general urban development guidelines were laid down for the area of the entire project. These guidelines set a development strategy for primary land zoning of the land, land use, urban structure, community facilities and urban corridors as well as standards for environmental care, population density and appropriate land use, among others. With this purpose, technical studies were done to evaluate different infrastructure in issues such as road systems, potable drinking water, sewage and electricity, among others.

Valle San Pedro foresees that its inhabitants will enjoy a sustainable city that promotes a balance between social, environmental and economic prosperity. Social prosperity brings about cohesion, as well as personal and family development through a new community model that fosters community involvement. It thrives, providing the optimal infrastructure to promote sports and recreation and the development of knowledge, education and culture, channeling national and international institutional resources and initiatives and urban elements that promote a healthy living.

From the environmental prosperity point of view, Valle San Pedro advocates the rational use of natural resources by providing an urban design which is in harmony with the natural environment, promoting a clean, orderly and safe environment with high community value. For both energy generation and conservation the

development participates in a series of feasibility studies to promote the use of new and advanced alternative technologies. To achieve appropriate water use and conservation, it proposes programs dealing with reuse of sewage water, wise use and saving of water resources, as well as the collection and use of rain water. It also promotes mechanisms for recycling and waste management, as well as establishing extensive ecological conservation areas. Its transportation system foresees an adequate urban and road design in order to obtain the most efficient human mobility. It also contemplates the promotion of an ecological culture and love and care of the environment.

To be able to achieve economic prosperity, Valle San Pedro fosters the creation of high-technology, economic clusters by linking the local productive vocation with the global megatrends to stimulate growth, promoting the creation of well-paid employment and regional and national competitiveness. It also utilizes housing as an articulator and strategic driver of economic development, fostering the development of housing programs for low-income families.

Valle las Palmas has been divided into two sectors for its study and implementation. Sector 2, named Valle San Pedro, has an area of over 5,800 hectares. A partial urban development program has been completed and published. Phase I of this sector began in 2009 with the development of a sustainable community in an area of 485 hectares, which includes the integration of regional roads, a university campus, and the construction of 10,000 homes primarily for families with an income of less than three times the minimum wage. It also considers the creation of a 200-hectare industrial area capable of generating 8,000 direct jobs and 5,000 additional jobs in the commercial and service sectors.

Only the determined participation of society and government will turn Valle las Palmas into a reality with all its social, environmental and economic significance. The integral, sustainable urban development of Valle San Pedro opens a new door for the construction of sustainable cities capable of establishing a favorable environment for the harmonious development of present and future generations. Projects like these are capable of improving the quality of life of all its inhabitants, of creating decent spaces to live harmoniously and safely and in safety and furnishing the adequate tools to preserve the most valuable possession we have inherited, our unique, great and beautiful Earth.]

MR. MUÑOZ: So, we'd like to think of this as a new Tijuana. This is going to be the Tijuana 2.0. This is... I mean the 5,000 hectares are not... those 10,000 homes that you heard are like the first stage; that is going to be done within the next four years. The 5,000 hectares are going to hold 135,000 units, and this whole city has an industry, commerce, public services, everything that... all of the dynamics of the city are going to be taking place here. So we have to do this in a very planned way. We have to... we need the collaboration of most of the public entities that take place into a city.

So where are we right now? And I would like just to go very fast on some of the update features so that you can sense a little bit of the advance of the project. We have a bridge to go into the city. That's already been built. The access highway, it's an eight-lane

highway, 50-meters width, for... made out of hydraulic concrete. It's already six miles... six miles long. It's constructed... it's prepared for a BRT—Bus Rapid Transit System. We're promoting, of course, public transportation here. The 185 hectares that we're talking about, well, these are the 10,000 units that would be constructed within the next four years. We'll have commerce, services—public and private services—a planned infrastructure, and right now we've already built around 4,000 units, and we have already our first community living right there.

This first community, of course—and this is not a dummy, it's actually like a picture—it has solar water heaters, walking paths, service... which lead you to all of the services at a walking distance. So we're basically... what we're doing is, instead of letting people move around from one... from Tijuana to Valle San Pedro, we're taking all of the services, all the employment, everything, into this new area, this new city, so that the life can be done here and we'll consume less transport than the usual.

Well, of course, parks, connectivity, leads to social integration; this leads to a community. We're right now irrigating with reused water in a reused water system, of course. These are the solar water heaters that we're building; every house has its solar water heater. We have a sports... sports units. This was the first football field out of synthetic grass for the affordable housing in Mexico, the first one to ever be built.

We have, well, of course, a fire station, police stations, a community center, which is really... the community center, this is fantastic. We see the infrastructure is the hardware, and then all of these social programs and what is going around it is like the software. And we're right now working, for example, with the kids. Mothers usually work in Mexico in this part, this region of Mexico; they're working in maquiladoras. And one of the biggest issues here is that they're working when kids go back from school. So they don't know if they're eating or not, if they're having lunch. Well, here, the community center, what we're doing is we have this program where we are feeding these kids when they're coming out of school, so that the mother can be really assured that her kid is going to have a decent lunch and going to be ready for doing his homework and when she comes back from work everything is in place in her house.

Of course, the town center, which has already been built... I mean is being built; the education center; this is also fun in Mexico. Sometimes it's difficult to explain what is first... you say what's first the egg or the chicken. And that's because when you want to build a school, the first thing they ask is: 'Okay, where are the students?' And you say: 'Well, the students are not here, because there's no school.' And when someone wants to move in, they can't move in because there isn't a school. Someone has to take the first step, and right now the Mexican government is taking the first step, and we're setting all of the services, public services, we're setting them in place, just before the first family arrives to this community.

Then what I said, the university, this university will be the biggest campus for the state university of Baja California. It will hold 12,000 students by the time it's finished. Right now it already has 3,500 students already in campus in Valle San Pedro.

Well, what I'm trying to do here, as your mission says: 'to enhance affordability, financing, long-term development and effective operation of infrastructure that promotes a clean and healthy environment for citizens of the region.' Well, I'm here to invite you,

not only to invest in water treatment, not only to invest in clean energy, solid waste, infrastructure that, isolated infrastructure, but to invest in the whole system. The maximum, the highest level that we have in infrastructure is a city. So I'm here to invite you to really invest into a city, to really make a change and improve the quality of life of citizens of Tijuana. Thank you very much.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you very much. En seguida les llamamos a Roberto Dávila y Edgardo Lozada, socios con la Consultoría de Negocios Ambiental Verde, que den la palabra si están presentes. ...¿No?

Excuse me, I believe, is it David Bogas?

MR. BOGAS: It's David Bogas.

MR. FLORES: David Bogas, yes. Welcome. In representation of EPT Land Communities.

MR. BOGAS: Good morning to everybody. I learned four days ago that I would be joining you all, and I had a couple of choices. I could learn another language or prepare some slides, so I'll go to the slides. I think... No?

MR. FLORES: I think they're being cued up.

MR. BOGAS: Okay. No problem. I'm born and raised in El Paso, Texas. I do speak some Spanish. Not enough. I come from a very, very rich Hispanic heritage, all educators, all originating out of all parts of Mexico, and I was the single lone gringo to break into the family. I've been married to my wife for 35 years.

Four years ago I was brought in to be a team of developing a smart-growth environment called Montecillo. What's happening across the country now is you are seeing a lot of municipalities take on the concept of new urban and smart-growth design—a better use and a better steward of the land. All that entails everything that I've heard here this morning; the purveyors of renewable energy resources, as well as development of new urban design such as Tijuana—an absolutely fabulous presentation of what you're trying to achieve down there. I absolutely commend you.

This is what new urbanism is, in fact, designed about. It's transect development. This is bringing the people who are the users of all of these reusable, renewable energy resources, bringing them into an environment, creating cities within cities. That's what you're seeing now, a city within a city, and you will see very shortly what we are doing as well. Every single one of these floor-plan designs is now being referred to as a transect, and it's mixed use, it's multifamily, it's townhomes, it's privately-owned condos, it's multifamily. But more importantly it's the orientation of the land; it's all the green concepts that you can possibly bring into a development.

This is our particular location. This is El Paso, Texas. And just to point a couple of things out. Obviously, this is the area that we're talking about. This is 293 acres of heavily-challenged topography. You have Interstate 10, which runs, as most of you probably

know, all the way from California to across Texas and beyond, and obviously right here through San Antonio. This is the tail end of the Rocky Mountains, and of course our border with Mexico. This is our city within the city. This is a single largest infield development within El Paso, Texas.

This will give you a little bit different concept picture of it. These areas right here, you will see very shortly in a couple of slides, is actually Phase I and is actually under construction at this point. Each one of these particular areas is, in fact, a smart-code, smart-growth, green development within the City of El Paso's Title 21 of their ordinance. This is El Paso Independent School District's new location for whatever type school they want, either elementary or middle, but it's not large enough for high schools. Again, I-10 right here headed west and east.

This is actually a depiction... we hired a land planner out of Pasadena, California, Moule & Polyzoides. Stefanos Polyzoides is considered probably the grandfather of new urban design. His initial concept on any design that he does is green development. Green is not just developers constructing with thermal-pane windows, energy-efficient appliances. If a contractor is not doing that today, he's already missed that boat. You have to do that today to stay competitive in the market. Green is also treating the land correctly, using the land correctly, orienting your buildings, passive solar, active solar, storm water retention, low-carbon footprints, access to bus rapid transit systems that were mentioned, walkability—walkability is huge in any green development; get people out of their vehicles and let them reach their destinations on foot. Open space is huge in green developments.

What you're seeing here is the way we have oriented all the different designs. This is approximately 3500 mixed-use, multifamily environments. It's about 650,000 square feet of commercial and retail. It's got 11 civic centers within it, parks—a civic center is deeded land to the municipality that can be used for anywhere from bus rapid transit stations to police substations to postal annexes. It's all part of this entire development that we're looking at here this morning.

The emphasis here, again behind green, is trying to figure out the best way to give land *back* to city environments for custodial purposes, for protection. What we have here—and it's a really difficult number to see—but that's 89 acres. This is a 293-acre development, of which through the last two years of going back and forth with the City of El Paso, 90 acres are going back to the City for development, which we have agreed to put in the walkways or pathways. This is open space. This is... the City came to us, quite frankly, and said how can we best preserve, and through the use of our consultants, we have presented this option to them, and I think it has fallen on great favor in that regard.

We actually commissioned the model. We found that we couldn't find people who understood how you take 293 challenged acres and turn it into an absolute development that takes into consideration everything that we have just discussed: the stewardship, the preservation of resources. So we created this model. This is 12 feet by 6 feet. It is to scale. It's very large. I don't know how many times it's been photoed and replicated. But when people actually come to understand, much like what was presented just before me, it takes this kind of planning and obviously considerable resources to make a project like this take place.

I'm showing you these four buildings right here—this is actually the first phase of the development. This is the venue at Montecillo. This is 290 mixed-use apartments. It is on a major thoroughfare called Mesa Street. It has both local bus service, as well as the... it is on the planned route for the rapid transit system. These are the projects actually under construction. Those pictures were dated December 5th, and, yes, it was very cold that morning. So you can see behind us are all the transects that are coming into play now for the purposes of putting this project together that we are presenting.

These are the elevations. It's... it's low income or not. It doesn't matter. A project does not have to look like low income. It's people's homes. It's something for them to take pride in, and that's our goal. Our goal is to present a project that anybody can be proud of when they live there. This is their home, whether they own or not.

We do follow the Texas Green Built™ protocol. I just put that up there because I'm sure everybody is familiar with it. It's something that we strive for. It's also a definition by which we've enlarged our definition. We take the stewardship of the land very, very seriously. And I'll tell you why. I'm an *organic* pecan farmer. My family would shoot me if I didn't take care of land. And they would shoot me if I didn't preserve resources. This is what we do. And we must keep this land available for future generations, no matter how we look at it. So I'm very passionate about the preservation and the proper use.

And again, as the Texas protocol dictates, they stop and they... someone formalizes that it takes it another 600 or \$800,000 dollars to build green. That's a really, really old number. It's really more like \$3.7 million on two projects to build green, but that's the investment in the future. That's what it takes. And so I hope my presentation to you has both opened your eyes and expressed my desire for you to understand what it takes to develop a city within a city. Thank you all very much for your time.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you very much, David. Now, I would like to call Mr. Paul Skillicorn, the C.E.O. of Agriquatics, to the podium.

MR. SKILLICORN: I'm the last guy, so I'll try to make it quick. Disculpe, puedo hablar en urdu, hindú, bangla, pero en español, no tengo verbo. So, inglés.

I'm going to start with admitting something, and then we will go from there. I make my living working with activated sludge, which I think if you look at your expenditures over the last X number of years, you probably spent more on activated sludge than any other single thing.

What I'm here for is to make a plea, basically, that we move beyond activated sludge. It is nasty stuff. I've seen activated sludge plants everywhere in the world, in the States, in Washington, D.C., New York City, Bangladesh, Mexico, Peru, London, New York, I mean Melbourne, Australia, I've seen them all. Activated sludge, it is nasty. It doesn't work the way people think it works. It's hard to keep going. You make the investment—say in Mexico you make an investment of 30 million—to operate that, now suddenly you've imposed on these people a cost of 4 or 5 million dollars a year to operate that plant. And this maintaining and keeping activated sludge going is a massively difficult problem.

I work in the States. Every municipality in some fashion cheats on activated sludge. Lowering cost, lowering costs, lowering costs is the message all the time, and they do it at the margin in every single way that they possibly can. So activated sludge is nasty stuff. I make my living doing it, improving efficiencies. You come to me, if you've got an activated sludge plant, I can lower your costs about 30% and improve the quality of the effluent. It's complicated, but basically there will be less sludge and lower costs in electricity, and a better standard out the other end. But we're not here to talk about activated sludge. It's the next thing that I'd like to talk about.

Wastewater is water, which is massively valuable, and largely nutrients, which are valuable. And so what I'm trying to do is to take those nutrients and water, extract the nutrients in a way that makes money, is profitable, and then bring the water to a condition that is 100% recyclable, essentially drinking water standard out the other side. You make money extracting the nutrients. You make money recycling the water.

Just to give you an example: If you spent, say, 30 million on activated sludge treatment plant, it's going to cost you 4 to 5 million dollars *really* to operate that, maintain it, and keep it going into the future. If you spend that same 30 million in a system that extracts nutrients... massively... treats the water and recycles it 100%, you should be making a profit—spend the same amount of money, treat twice as much water, and make a profit somewhere north of \$10 million a year. That's the difference. Cost of 5 million, half as much water treated, and a profit of 10 million and recycle 100% of your water.

If you can recycle your water 100%, just to give you an example, you can multiply the water by a factor of four. So one liter of water recycled, recycled, recycled, recycled is four liters of fresh water. That challenge is massive. You're looking at Mexico City, just dying, trying to get more water, and they're not treating their wastewater. There's a big project to do it, activated sludge, unfortunately, which is a disaster. But everywhere we're looking for more water, more water, more water. If we would recycle it and learn to recycle 100%, it's achievable.

So very quickly, what I've got here is, I'm taking another approach as well, and that is taking wastewater treatment, which is this large concrete structure, typically very ugly and stuck way off there somewhere where nobody can see it. It smells bad. It looks bad. It costs a lot of money to run. Everybody hates a wastewater treatment plant. Not near me! So we've taken wastewater which is the ugliest, most horrible thing that a city produces, and we've turned it into the center of town, a park, which is the most beautiful place in town, where everybody wants to go, where boyfriends and girlfriends walk to hold hands—preferentially where people are now wanting to be married—is the wastewater treatment plant. So that turns it around completely, and it's a wastewater treatment plant that makes money. It's profitable.

So very quickly I'm just going to teach you a little bit... I'm going to run through this very quickly. This is just an internal report that we did within our group, and it's not, you know, for an outside audience, but basically we're taking just standard wastewater in a town called Barranca, in Peru, up north of Lima, and we are... do I? What do I do? I did the wrong thing here. Can we turn it on again? Okay. There we go. It's just wastewater like any other wastewater. We took it to a site. This was the site that was growing cabbages. It was home to Sendero Luminoso, oddly enough, at one stage. That building is a derelict

building. And we're taking this, which is a dangerous place, drugs being sold, et cetera, and we turned it into a park.

I won't go into... this is just standard stuff. This is dealing with the front-end solids. This is a temporary fix. We deal with influent solids, primary solids, by feeding it to worms. And we harvest worms. We also do an anaerobic digestion in a very different way than it's done, but this is just a front-end fix; it's a drying bed. Worms are how we eat organic solids. Worms eat the solids, we harvest the worms; they're protein, relatively inexpensive. We can produce a hundred times as much protein on an acre as you can grow chickens, as an example, with aquatic worms; massive increase in protein production. These are the worms that we grow, California black worms. The California fish industry actually uses this technique very effectively.

We take the clarified primary effluent, and it's actually treated in a system that looks like this. This is a park-like setting. A normal waste treatment plant would be a little more industrial, but still very attractive to look at. It's lined ponds. That is what we have as our waste treatment plant, the center of a park. It's not fully landscaped yet. It will be. But that's our group. We're growing a plant called duckweed in that, which you will have heard of. Duckweed can grow protein at 30 times the rate of soybeans on an acre. So we can grow 30 times as much protein as soybeans per acre on duckweed. Municipal wastewater is fabulous for duckweed. The two go hand in hand. We harvest this. This is a system that is designed to produce duckweed very, very efficiently. It's harvested. It's dried. It's made into animal feed, or fish feed in this instance, but it looks very attractive. People love to look at it.

Duckweed. Essentially these are our harvesting system—and I'll just go through it quickly. It's all a crop, so you have to manage the crop efficiently. This is how it's harvested. The ball is lifted up, a simple ball valve; I call this the most efficient ball valve I've ever seen. And it harvests, just flows in... and we collect it... like that. This is the material that we're growing, and it grows in Lake Titicaca, grows in Northern Ontario, it grows in Singapore. It's an incredible plant... fifty, forty-five percent protein, a better protein than soybeans, and grows at 30 times the rate of soybeans.

This is again our park. This park has opened by the mayor, in this instance. It's still got a year or two of landscaping to go, but you can see how the local community has basically wedded, is wedded to this park now. We get busloads of school kids now every single day coming to this treatment plant to look at what's going on in the park.

Solar dryers. An example of a very simple design of solar dryers—this actually has a chimney on it as well to create a vortex—but a very efficient design of a solar dryer. Simple sand filters. We use ozone. I will *never* use chlorine to treat wastewater. It simply should not be done. If anybody does it, stop.

Water is treated, pressurized, used to irrigate, and then we use reverse osmosis... at the far end... basically to demonstrate that we're treating wastewater now to an advanced tertiary standard. So this park treats to a higher standard than New York City or Washington, D.C. or Miami or any other place in the United States, without reverse osmosis. But we can treat it with reverse osmosis out the other end, very, very inexpensively because we've got drinking water anyway, and then that water is fully recycled.

So in the opening of this treatment plant, the mayor opened it up and saw it and we said, well, the mayor and I are going to toast each other with a glass of water. And 'no, no, no, don't do that,' but we did it anyway; the mayor wanted to do it. And what was interesting to me is once we did that, everyone in the room ran to get a drink of that water. Everyone. So the concept of complete recycling is I think not that far away.

We intend here, in this city, to put together some subdivisions that will be inexpensive housing, and we've got our ideas on that as well. It'll all be landscaped like this. It will be a pretty park, a lot of bougainvillea and so on. We use the treated water right now for agribusiness. So all of our water—our rule is not one drop of water is discharged. So every drop has to be reused, either industrial reuse, which we get paid for at a 50% discount over the fresh water, but it's better, in fact, than the water they're getting through the faucet. But we make more money doing agribusiness. And we are working with NETAFIM, the Israeli company, to do agribusiness using fertigation technology and in joint ventures with campesinos outside the city. We do it on a 50-50% basis; they make 50% of the profits; we make 50%. So a campesino investing in ten hectares is making or will make a profit of more than 100,000 dollars a year. So think about that as well: Mexico, ejidos, ejidatarios', ten hectares, a 100,000 dollars. It's all double.

We grow fish. We have designs that do this with the most efficient aquaculture systems in the world. It involves oxygen. We work with lowering surface temperature of water. There's all kinds of tricks to this as well, but it's the most efficient system. We grow in domes. We will be growing this arapaima or pike fish, as well as an Amazon fish that has never been reproduced—we'll be doing that in Peru—but mainly tilapia, environmentally friendly fish. So the treatment plants, the guts of it, are producing protein and growing fish. The output is drinking water and fish. Massive profits.

We do domes. Everything is done in the dome. All of our fish are grown in domes. Our work is done in domes. I'm wedded to domes because this is the most inexpensive way to cover a square foot of surface, and so that is another piece of the equation.

This is all our agribusiness. We're working with biofuels as well. Arundo Donax is the fuel that we're producing.⁹ We use it to manufacture lumber initially, but eventually it will also be used to do... as fuel. We are getting into the enzyme business as well: genetically-engineered duckweed, enzymes. It works very well.

So basically that's it. We will be working here with Alamo in the Valley, and doing a system. University of Texas will be working with us. We will have the Israeli firm NETAFIM working with us as well, and we challenge you guys to work with us to move this all forward... That's basically it. Thank you.

[APPLAUSE / APLAUSO]

MR. FLORES: Thank you very much. We have two additional people who signed up after the start of the meeting, and so very quickly we will call to the podium Ms. Verónica Jiménez de la Dirección General de la Fundación Zaragoza para Desarrollo Sustentable... de Ciudad Juárez, Chihuahua. Bienvenida.

⁹ Arundo Donax is a tall perennial cane, similar to bamboo.

SRA. JIMÉNEZ: Muy buenos días, todavía creo. Es un gusto estar aquí y tener la oportunidad de presentarles el proyecto con el que estamos trabajando. Como ya comentaron, venimos de Ciudad Juárez. Este proyecto está realizando en coordinación con Fundación Zaragoza y una organización civil que se llama Desarrollo Social Sustentable.¹⁰ A partir del inicio de este año buscamos la manera de apoyar, sobre todo las colonias del norponiente y surponiente de Ciudad Juárez, que son las colonias más vulnerables donde se concentra la población en situación de pobreza extrema y la que tiene menos posibilidades de tener todos los servicios públicos que requieren para tener una calidad de vida aceptable.

El objetivo de este proyecto es contribuir a que las familias vulnerables en situación de pobreza de colonias marginadas del norponiente y surponiente de Ciudad Juárez mejoren su calidad de vida a través de la solución sustentable de la instalación de un sistema fotovoltaico para generación de energía eléctrica, tanto en los centros de desarrollo o escuelas como en sus casas.

Aquí tenemos una filmina donde nos explica en que consiste la energía solar fotovoltaica. Me la voy a saltar porque ya es un tema por demás visto en esta reunión. Las acciones de este proyecto es primero identificar en estas colonias los beneficiarios de los proyectos e iniciamos con una capacitación teórica y práctica de la instalación de la energía solar fotovoltaica. Ésta es una capacitación que se les da a cada una de las familias que se lleva a cabo en cuatro meses para que tengan las herramientas técnicas de que, a qué se refiere con este tipo de energía verde y cuál es el procedimiento para realizar una instalación sencilla.

También se lleva a cabo una práctica de instalación de paneles solares en un lugar de reunión de la comunidad o de la colonia, que puede ser un centro comunitario o una escuela dentro de la misma colonia. Y esta instalación se pretende que se realice por estas mismas personas de la colonia que asistieron a la capacitación. Se realiza, por supuesto, con la supervisión y la asesoría de personal capacitado que les lleve paso por paso todo lo, cómo hacer la instalación.

La siguiente acción es también la supervisión y asesoría para la instalación del sistema de energía solar pero en la casa de los beneficiarios elegibles; es decir, las personas que asistan a esta capacitación tendrán la oportunidad posterior de poder hacer una instalación sencilla en su casa. Nos topamos con que estas personas, muchas de ellas no tienen acceso a la luz eléctrica porque están lejos del último poste de la Comisión Federal y, en este caso, pues, no tienen acceso a energía eléctrica y muchas de las veces tienen familiares con discapacidad dentro de sus casas y pues esto les complica muchísimo la calidad de vida, tanto de los miembros de la familia como, por supuesto, de las personas en esta situación de desventaja. Hay otros que sí tienen acceso a la energía pero no tienen la posibilidad económica de pagar la energía eléctrica. Entonces, a raíz de este proyecto también se pretende que los gastos de estas personas disminuyan con la instalación que se realice y que estos recursos los puedan destinar a otras necesidades básicas, como puede ser la alimentación.

¹⁰ *Organización para el Desarrollo Sustentable, A.C.*

Éstos son algunos beneficios de la energía solar que nosotros consideramos que son factibles para poder desarrollar el proyecto. Éste es un ejemplo de las colonias donde estamos trabajando. Una de ellas es Lomas de Poleo y es por demás una colonia vulnerable de Ciudad Juárez donde la población generalmente habita en lugares donde no tienen todos los servicios y eso es gente que viene de todas partes de México con la intención de cruzar a Estados Unidos y al no poder realizarlo se queda en Ciudad Juárez pero con unas condiciones de vida deplorables.

Éste es en sí el esquema del proyecto. Hay una Fase 1 que es el taller de capacitación y entrenamiento de energía solar, que dura aproximadamente cuatro meses. Hay la segunda fase que es la instalación de paneles solares en un centro comunitario o escuela. Ahí es donde realizan la primera práctica de manera comunitaria y con beneficio a toda la colonia. Y la tercer y última fase es la instalación de los paneles solares en cada una de las casas habitación de los beneficiarios que asistieron al centro. Ahí podemos ver algunas fotografías de la gente tomando la capacitación en estos centros comunitarios. Son, en su mayoría, personas que ahorita no tienen una fuente de empleo. Y también, a través de este proyecto, se pretende la autogestión y la capacitación para que puedan acceder en un futuro, pues, a un empleo remunerado o puedan incluso emplearse por cuenta propia.

En el taller de energía solar son 120 beneficiarios por colonia; dura 80 horas de teoría y 30 horas de práctica y son seis grupos de 20 personas cada uno, como está estructurada la capacitación.

Tenemos el presupuesto del taller de capacitación y el calendario. En el presupuesto de la capacitación de la energía solar, está todo lo que se requiere tanto de las tutorías y se les da también algunas pláticas de formación empresarial y formación humana para que puedan tener estos elementos.

En la descripción del curso, ya comentábamos, está dirigido a jóvenes y adultos. Tenemos muchos jóvenes participando en estos talleres porque están muy interesados en adquirir este tipo de conocimientos, sobre todo muy jóvenes. Pero también tenemos, gratamente, dentro de nuestro curso muchas mujeres. Entonces las mujeres están ahorita muy interesadas en adquirir este tipo de conocimientos; están muy interesadas en poder implementarlo en sus casas. La mayoría de las familias en Ciudad Juárez están lideradas por una mujer. Entonces, esto hace que ellas se vayan a buscar diferentes formas para mejorar sus condiciones de vida y nos da mucho gusto que ahorita estemos teniendo muchísimas mujeres en estas capacitaciones.

Se les da algunos conocimientos básicos como componentes de los sistemas, análisis del lugar de las instalaciones, el criterio de selección de los módulos fotovoltaicos, los sistemas de montaje, seguridad y diseño fotovoltaico, determinación del calibre, protección de la corriente y tierra eléctrica, que son algunos temas básicos para poder hacer las instalaciones. Pero como les comentaba, posteriormente en la segunda y tercer fase se les asesora y se supervisa todo el trabajo.

Éste es el plan de estudios que se está llevando a cabo en este tipo de capacitaciones y pues viene muy específico todos los temas que se cubren.

Ésta es la Fase 3 para la instalación en las casas habitación y también viene toda la descripción de los materiales que se requieren para cada una de las casas.

Al final viene un resumen del proyecto y vemos que el proyecto para 120 personas es un porcentaje considerable de una colonia vulnerable, sobre todo, detectando aquellos que tengan mayor necesidad. Está alrededor de \$300,000 dólares. Éste es el proyecto, incluyendo primera, segunda y tercera fases, a través del cual se tienen... como resultado se tienen 120 personas capacitadas, de 120 familias; una coinstalación comunitaria, ya sea en un centro comunitario que es donde generalmente acuden a hacer varias actividades o en una escuela, según lo que el grupo elija; y al final en cada una de las casas habitación de estos beneficiarios pues se obtiene la posibilidad de contar con la instalación de un sistema que contribuya, de alguna manera, a su economía familiar y sobre todo, a estar en este ámbito de cultura y de ahorro de energía que es bien importante para las comunidades verdes. Muchas gracias.

[APLAUSO / APPLAUSE]

MR. FLORES: Muchas gracias. Y ahora para cerrar esta sesión del comentario público de la reunión del Consejo llamamos al Ing. Ramón Corral Martínez, asesor del Secretario de la Secretaría de Infraestructura y Desarrollo Urbano del Estado de Sonora.

SR. CORRAL: Buenas tardes a todos. Agradezco la invitación a participar en esta reunión. Vengo con la representación del Gobierno de Sonora.

Sonora es uno de los estados fronterizos que más ha aprovechado los recursos del NADBank y de la COCEF. Desde el año de 1997, fue los primeros proyectos que certificaron fueron del estado de Sonora. El primer contrato de BEIF y el primer crédito también se firmaron con la Ciudad de Naco del estado de Sonora; o sea que, desde el principio, Sonora ha sido muy activo en su relación con la COCEF y con el Banco.

Actualmente, prácticamente todo el problema de tratamiento de aguas residuales en las comunidades fronterizas está resuelto gracias al apoyo del Banco y la COCEF. Y el siguiente paso que queremos atacar es la solución del problema de la contaminación por polvo en las ciudades fronterizas. La COCEF, en asociación con el Estado de Sonora, realizó un estudio de detección satelital de necesidades de pavimentación el año pasado y se obtuvieron resultados alarmantes en el sentido de que un gran porcentaje de las ciudades fronterizas carecen de pavimentación. Eso a simple vista se podía ver sólo visitando esas ciudades, pero ya las cifras contundentes son realmente alarmantes. En base a eso se lanzó un proyecto de pavimentación masiva que se le presentó al Banco el año pasado y fue autorizado para un crédito de aproximadamente 200 millones de dólares, el cual ya está autorizado, repito. Sólo falta resolver el asunto de la autorización del Congreso estatal para tomar la deuda que por tiempos políticos no ha sido posible llevarlo a cabo, pero consideramos que en el 2012 se va a presentar al Congreso estatal para autorización y proceder a iniciar este proyecto.

En paralelo con esto, de obra pública, también el Estado está promoviendo activamente proyectos privados para lo que es energías renovables y actualmente tenemos dos proyectos de energía eólica en la costa del Golfo de Cortez, que se están desarrollando para posteriormente presentarlos a la consideración del Banco y la COCEF. Y así

mismo también proyectos de energía fotovoltaica en lo que es el desierto de Altar, que es una de las regiones de Norteamérica con mayor irradiación solar. Hay algunos obstáculos todavía para el desarrollo de estos proyectos fotovoltaicos, dado que en México no se cuenta todavía con un esquema de incentivos para este tipo de energía. Sin embargo, como la tecnología está avanzando tan rápidamente y los costos de instalación de ese tipo de energía van a la baja, consideramos que en los próximos años va a ser posible ya llevar a cabo ese tipo de proyectos.

Aprovecho la ocasión para agradecer el apoyo tanto del Consejo, del Banco y la COCEF, como de los directivos y los funcionarios, todo el apoyo que le han dado al Estado de Sonora y a los proyectos sonorenses y esperamos seguir participando activamente con ustedes. Muchas gracias.

[APLAUSO / APPLAUSE]

MR. FLORES: Gracias. Mr. Chairman, that concludes the public comments. I'll turn it over to you to close the meeting.

SR. BACA: Nada más, nos hemos prolongado un poco más de lo que teníamos planeado, pero es simplemente el ejemplo del interés que hay, la diversidad de proyectos y de necesidades que atender todavía en nuestra frontera compartida. Pues, me congratulo por esta sesión pública tan productiva y no me queda más que agradecerles y agradecerle a Gerónimo y a María Elena, su reporte. Y bueno, ahora pasaremos a tener una sesión compacta pero también muy productiva para ver precisamente cómo en la parte de políticas del Consejo podemos seguir apoyando y haciendo frente al reto que tenemos, que es cómo utilizar de mejor manera y de una manera más eficiente los recursos que hay, con el objeto de tener el mayor impacto en las comunidades de la frontera. Nuevamente muchas gracias.

[APLAUSO / APPLAUSE]

[CONCLUYÓ LA SESIÓN / MEETING ADJOURNED]