

August 31, 2016

The Honorable Orrin Hatch 104 Hart Senate Office Building Washington, DC 20510

The Honorable Marco Rubio 284 Russell Senate Office Building Washington, DC 20510

The Honorable Bob Menendez 528 Hart Senate Office Building Washington, DC 20510

The Honorable Bill Nelson 716 Hart Senate Office Building Washington, DC 20510 The Honorable Sean Duffy 1208 Longworth House Office Building Washington, DC 20515

The Honorable Tom MacArthur 506 Cannon House Office Building Washington, DC 20515

The Honorable Nydia Velazquez 2302 Rayburn House Office Building Washington, DC 20515

The Honorable Pedro Pierluisi 2410 Rayburn House Office Building Washington, DC 20515

DELIVERED BY HAND AND VIA ELECTRONIC MAIL: prtaskforce@mail.house.gov

Dear Chairman Hatch and Members of the Bipartisan Congressional Task Force for Economic Growth in Puerto Rico:

Puerto Rico and our fellow 3.5 million American citizens residing on the Island are experiencing an unprecedented economic crisis. In response, Congress enacted, and the President signed into law, the *Puerto Rico Oversight, Management, and Economic Stability Act* (PROMESA), PL 114-187. Among its many provisions, Section 409 of the Act provided for the creation of a Bipartisan Congressional Task Force for Economic Growth in Puerto Rico, with the specific task of identifying impediments to economic growth on the Island stemming from Federal Law and programs and recommending reforms that are needed to promote prosperity and grow the territory's economy.

As you embark on this very important undertaking, Brisa International would like to propose a potential solution to many of the challenges that Puerto Rico is currently experiencing, and has experienced for decades, in the areas of environmental impact mitigation of power plant emissions, production of green energy and biofuels, wastewater treatment, water supply shortages, and solid waste disposal. The proposed project would also boost ongoing economic development and job creation efforts.

To follow is a brief write up on our company and our proposed solution for Puerto Rico: **The EcoTech Complex**.

The EcoTech Complex in Puerto Rico Project Information

Brisa International – A breeze of inspiration for the world!

Brisa International is bringing the future to life through innovation in the areas of environmental, infrastructure, power, and industrial services and facilities.

Brisa is a Duluth, Georgia-based, U.S. international consulting firm providing cutting edge solutions in project and resource planning, facility design, construction and operations.

We undertake the studies, planning, design, engineering, and construction of environmental and infrastructure facilities, such as wastewater treatment, power plants, biofuel projects, waste-toenergy, saltwater desalination, wind and solar energy, and industrial facilities. These facilities are planned, designed and built, by top innovative experts to implement unprecedented efficiencies, conserving resources, and saving operational expenses.

Brisa has world-leading expertise in combining different infrastructure systems in new, synergistic ways, to provide unprecedented efficiencies. After nearly seven years of research, Brisa has developed a new project design, the **EcoTech Complex**, which is poised to completely change the world dynamics of power, waste, and fuel. The **EcoTech Complex** integrates a cutting edge algae biofuel system with a power plant, wastewater treatment, and other optional components such as a waste-to-energy system. Combining these systems through Brisa's patent pending processes allows for effective mitigation of power plant emissions, efficient treatment of wastewater, power generation from solid waste, biofuel generation, and greatly improved efficiency in all integrated systems.

We are dedicated to solving the most challenging infrastructure problems today to ensure a brighter future tomorrow.

Project Description

Over the past six months, Brisa has presented its **EcoTech** concept to numerous government officials and stakeholders, both in Puerto Rico and Washington, DC. These include the President of the Puerto Rico Aqueduct and Sewer Authority (PRASA), the leadership of the Puerto Rico House and Senate, the Chairman of the Puerto Rico Energy Commission, the Executive Director of the Puerto Rico Commerce and Export Company, the Mayors of Arecibo, Ponce, and Fajardo, and the top two gubernatorial candidates and their respective platform committees. We have also met with senior officials at the U.S. Department of Energy, the U.S. Department of Agriculture, the Environmental Protection Administration, and Members of the U.S. Congress. The response to date has been unanimously positive, as evidenced by the letters of support enclosed with this document. Furthermore, the U.S. House of Representatives has adopted language in two FY 2017 Appropriations Bills (Energy and Water Development, and Related Agencies / Interior, Environment and Related Agencies) directing the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) to "offer technical and other programmatic assistance to the Commonwealth of Puerto Rico to support investment in innovative technologies to effectively reduce power system emissions, efficiently treat wastewater, and generate power from solid waste" while also allowing Puerto Rico and the other territories and tribal communities to use appropriated funds from the Interior Department's Clean Water State Revolving Loan Fund to "plan and design wastewater infrastructure" in the same manner as the States.

At present, there are several power plants operating in Puerto Rico that are not currently capable of meeting U.S. emissions standards. Several of these plants operate using No. 6 Residual Fuel Oil, which is particularly problematic in regard to emissions. Others use No. 2 diesel fuel. As a U.S. territory, Puerto Rico is regulated by the U.S. Environmental Protection Agency. Power plants have been shut down or reduced to low capacity or "peaking" only due to ongoing emissions violations. We are told that 6 sites are the highest priority. As many as ten more power plants at these sites are in danger of shutdown also due to emissions. There is also a pressing need for wastewater treatment. And there is also a drinking water shortage. Solid waste disposal is also a major concern.

Project Goals

The primary goal of the project is to provide a means to mitigate the emissions from the power plants that have been shut down or limited in capacity, so they can get up and running again, and to prevent future shutdowns and fines. Brisa can accomplish this by retrofitting the power plants using its proprietary **EcoTech Technology**. Once these power plants are at full capacity, it will drastically improve the energy situation in Puerto Rico. The current price of electricity in Puerto Rico is approximately 2½ times the cost of electricity in the mainland U.S. The prices and economy as a whole are being dramatically affected by the lack of capacity, which could be remedied by the full operation of the plants already in existence. The price of power in Puerto Rico would drop dramatically with all of the power plants running at full capacity, providing great benefit to the Island's whole economy.

Other major benefits would result from implementation of the Brisa design. The **EcoTech** can be configured to produce a high value, economical biofuel stream from wastes that could replace power plant fuels, further significantly reducing energy costs. The **EcoTech** also has the ability to provide low cost wastewater treatment, desalination, and waste-to-energy (power from municipal or farm waste), and a variety of other products and services. These products and services may be provided in an integrated manner which greatly increases the efficiency of each process, and greatly reduces environmental impact. These secondary project objectives may be decided in the planning stages for each location of interest.

The **EcoTech** algae system used to mitigate the emissions will be able to produce many useful biofuels from the emissions while treating wastewater. Several biofuel types are possible, depending in part on technology selection and water substrates available, including: biocrude, gasoline, diesel, jet fuel, kerosene, fuel oil, ethanol, and biogas (methane).

The biocrude produced may be used as a replacement fuel for No. 6 residual fuel oil, with only some addition of methanol for stabilization if stored for long periods. Diesel produced in this system could be used for diesel-fired plants. Biogas can be used in natural gas fired plants. This would enable Puerto Rico to produce some of its own fuel at low cost, and use the fuel in its own power plants already in existence. Alternatively, or additionally, the fuels may be used as transportation fuels. The best solution for Puerto Rico's power issues at present is not to start over by building new power plants, but rather to reclaim and restore the expensive infrastructure it already has in place at minimal cost. The **EcoTech** is designed to do just that.

A large number and variety of different non-fuel products may also be produced by the system. If wastewater is used: fertilizer, animal feed, fish feed, bioplastics, lubricants, dyes and many other products. If other water sources are used: high value pharmaceuticals, nutraceuticals, and other edible products in addition to those listed above.

The New Algae System vs. Old Algae Systems

The algae technology has been known to hold huge promise for many years, and much research has been conducted in the field worldwide. However, some early implementation efforts have failed.

Brisa understands that in the past some companies have tried to implement algae systems in Puerto Rico. An algae project was undertaken by Exxon Mobil in July 2009, which was ultimately not pursued, according to articles, mainly due to algae that could not produce fast enough.

However, the field of algae technology has completely changed since 2009. In the last 2-3 years, major breakthroughs have occurred in the field that have multiplied its productivity many times over. Much research has been completed in that period to optimize algae species, growth, and refining methods. Over the past seven years, Brisa has then added over 300 new patent-pending technologies, which have enabled the **EcoTech**, when in the right context, to become an exceptional technology both economically and environmentally.

Brisa is confident based on what we have learned about the Puerto Rico's existing power and water treatment infrastructure, that our innovative approach will result in a successful retrofit of existing plant(s) that will mitigate the current emissions issues, resulting in savings of infrastructure costs, provide valuable fuels and other products of many kinds, and simultaneously perform many other valuable services, such as water treatment at a minimal cost and low carbon fashion. Furthermore, Brisa believes that Puerto Rico's **EcoTech** projects can become a showpiece for the world, demonstrating the power and efficiency of this modern, integrated algae technology.

Description of Specific Issues in Puerto Rico

According to Brisa's initial research, several power plants have been reduced in capacity and as many as ten additional power plants in Puerto Rico are in danger of shutdown due to emissions issues. Water supply, wastewater treatment, and solid waste are also other pressing challenges.

Power Plant Emissions Issues

Under the August 2015 recommendations to the Puerto Rico Electric Power Authority (PREPA) from TRC and Siemens, *ten* units will either be closed or converted to "limited use status" in order to comply with EPA rules. Limited use status means the plants can only run up to 8% of the time, which is a near shutdown. All ten are steam plants and use heavy (No. 6) fuel oil rather than more expensive diesel or regasified imported liquefied natural gas (LNG). According to Brisa's information, these ten units are San Juan 7, 8, 9 & 10 (100 MW each), Palo Seco 1 & 2 (85 MW each), Palo Seco 3 & 4 (216 MW each), and Costa Sur 3 & 4 (85 MW each). That is a total 1172 MW of capacity being taken essentially offline.

Current plans are for four other steam units currently using No. 6 fuel oil, Aguirre 1 & 2 (450 MW each) and Costa Sur 5 & 6 (410 MW each), to be replaced by combined cycle turbines if they can be financed and built, which will use either more expensive diesel or regasified imported LNG, if the new Aguirre LNG import terminal is actually financed and built.

Puerto Rico is already laboring under a heavy energy burden of high energy costs due to the plants that have already been shut down. Hospitals, businesses, schools and private citizens have been struggling to pay power bills, a problem which has damaged the economy. The loss of an additional 1,000 MW or more of capacity, and expensive upgrades could cause major issues for Puerto Rico due to lowering supply of power. The **EcoTech**, however, provides a solid solution.

Wastewater Treatment Issues

According to initial information, the EPA issued a consent decree requiring \$1.5 billion in upgrades to Puerto Rico's wastewater treatment system in order to meet discharge requirements. The Puerto Rico Aqueduct and Sewer Authority's (PRASA) Puerto Nuevo Regional Wastewater Treatment Plant (WWTP) is the largest focus of the required upgrades. The Puerto Nuevo Regional WWTP currently provides only advanced primary treatment, and the effluent is then piped out into the Atlantic Ocean (along with the effluent from PRASA Bayamon WWTP and Bacardi's WWTP). Several other WWTPs are also discharging only primary treated wastewater under temporary *Clean*

Water Act waivers. In 2000, Puerto Rico agreed with EPA to voluntarily end ocean discharge of primary treated only effluents regardless of such waivers, to help the U.S. comply with the 1999 *Caribbean Protocol on Land-Based Sources of Marine Pollution* as well as to protect Puerto Rico's own beaches and marine areas.

The **EcoTech** offers a dramatic reduction in wastewater treatment costs and energy use, and even more savings if nutrient removal (nitrogen and phosphorus) is also provided. The cost advantage is further increased by the additional value of treating power plant flue gas (CO2, SOx, and NOx) plus the generation of biofuel for sale, or providing it to the power plant. The **EcoTech** adds tremendous value to all of these systems.

Drinking Water Issues

After a previous drought in 1994, PRASA commissioned Malcolm Pirnie to engineer the 40 mile Super Aqueduct from Arecibo to San Juan, which began operations in 2000 and currently supplies about 56 MGD (net) to PRASA's Metro Region. Even with that aqueduct, the Metro Region faces a water supply shortage of approximately 61 MGD in 2020 as described in PRASA's "Metro Region Water Resources Management Plan" of November 2015.

Also, the south coast has also suffered impacts, such as farmers' delaying crop plantings for lack of rain or sufficient surface water for irrigation. And several key aquifers in the south have been depleted below sea level, leaving them vulnerable to salt water intrusion. Should this happen, the aquifers would become useless to future generations, and even more severe water shortages would result.

PRASA's 2015 Plan examined the shortage and proposed solutions. One suggested solution is reuse of treated wastewater. The Plan stated in part: "Potential uses for the treated effluent of wastewater treatment plants (WWTPs) were evaluated looking for non-conventional raw water sources. The analysis found that there is an opportunity for the indirect potable reuse of these waters ..."

The **EcoTech** provides a way to reclaim a large volume of water and completely solve these issues.

Solid Waste Issues

According to Brisa's initial research, many landfill sites in Puerto Rico have been closed or limited by EPA in their operations due to health risks. Landfills at Aguadilla, Arecibo, Moca, Lajas, and Toa Baja, among others, have been instructed to make changes to their landfill procedures and management, have been limited as to future use, or ordered to close altogether, creating an urgent situation in regard to waste disposal capacity. Brisa has been informed that solid waste disposal has become a near-crisis situation in Puerto Rico as a result.

EPA's Region 2 Administrator proposed solutions in 2007: "While we recognize the need for landfills, some of the landfills are so poorly run the only responsible thing is to close them in order to

protect the health of the surrounding communities. Along with landfills, the Commonwealth also needs to promote reduction of waste, recycling and waste to energy plants."

An optional waste-to-energy system of unprecedented efficiency may be incorporated as part of the **EcoTech** design to solve these issues.

The EcoTech Solution

The **EcoTech** combines the best emissions mitigation technology in the world, the best biofuel technology in the world, and the best and least expensive wastewater treatment technology in the world in a single complex. The complex costs only about half the cost of a single normal wastewater treatment plant while performing all of these functions. The **EcoTech** is optimized when both power plant flue gas and wastewater are available at the same or nearby locations.

For example, PREPA's San Juan Power Plant is located in Puerto Nuevo section of San Juan, near PRASA's Puerto Nuevo Regional WWTP. This creates potentially an ideal situation for implementation of the **EcoTech** technology. There is also a second known ideal location for an **EcoTech** algae biofuel plant at the Palo Seco power plant, using its flue gas plus the partially-treated effluent from Bayamon WWTP.

The **EcoTech Complex's** breakthrough integrated algae technology can solve both the wastewater problem and the power plant emissions problem at these locations simultaneously, while also providing valuable biofuel, and high quality treated reclaimed water. The **EcoTech** can not only mitigate emissions to help PREPA comply with EPA emissions rules for its power plants and keep them operating, and provide fuel for the power plants, but will at the same time serve as an algal wastewater treatment plant for PRASA, which will be approximately one half the cost of a standard wastewater treatment plant.

Although only about half of the cost, **EcoTech's** algae WWTP is capable of treating wastewater to a standard much higher than regular WWTPs. The algae treated wastewater will be of excellent quality and suitable for industrial reuse, irrigation, power plant cooling, firefighting, aquifer recharge, and many other uses. These secondary uses would replace large amounts of drinking water, and thereby greatly assist with water conservation. With wise water reuse in the same manner reclaimed water is being used in California and other locations, the 90 MGD of reclaimed water from these two locations could largely eliminate the current and future projected water shortages in the San Juan Metro area. After meeting the water needs in the San Juan area, an additional surplus of 29 MGD of reclaimed water will be available for irrigation, aquifer recharge, or other uses in other locations.

Furthermore, the Carolina WWTP provides only primary treatment for ocean discharge of about 45 MGD, while Arecibo WWTP discharges 20 MGD of primary treated wastewater into the ocean, and the Ponce WWTP discharges 18 MGD of primary treated wastewater into the ocean. These three locations are also candidates for the **EcoTech**, reclaiming an additional 83 MGD of high quality treated water to meet critical needs, while producing valuable fuels at low cost.

EcoTech's Waste-to-Energy Component

With an added optional Waste-to-Energy (WTE) module, solid waste can also be converted into power and biofuels for additional power generation, and to solve the solid waste and landfill issues.

The **EcoTech Complex** incorporates a unique optional breakthrough Waste-to-Energy (WTE) solution whereby solid waste is used to generate power, but in an unprecedented new patentpending step, the emissions from the WTE system are directed into Brisa's algae wastewater treatment system, whereby algae turn the emissions into a clean biofuel stream. The biofuel stream, which originated as municipal solid waste, may be used in a local power plant to generate power in a "second pass". Agricultural or construction waste may also be combusted in the **EcoTech** WTE system to produce power, with the emissions directed into the **EcoTech** algae system to produce biofuels. Alternatively, the fuels generated from waste/biomass may be used as carbon-neutral transportation fuels or synthesized into other valuable products.

In conjunction with recycling, landfilling in Puerto Rico may be drastically reduced or eliminated, greatly reducing land use and human exposures due to landfill leachate into groundwater and harmful VOA emissions. The **EcoTech's** WTE component would also significantly reduce the carbon footprint of Puerto Rico's solid waste disposal by eliminating new methane generation by landfills, a gas which is 25 times more potent as a greenhouse gas than carbon dioxide, the carbon neutral product of WTE technologies.

Given the pressing need for clean power generation, environmental compliance, and elimination of human health threats to the population posed by landfills, the **EcoTech's** WTE approach would seem to be the ideal solution to address Puerto Rico's pressing solid waste issues both economically and environmentally.

Economy of the EcoTech Complex

As an example of savings, if **EcoTech** complexes are built at each of the two identified high potential locations near San Juan, Puerto Nuevo WWTP and Bayamon WWTP, scaled to treat the total actual volume of 90 MGD, the technology is projected to save the government approximately \$30,200,000 per year in reduced water treatment costs to achieve full treatment, in addition to enabling the power plants to continue operate while meeting EPA emissions standards. And the biofuels generated may be provided for approximately \$8.00 per barrel, which is projected to generate fuel savings of perhaps \$14,400,000 per year compared to current market rates. In future years, as fuel prices rise, this saving will increase greatly. And at this scale, up to 90 MGD of high quality treated wastewater will be reclaimed. According to PRASA's 2015 plan, the reclaimed treated wastewater is potentially worth \$270,000,000 per year to the Puerto Rican economy, and can be used to completely solve the San Juan drinking water crisis. Further studies are needed, but these look to be two very promising sites for the EcoTech technology to save Puerto Rico hundreds of millions of dollars in the years to come in each location, and to solve all of these serious issues at the same time. The optional WTE system would additionally help solve multiple health, power and environmental issues related to solid waste. The costs and benefits of this system would be determined in the studies phase.

The **EcoTech Complex** scaled for 250,000 people or 20 MGD is projected to save the government approximately \$5,600,000 per year in reduced water treatment costs to achieve full treatment, in addition to enabling power plants to continue operate while meeting EPA emissions standards, or waste-to-energy plants to operate with the emissions mitigated and used to make fuel. And the biofuels generated may be provided for approximately \$9.30 per barrel, which is projected to generate fuel savings of perhaps \$2,200,000 per year compared to market rates. And at this scale, 20 MGD of high quality treated wastewater will be reclaimed. According to PRASA's 2015 plan, this volume of reclaimed treated wastewater is potentially worth \$60,000,000 per year. These numbers approximate the results at Ponce and Arecibo based on the wastewater available, and the reclaimed water may be used to completely solve local water supply shortages, including pressing irrigation needs, and to save threatened aquifers in the south.

The EcoTech as an Integrated Solution for Puerto Rico

In summary, the **EcoTech Complex** is projected to be able to solve wastewater treatment and water supply problems in Puerto Rico, while mitigating power plant emissions, producing power from waste, and providing low cost fuels to reduce the cost of power in Puerto Rico, and solving multiple environmental compliance issues. All of these benefits can be achieved for about half the cost of just a single traditional wastewater treatment plant, and simple, proven systems added to convey gases and water, and an optional standard WTE technology for solid waste. There are many locations in Puerto Rico which have potential for the **EcoTech** design and which may be identified in the studies.

Description of Project Process

Brisa's priority at this time is to better learn the needs of the project at one or more locations, to plan, design, implement, and operate the project. This proposal presents the steps to study and develop a technical solution at each site of interest. Licensing/regulatory aspects are not included.

The project development steps included in this proposal are as follows: *Needs Assessment/Site Selection, Preliminary Feasibility Study, and Feasibility Study.* Based on its initial research of Puerto Rico, Brisa recommends that the project perform a needs assessment and description of the attributes for 10 power plant and wastewater sites, and proceed to full studies for 6 sites.

The cost for the studies phase and scope as outlined above is \$3.7 million.

Subsequent project stages will include: *Demonstration of Selected Technologies, Pilot, Project Implementation, and Operations and Maintenance.* These aspects will be determined based on Studies / Project Development.

Brisa believes the **EcoTech** technology will be extremely effective and economical in reaching the stated goals, and its operations will produce great economic and environmental benefits for Puerto Rico for many years to come.

Your time and consideration are greatly appreciated, and we would welcome the opportunity to make a more thorough presentation to the Task Force. In the meantime, please do not hesitate to contact us if you require any additional information.

Sincerely, X

Kevin Harmon President/CEO

Enclosures

ATTACHMENTS

- 1. Alberto Lázaro-Castro Letter
- 2. Senator Ramón Nieves / Senator José Nadal Power Letter
- 3. Francisco Chévere Letter
- 4. Hon. Carlos Molina Rodríguez Letter
- 5. Hon. Maria Melendez Altieri Letter
- 6. FY 2017 Energy and Water Appropriations Bill Press Release
- 7. FY 2017 Interior, Environment, and Related Agencies Appropriations Bill Press Release



June 20, 2016

The Honorable Joe Biden Vice President of the Unites States 1600 Pennsylvania Ave., NW Washington, DC 20500

Dear Mr. Vice President:

On April 18, 2016, we met with the leadership of Brisa International, who made a presentation on their company's new EcoTech Complex. We at PRASA feel that Brisa's new EcoTech technologies could be a potential solution in areas related to environmental impact mitigation, green energy, wastewater treatment, water supply, and solid waste disposal.

We endorse Brisa's ongoing efforts to secure the required funding to conduct studies of the EcoTech Complex at multiple locations island-wide where it may provide these benefits. In fact, we have offered to provide any technical data needed by Brisa regarding our wastewater treatment facilities to conduct the appropriate studies.

Please do not hesitate to contact me if you require any additional information.

Sincerely,

Al.

Alberto M. Lázaro-Castro, P.E., BCEE Executive President

HEADQUARTERS

#604 Barbosa Avenue, Hato Rey - PO Box 7066, San Juan. PR 00916-7066 T. 787.620.2277 EXT. 2653 / F. 787.993.9164 **b www.acueduclospr.com** Ramón Luis Nieves



(C) José R. Nadal Power

Senadores Distrito San Juan - Guaynabo - Aguas Buenas

June 16, 2016

To whom it may concern:

We strongly feel that Brisa's new EcoTech technologies hold significant promise as a potential solution in many areas where the Commonwealth of Puerto Rico has been struggling, including environmental impact mitigation, green energy, wastewater treatment, water supply, and solid waste disposal.

Therefore, we fully endorse Brisa's ongoing efforts to secure the required funding to conduct studies in selected Puerto Rico Aqueduct and Sewer Authority (PRASA) and Puerto Rico Electric Power Authority (PREPA) facilities to better ascertain the viability and maximum efficiency of the proposed applications.

Cordially, Ramón L<u>uis Nieves</u> José R. Nadal Power President President Senate Committee on Senate Committee on Energy Affairs and Water Treasury and Public Resources Finances

El Capitolio- P.O. Box 9023431 San Juan, Puerto Rico 00902-3431



June 16, 2016

To Whom It May Concern:

As the Executive Director of the Puerto Rico Trade and Export Company, I strongly believe that Brisa International's new EcoTech technologies hold significant promise as a potential solution in many areas where the Commonwealth of Puerto Rico is facing difficult challenges. These include environmental impact mitigation, green energy, wastewater treatment, water supply, and solid waste disposal. I also believe that the implementation of these technologies could provide an important boost to our ongoing economic development and job creation initiatives, including the establishment of appropriate ecosystems for the development of small and medium sized enterprises.

Therefore, I endorse Brisa's efforts to secure the necessary funding to conduct studies in selected Puerto Rico Aqueduct and Sewer Authority (PRASA) and Puerto Rico Electric Power Authority (PREPA) facilities to better ascertain the viability and maximum efficiency of the proposed applications.

Sincerely, Francisco Chévere, Esq



Estado Libre Asociado De Puerto Rico Gobierno Municipal De Arecibo Oficina del Alcalde PO Box 1086 | Arecibo, Puerto Rico 00613 Teléfono: (787) 878-2299



May 17, 2016

THE HONORABLE JOE BIDEN VICE PRESIDENT OF THE UNITES STATES 1600 PENNSYLVANIA AVE., NW WASHINGTON, DC 20500

Dear Mr. Vice President:

As you know, Puerto Rico is experiencing an unprecedented fiscal crisis which, if left unattended by the Federal government, will soon become a humanitarian crisis. Many proposals have been discussed and debated locally, in the U.S. Congress, and within the Obama Administration, but reaching a compromise on any solutions has proven elusive.

Last week, I met with a group from Brisa International to discuss their groundbreaking EcoTech technologies as a potential solution for many of the longstanding problems that we are facing in the municipality of Arecibo in the areas of power plant emissions, sanitary wastewater treatment, drinking water shortages, high energy costs, and solid waste /landfill management.

While we have been considering another option in the solid waste to energy area for the past few years, I was very impressed by the potential environmental and economic benefits of these technologies, particularly as they pertain to wastewater treatment and the elimination of power plant emissions. Thus, as Mayor of Arecibo, I urge the Federal government to allocate the funding necessary to conduct needs assessment and preliminary studies to further confirm the viability and most efficient application of the proposed solutions. This would be consistent with report language introduced last week by Congressman José Serrano in the *FY 2017 Energy and Water Development Appropriations Bill* specifically directing the DoE to provide technical and programmatic assistance to the government of Puerto Rico in the application of comprehensive solutions such as those proposed by Brisa.

There has been much talk about the many problems facing the U.S. citizens of Puerto Rico, but no solutions seem to be forthcoming. I know of your strong commitment and steadfast leadership on issues related to the Island and encourage you to seriously consider the comprehensive applications proposed by Brisa. Please do not hesitate to contact me if I can ever be of assistance to you.

VERY RESPECTFULLY,

Hon. Carlos Molina Rodríguez Mayor

Arecibo... Una ciudad que crece.



Government of Puerto Rico Autonomous Municipality of Ponce *Mayor's Office*

May 3, 2016

The Honorable Joe Biden Vice President of the Unites States 1600 Pennsylvania Ave., NW Washington, DC 20500

Dear Mr. Vice President:

Puerto Rico is currently enduring an unprecedented fiscal crisis which, if left unattended by the Federal government, will soon become a humanitarian crisis. Many proposals have been discussed and debated locally, in the U.S. Congress, and within the Obama Administration, but reaching a compromise on any solutions has proven elusive.

Last week, I met with a group from Brisa International to discuss their groundbreaking EcoTech technologies as a potential solution for many of the longstanding problems that we are facing in Ponce, Puerto Rico's southern region, and the Island as a whole, in the areas of power plant emissions, sanitary wastewater treatment, drinking water shortages, high energy costs, and solid waste /landfill management.

I was very impressed by the potential environmental and economic benefits of these technologies and, as Mayor of Ponce and President of the Alliance for the Comprehensive Development of the South (DISUR), would urge the Federal government to allocate the funding necessary to conduct needs assessment and preliminary studies to further confirm the viability and most efficient application of the proposed solutions. Just last week, Congressman José Serrano announced the inclusion of report language in the *FY 2017 Energy and Water Development Appropriations Bill* directing the DoE to provide technical and programmatic assistance to the government of Puerto Rico in the application of comprehensive solutions such as those proposed by Brisa.

There has been much talk about the many problems facing the U.S. citizens of Puerto Rico, but no solutions seem to be forthcoming. I know of your strong commitment and steadfast leadership on issues related to the Island and encourage you to seriously consider the comprehensive applications proposed by Brisa. As always, your time and consideration are greatly appreciated.

Very respectfully,

anie E. "Manite" Melen de altieri Maria Melendez Altieri

Mayor Autonomous Municipality of Ponce

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Serrano Announces Energy Technical Assistance for PR in Appropriation Bill

Apr 19, 2016 | Press Release

Washington, DC - Today, Congressman José E. Serrano announced that a provision he inserted into the report accompanying the fiscal year 2017 Energy and Water Appropriations bill directs the Department of Energy's Office of Energy Efficiency and Renewable Energy to offer technical and programmatic assistance to the Commonwealth of Puerto Rico. Long an advocate for equal treatment under federal law for Puerto Rico, Congressman Serrano felt that more needed to be done to support investment to reduce power system emissions, efficiently treat wastewater, and generate power from solid waste.

"While I am glad this report language will help Puerto Rico obtain both technical and programmatic assistance to support investment in innovative technologies for the energy and water sectors, I am disheartened that it continues to take Congressional action to ensure that Puerto Rico receives the attention it deserves from the federal government," said Congressman José E. Serrano. "The current fiscal crisis in Puerto Rico has prevented the island's government from investing in innovative technologies that make its energy and water utility companies more efficient and cost-effective. I hope that through this language we are able to help the people of Puerto Rico access better services from their utility companies.

The report language contained in the report accompanying the FY 2017 Energy and Water Appropriations Bill is as follows:

The Committee directs EERE to offer technical and other programmatic assistance to the Commonwealth of Puerto Rico to support investment in innovative technologies to effectively reduce power system emissions, efficiently treat wastewater, and generate power from solid waste.

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Congressman Serrano Adds Amendment to Allow Puerto Rico, Territories and Tribal Communities to Use Funds to Upgrade Wastewater Infrastructure

June 20, 2016 | Press Release

Washington, DC - During the Fiscal Year 2017 Interior, Environment, and Related Agencies Appropriations Committee mark-up Congressman Serrano successfully added an amendment that allows territories and tribal communities to use appropriated funds from the Interior Department to plan and design wastewater infrastructure.

With this change, territories and tribal communities will be able to use money from Clean Water State Revolving Loan Fund for the same types of projects as states. This will help the future of Puerto Rico and the other territories, while at the same time fueling economic growth as in other parts of the nation. Congressman Serrano believes that this is a "common sense" idea that seeks to treat American citizens from those areas as equal as those that reside in states.

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