PREPA

Statement of
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before the
Committee on Energy and Natural Resources
United States Senate

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Chairman Murkowski, Ranking Member Cantwell, and Senators, thank you for the opportunity to appear before you today to discuss the hurricane recovery efforts in Puerto Rico. When I became Executive Director of the Puerto Rico Electric Power Authority in March 2017, I knew that PREPA faced significant challenges including a declining revenue base, a shrinking workforce, a backlog of unmet or deferred maintenance, key major equipment beyond its useful life, and of course, the many challenges associated with Puerto Rico's and PREPA's financial condition. PREPA is one of the largest public power utilities in the United States, and the challenges facing the company are just as large.

I never imagined, however, that we would be facing the unprecedented natural disaster and humanitarian crisis caused by two massive hurricanes striking the island over the course of only two weeks. The second storm, Hurricane Maria, damaged nearly every single PREPA substation, shut down all of our transmission lines across the entire island, devastated PREPA's operational control centers, and left all of Puerto Rico without any electrical power.

Senators, I cannot understate the extraordinary challenges that we have faced. Hundreds of transmission structures were damaged, and thousands of distribution lines, poles, and transformers were destroyed or damaged. Because PREPA's communications and control centers were inoperable, we were forced to resort to shortwave radios and satellite phones to provide limited communications with other PREPA facilities. The devastation to Puerto Rico's infrastructure, including roads and airports, made it difficult or impossible to assess the damage in some areas. It took us nearly a full week even to make contact with all of PREPA's key facilities.

In the weeks since the devastation by Hurricane Maria, the employees of PREPA, along with thousands of additional workers who have since come to the island to provide assistance, have been working nonstop to restore power to Puerto Rico. In less than two months, we have repaired about 620 high voltage towers and about 650 transmission devices. After inspecting all of our substations, we have returned about 60% to operation, along with nearly 52% of the major feeders that distribute power from substations. In total, power has been restored to about 48% of the island. Our initial recovery efforts were successfully focused on restoring power to our most critical customers, including hospitals, water and sewage treatment plants, agencies providing essential services, and others that are central to Puerto Rico's recovery.

Senators, let me be clear, however. We still confront extraordinary and unprecedented challenges ahead. Restoring power to the remaining areas of the island will be vastly more difficult than our work so far. The areas currently without power are more isolated and more mountainous. Restoring power to these communities requires unique skills, experience, and equipment, and it will take significantly more resources, time, and effort. In this extraordinary recovery effort, the island needs your support.

I would like to take a moment to address a contract that PREPA executed with Whitefish Energy in the immediate aftermath of Hurricane Maria. Around the two hurricanes, PREPA received an outpouring of offers of assistance and support, including from Whitefish. Whitefish indicated that it had access to more than 100 accredited linemen, equipment operators, and apprentices; about 100 trucks, diggers, and other pieces of equipment; and a large stock of materials, poles, transformers, and conductors. Some of these resources, it said, had recently completed restorations after hurricane damage in Florida.

After the devastation of Hurricane Maria, I believed that PREPA was unable to meet the requirements for mutual assistance through the members of the American Public Power Association, such as providing accommodations for workers and other logistics.

After reviewing about a half-dozen proposals from potential first responders, we found that only two offered the immediate services that PREPA needed. One proposal required a guaranteed payment of $25 million, the other – from Whitefish – offered PREPA the ability to pay only for work that was completed (and mobilization/demobilization). I therefore authorized our contracting staff to execute a contract with Whitefish while we continued to seek additional assistance from others for the complete, multi-billion dollar restoration effort still to come. In retrospect, there are some steps in our contracting process with Whitefish that we could have done better. I chose to contract with Whitefish because my priority was securing the immediate assistance that we needed to begin restoring power as quickly as possible to our most critical customers.

PREPA's Hurricane Preparations and Hurricane Irma

PREPA engages in an annual hurricane preparation process prior to each hurricane season. These preparations generally involve updating PREPA's roster of first-response suppliers, verifying and preparing backup systems and critical assets, and revising PREPA's emergency plan to reflect the most current information. PREPA often issues a public request for information to supplement information already assembled concerning hurricane response plans, and it did so in preparation for the 2017 storm season. For the 2017 storm season, PREPA reviewed its emergency plans and cataloged disaster recovery and repair materials, such as cables, structures, hardware, fuses, insulators, and safety equipment.

Hurricane Irma passed just north of Puerto Rico on September 6, 2017. Irma was one of the strongest storms ever recorded in the Atlantic. It devastated numerous Caribbean islands, and inflicted serious damage to Puerto Rico, including PREPA's facilities. Following Irma, more than one million people – 70% of PREPA's customers – were without power. PREPA restored power to a significant portion of these customers within a few days, and more than 96% of its customers by September 18. The restoration efforts following Hurricane Irma severely

depleted PREPA's recovery and repair supplies. PREPA sought to restore these supplies quickly following Hurricane Irma, and we also began preparing for the possibility of a second, severe hurricane headed for the island.

Hurricane Maria

As Hurricane Maria approached Puerto Rico, PREPA prepared for the possibility of unprecedented damage. For context, we noted that it took about six months to restore power to the entire island after Hurricane Hugo in 1989, at a time when PREPA had approximately 4,000 additional employees and the electric system was in less disrepair. Hurricane Maria hit Puerto Rico on September 19 and 20, 2017. The storm passed directly down the entire length of the island. As the storm ravaged the island, PREPA's emergency management team gathered in our incident command centers. Additional PREPA personnel were stationed in critical locations at PREPA facilities across the island, poised to respond as soon as the storm passed.

As the front of Hurricane Maria hit Puerto Rico on September 19, the electric grid began to fail. Around 8:00 p.m. that evening, transmission lines began to experience cascading failures. At approximately 2:00 a.m. on September 20, the last transmission line failed and PREPA's command centers and headquarters lost all communications and power. Some PREPA generators provided backup power for these operations, but others failed due to hurricane damage.

After the storm passed, PREPA began its damage assessment. Our efforts to assess the damage across the island were severely hampered. Our headquarters and emergency command centers had no reliable communications for several weeks after the storm. The damage to Puerto Rico's roads and bridges made it extremely difficult to conduct physical inspections of PREPA's facilities. We employed helicopters, drones, and land vehicles where possible to inspect the major transmission lines. Without reliable communications systems, PREPA used shortwave radios and satellite phones to establish limited communications with some facilities. It took nearly a week to make contact with all key PREPA facilities.

The damage assessment confirmed that PREPA's entire grid suffered severe damage. Hurricane Maria inflicted sustained winds around 155 miles per hour, with gusts exceeding 200 miles per hour, far more than much of PREPA's infrastructure was designed to withstand. We found that hundreds of major transmission structures were damaged, hundreds of conductors and insulator failed, and thousands of individual distribution lines, poles, and transformers were down or damaged. PREPA's datacenter, communications, and information technology systems were down, and most of PREPA's communications antennas and fiber optic cables were damaged.

The entire island of Puerto Rico was without power, leaving generators as the only source of power at critical facilities such as hospitals and airports. Hurricane Maria also left Puerto Rico with a devastating humanitarian crisis, with long lines for fuel, residents struggling to secure access to critical medications, and basic supplies like shelter, food, and water desperately difficult to obtain.

Since the passage of Hurricane Irma and Hurricane Maria, the employees of PREPA and the thousands of workers who have come to Puerto Rico to assist us have worked tirelessly to restore power and begin the recovery process. We have made significant progress, but much more remains to be done. We are working hard toward meeting the Governor's directive that 95% of the island must have its power restored by December 15, 2017.

Even during the recovery and restoration process, we are focused on developing a plan for the future of electric energy in Puerto Rico. PREPA's governing board has brought together top minds in the industry to provide best-in-class thinking on the future of our electric utility. Our team is evaluating all options in order to achieve grid reliability and resilience for the long term.

Madam Chairman and Senators, thank you for the opportunity to be here today. I would be happy to answer any questions that you may have. At the conclusion of this hearing, I look forward to getting back to Puerto Rico and back to the hard work of rebuilding our devastated island.

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