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Senate of Puerto Rico,
before the Subcommittee on Energy,
Committee on Energy and Commerce
U.S. House of Representatives
November 2, 2017

"The 2017 Hurricane Season: A Review of Emergency Response and Energy Infrastructure Recovery Efforts"

Chairman Fred Upton, Ranking Member Bobby Rush, members of the Subcommittee on Energy:

My name is Ramon-Luis Nieves. I had the privilege to serve the people of Puerto Rico as a state senator, representing the District of San Juan. After my return to the private sector, I founded RL Legal & Consulting Services, LLC. I currently practice law in the state and federal courts of Puerto Rico.

I want to thank the subcommittee for this opportunity to discuss Puerto Rico's energy challenges. Puerto Rico is suffering from the longest blackout in U.S. history. As a resident of San Juan, I have personally suffered the problems associated with the lack of electricity for more than forty days. The current energy crisis is destroying our economy and our way of life. Our friends and families are emigrating by the thousands. The government estimates that close to 15% of our population will emigrate as a consequence of Hurricane Maria and the subsequent lack of energy.

More than forty days after Hurricane Maria made landfall, several million Puertoricans, U.S. citizens, lack electricity in their homes and businesses. The businesses that have been able to open, are testing the limits of their power generators.

Nobody denies the challenges of repairing the collapsed energy grid of Puerto Rico. 80% of the grid was destroyed by a category 5 Hurricane. The Islands of Puerto Rico have a mountainous geography. Trucks from energy companies cannot arrive the next day after a natural disaster, since this U.S. territory is an Island (surrounded by "water, big water", as the President stated a few weeks ago).

But I submit to you that most of the challenges to "turn the lights back on" in Puerto Rico are neither natural, nor geographic: they are man-made.

The Puerto Rico Electric Power Authority of Puerto Rico (PREPA) was already a bankrupt, fragile and useless entity before Hurricane Maria made landfall. The power authority's grid was obsolete, lacking adequate maintenance. For years, consumers and businesses have suffered from high energy costs, unreliability and constant interruptions.

PREPA was one of the "crowning jewels" of the mid-Twentieth Century economic miracle that transformed Puerto Rico. In just forty (40) years, PREPA accomplished its original mission: to provide total electrification to the residents of Puerto Rico.

The utility currently struggles to operate a centralized grid, where power generation is based in the southern part of Puerto Rico, while most of the energy consumption concentrates in the North. PREPA owns and operates a centralized energy system: power generation, transmission and distribution infrastructure are

controlled by the public corporation. Two private entities AES (coal) and Ecoelectrica (natural gas), and several utility scale renewable energy projects, sell their energy to PREPA. These private entities account for more than a third of the Island's electric power generation. As is the case with most Island electric power systems, which are isolated systems, PREPA depends mostly on imported oil to generate energy. 98% of all electricity in Puerto Rico is generated by burning fossil fuels.

As accurately described by the Center for the New Economy, PREPA operated for more than 70 years as a tax-exempt, self-regulated, public monopoly, with broad powers including unsupervised rate-making, and debt-issuing authority.

Congress's decision to repeal the IRC Section 936 tax incentive regime, Puerto Rico's manufacturing backbone, precipitated a deep economic depression, now on its eleventh year. High oil prices, continued migration of thousands of residents, and industries closing, severely affected the revenues of the utility. PREPA and the governing political parties of the Commonwealth refused to adapt. They rather chose the slippery slope of enormous borrowing. In 2010, 2012 and 2013, PREPA authorized ten (10) bond emissions, for a combined amount of \$5.3 billion in debt.

But PREPA was not just financially broke before Maria made landfall. Politics also destroyed the utility's chance to transform itself. The improper intervention of local political factions undermined PREPA's decision making for years: from its governing board, full of political cronies, to its day-to-day management, and even the recruiting process of its employees. At the start of any new administration of the

government of Puerto Rico, the prevailing party awards its loyalists with numerous management and technical posts at PREPA. Any recently elected politician is overwhelmed by hundreds of petitions from party loyalists to 'facilitate' recruitment at PREPA, known for its generous labor benefits. For years, political organizations operating at the heart of the utility raised thousands of dollars in campaign contributions. Bondholders, brokers, consultants, political parties, fuel suppliers, and others have used PREPA as a cash cow since forever.

The recent Whitefish debacle, which I'll address later, is Exhibit A of the governance issues plaguing PREPA, which affect the recovery efforts. PREPA has historically ignored legal mandates, such as the ones ordering it to embrace renewables and regulate wheeling, for example. Weak and politically dependent governing boards frequently cede control to the Governor's Mansion (La Fortaleza). Transparency is such a joke at PREPA, that the unions usually assume the role of spokespersons for the utility. PREPA became such a politically powerful force over the decades, that no Legislature dared to perform adequate oversight. That is, until 2014, when the Senate of Puerto Rico stepped up to the challenge.

But I didn't take three flights from San Juan to complain about PREPA. I come before you with proposals to help us transform Puerto Rico's energy model.

Energy equals life. As most Puertoricans sadly understood after Hurricane Maria, the lack of a strong, resilient, and smart energy system has the potential of killing people, and destroying the economy. Official government figures currently

place the death toll of Hurricane Maria at 59. But that statistic is misleading. Recent reports state that the government authorized almost a thousand cremations. Also, on a personal note, dozens of friends have shared with me countless stories of their elderly loved ones dying as a result of the lack of electricity in their homes, hospitals and care-centers. The actual death toll, not of Hurricane Maria, but of Hurricane PREPA, has not been properly disclosed by the government of Puerto Rico.

While working hard to "turn the lights back on" as soon as possible, policymakers must also think long term. Puerto Rico's short term recovery, and future prospects of economic development, depend on building a new energy grid. Countless policymakers already agree that just repairing the old, obsolete energy grid of Puerto Rico will be a colossal waste of taxpayer dollars. Governor Ricardo Rosselló, President Donald Trump, the Department of Energy, the Puerto Rico Energy Commission, senators and representatives, as well as the energy industry, all agree that a plan to transform Puerto Rico's energy model, supported by significant federal funding, is the right course of action.

A decentralized energy system

PREPA has historically adhered to the old utility model, which until recently had not changed much since the times of Thomas Alva Edison. In the old, centralized model, energy consumers had a passive relationship with their utility. They received electricity generated, transmitted and distributed by the utility, and payed their bills.

Technology and innovation are transforming the energy industry. The development of batteries for storage, lower costs or more favorable financing models for the renewable market, net metering, microgrids and community-shared solar, are disrupting the old utility business model. Energy consumers now have the option to become active elements of the equation, not just passive consumers.

Puerto Rico must break free from PREPA's centralized energy model. The people of Puerto Rico deserve an energy model whereby more and more consumers are able to opt for distributed generation; net metering in their homes and business, or opting to go "off the grid", with the combination of renewables and storage; a system that regulates and allows wheeling for the industrial sector, so they can opt to purchase their power from private generators, offering more competitive rates than the utility.

Creative public-private partnerships, as well as new power purchase agreements with private generators, must be pursued. For years, advocates of power authority's centralized model have frowned upon these options. Their time is up.

As other utilities have been doing for years, PREPA could even become a player in the renewable market. Sadly, that ship sailed years ago: the oil-addicted PREPA did nothing to embrace the renewable market through its little known, and now inactive subsidiary, PREPA Renewables.

Policymakers are finally agreeing with the idea of a new energy model based on several regional microgrids in Puerto Rico. Microgrids for key government, security and health installations (such as hospitals), would also help recovery efforts after future storms and hurricanes.

The mandate to regulate microgrids is already in our law books: Act No. 133-2016, the last bill sponsored by me that became law. The Puerto Rico Energy Commission recently announced an expedited process to enact proper regulations for microgrids.

Microgrids present a unique opportunity for industries and residential communities. Although used for decades, Hurricane Sandy in 2012 opened a new dialogue on microgrids in the United States. Several business models for microgrids are actively discussed by energy stakeholders. Prominent researchers at the University of Puerto Rico-Mayagüez College of Engineering, such as Efraín O'Neill, Ph.D., contribute regularly to the discussion with research on the possibilities of microgrids.

Significant federal resources are required to build a new energy grid

A stronger, resilient and "smarter" grid is required to properly decentralize Puerto Rico's energy model. The old (and now collapsed) grid, was only able to integrate of 580 MW of renewable power. The grid that is currently being repaired lacks "smart grid" technology; hence, the old grid is not able to deal with the technical challenges of an energy model which embraces renewable power, and includes active energy consumers.

Appropriating taxpayer money just to repair an old 20th Century grid is a waste of resources. Ken Buell, director of Emergency Response and Recovery with the U.S. Department of Energy, stated that "we really should think in terms of rebuilding at this point", not just repairing the old grid. Judith Enck, former EPA administrator, concluded that "it's absolutely imperative that FEMA not fund rebuilding an inadequate system".

There are no official cost estimates for the project proposed herein. Building the infrastructure for a decentralized energy model is obviously a multibillion dollar project. But with the insolvency of PREPA and the government of Puerto Rico, the federal government is the only entity able to finance this key project.

PREPA's governance...and the Whitefish debacle

The Whitefish scandal currently occupies media space that could rather be used to portray the current humanitarian crisis in Puerto Rico. But, as stated earlier, Whitefish is a sad example of the shameful and incompetent governance that characterizes PREPA.

The energy industry watched with dismay as PREPA declined to activate the mutual aid protocols of the American Public Power Association and the Edison Electric Institute. Instead, PREPA opted to award a no-bid \$300 million contract to a company with just two employees, totally unknown in the industry, and even unknown by an energy regulator from Montana, their home state.

The Whitefish contract included provisions that would have raised the attention of a first-year law student. It precluded audits from government authorities over the work performed, and absurd and illegal clause. The contract represents that FEMA approved it, which is false. FEMA knew about the contract after the fact, and has "significant concerns" about the process of procurement and the contract prices.

The government recently requested PREPA to cancel the controversial agreement, and attempted to take distance from it. Now, forty days after Hurricane Maria, PREPA did what it should have done from the start: request the mutual aid offered by the private and public electric companies of APPA and EEI. Finally, help is on the way, after wasting forty days.

But where was PREPA's governing board? PREPA has stated that it failed to make contact with their board for fourteen days after Maria. Obviously, they had to pass judgment on the Whitefish contract, which they did.

The fact that nobody in that board appears to have seriously questioned the Whitefish agreement, raises two possibilities: either they rubber-stamped the management's decision, without reading, or somebody lobbied PREPA really hard to favor Whitefish. I hope that we will know the real Whitefish story, soon enough.

I submit that Whitefish is the direct result of the current government's recent legislation to control PREPA's board. For the first time in PREPA's history, a professional, non-partisan and independent board was appointed in 2016, as mandated by Act No. 4-2016. But it was short-lived. Now, government officials and

other members selected by the governor control the board. This politically controlled board delivered Whitefish.

Federally-sanctioned solution to PREPA's unpayable debt

In 2014, PREPA collapsed under its \$9 billion debt. Bankruptcy was not an option because Congress, in a yet unexplained 1984 decision, 'mysteriously' excluded PREPA from the bankruptcy provisions of Chapter 9. The local legislature tried to provide a "bankruptcy type" solution for PREPA, but the so-called Recovery Act was struck down by the United States Supreme Court in 2016.

Pursuant to the PROMESA Act, Congress imposed a Financial Oversight and Management Board over the Commonwealth to deal with the Island's fiscal nightmare. On behalf of PREPA, the Board filed for the bankruptcy-type process under Title III of PROMESA.

I respectfully submit that building a new energy grid for Puerto Rico, as has been proposed, will not be possible until PREPA's debt situation is solved. PREPA's \$9 billion debt was already unpayable before Hurricane Maria. Now, with its grid collapsed, the people leaving by the thousands, and businesses closing, there is no way for PREPA and its customers, the people of Puerto Rico, to pay the debt. Failure to pay PREPA's debt is not a moral issue: it is a financial impossibility.

Bondholders would have reason to object a project to decentralize Puerto Rico's energy model. They bought bonds based on the business model of a centralized energy

utility. The prospect of a utility that agrees to lose earnings, as a result of its decentralization, runs counter to their financial interests.

Congress, the Administration, the Oversight Board, and even the federal court must consider enabling a process to create a financial solution for PREPA's debt. If there is political will, a creative financial solution will certainly emerge. Aggressive restructuring of the debt, combined with new, Brady-type bonds, and continued oversight over PREPA, could be the way to build a new energy model and infrastructure in Puerto Rico.

PR Energy Commission: an Independent and Strong Regulator

The most efficient way to transform the energy model of Puerto Rico is by getting politics out of PREPA. Decisions about energy policy and management must be based on facts, data, and compliance with applicable laws and regulations.

Hence, a strong an independent energy regulator is the only way to guarantee that politics no longer control decisions over the energy sector.

Act No. 57-2014, the "Act for the Transformation and Energy Relief of Puerto Rico", paved the way to end PREPA's inefficient monopoly. The Energy Reform Act contains a strong and forward-looking declaration of public policy, as well as specific mandates to transform PREPA, and develop the framework for a vibrant private energy sector. The creation of a powerful and independent Energy Commission ended

seven decades of self-regulation. The Energy Commission has broad powers of regulation and dispute resolution over PREPA and the private energy sector.

For the first time in its existence, PREPA was required to prepare an Integrated Resources Plan (IRP). The IRP creates a roadmap of the electric power system in Puerto Rico during a twenty (20)-year period. The Energy Commission now has the authority to approve PREPA's rates, and concluded its first ever rate review in early 2017. For political reasons, PREPA's basic rate had not been revised since 1989.

A new legal framework for energy regulation and management was established by Act 57. Apart from the powerful Energy Commission, the Act created the Independent Consumer Protection Office, an energy advocate for consumers. New powers of oversight and authority to implement energy policy were also delegated to the State Energy Public Policy Office.

Congress, the Administration and the Oversight Board have expressed their support for the Energy Commission created under Act No. 57-2014.

Title V of PROMESA provides for the appointment of a Revitalization Coordinator who will assess "critical projects" to (i) improve performance of energy infrastructure and overall energy efficiency; (ii) expedite the diversification and conversion of fuel sources for electric generation from oil to natural gas and renewables; (iii) promote the development and utilization of energy sources found on Puerto Rico; (iv) contribute to transitioning to privatized generation capacities in

Puerto Rico and (v) support the Energy Commission in achieving its goal of reducing energy costs and ensuring affordable energy rates.

The Oversight Board has named Mr. Noel Zamot as both Revitalization Coordinator, and chief restructuring officer of PREPA (a decision challenged by the government of Puerto Rico).

In order to guarantee that federal funds to build a new energy grid are properly used and allocated, I propose that the Revitalization Coordinator and the PR Energy Commission be given sole authority over PREPA. PROMESA already mandates that the Revitalization Coordinator will work with the PR Energy Commission, so this proposal is a logical step. Neither Puerto Rico, nor the U.S. government, need another Whitefish situation.

Thank you for this opportunity. The people of Puerto Rico urgently need to turn the lights back on. But we also demand the resources to create a new energy model. Our lives depend on it.