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Statement of the American Public Power Association
Submitted to the House Oversight and Government Reform Committee's
Subcommittee on National Security
For the March 21, 2018, Hearing on
(Submitted March 20, 2018)

The American Public Power Association (APPA or Association) welcomes the opportunity to submit this statement for the record in relation to the House Oversight and Government Reform Committee's Subcommittee on National Security hearing on "Bureaucratic Challenges to Hurricane Recovery in Puerto Rico." APPA is the national service organization representing the interests of over 2,000 community-owned, not-for-profit electric utilities. These utilities include state public power agencies, municipal electric utilities, and special utility districts that provide low-cost, reliable electricity and other services to over 49 million Americans.

Hurricanes Harvey, Irma, and Maria caused widespread damage and impacted millions of Americans throughout the South and in the Caribbean. Public power utilities and their customers were impacted by all three storms, but particularly by Hurricanes Irma and Maria. Hurricane Irma caused widespread damage to the islands of St. Thomas and St. John in the U.S. Virgin Islands (USVI) and Key West, Florida. All 63 counties of Florida and large parts of Georgia, as well as Puerto Rico, were also impacted by the storm. Irma was soon followed by Hurricane Maria, which caused significant damage to St. Croix in USVI and Puerto Rico. Mutual aid played an important role in helping restore power to many impacted communities and is ongoing in the efforts to restore power to Puerto Rico.

The Mutual Aid Process

In the aftermath of these devastating storms, APPA received a lot of questions about mutual aid. Common questions include what is mutual aid? How does it work? How is mutual aid invoked? Who pays for mutual aid assistance? Given the many questions we have received, we thought it would be helpful to provide an overview on the mutual aid process.

Mutual aid is when utilities help one another in times of need. The Association, together with state and regional public power utilities and organizations, coordinate the mutual aid program (MAP) for the nation's public power utilities. More than 1,100 public power utilities across the country participate.

Utilities that want to give and get help for power restoration after a disaster voluntarily sign up for this national network. The network participants also maintain lists of independent contractors that may be available when extra help is needed.

When (and even before) a major disaster hits a utility's service territory and the utility knows that its own crews and equipment will not be enough to restore power quickly, the requesting utility or MAP network coordinator calls for mutual aid. It provides its best estimates of how many lineworkers and the types of equipment the requesting utility needs and what type of skills the responding lineworkers should have. The requesting utility also specifies any specialized equipment and/or materials needs. Other utilities in the national mutual aid network respond with what they can offer. The requesting utility also utilizes agreements with contractors to supplement the responding utility crews.

The actual dispatch and movement of crews from different utilities and contractors is coordinated by utility and public power association personnel who volunteer as regional and national mutual aid network coordinators. Such efforts require substantial logistics management. The utility that is requesting mutual aid generally arranges to house, feed, and care for the crews that come in from other utilities, and provides them the necessary work and safety briefings to do their jobs effectively. Requesting utilities generally assist the visiting crews to prioritize circuit restoration, ensure safe work procedures, and understand the terrain because the responding employees are typically unfamiliar with the requesting utilities' electric system.

Public power utilities requesting mutual aid pay utilities and contractors that provide help. Rates are determined through agreements entered into by the utilities. As units of state and local government, public power utilities are eligible for partial reimbursement of restoration expenses by the Federal Emergency Management Agency (FEMA), if all relevant conditions and requirements are met.

In addition to helping public power utilities in need, public power utilities also provide mutual aid to cooperatives and investor-owned utilities when requested and have also received assistance from cooperatives and IOUs when needed. In the aftermath of Superstorm Sandy, the entire industry has worked more closely on restoration efforts with the goal of bringing back power to all customers as soon as possible. The lessons learned from previous hurricanes and Superstorm Sandy were evident in the industry's restoration efforts following the active hurricane season in 2017.

The Role of Mutual Aid Following Hurricanes Harvey, Irma, and Maria

When Hurricane Harvey hit the Gulf Coast in September, most public power utilities were spared the worst, but did provide mutual aid to others directly impacted by the storm. Approximately 160,000 public power customers in Texas lost power and service was restored to nearly all of them within three days. Robstown, Texas, which is near Corpus Christi, suffered wind damage, but restored power to 95 percent of its customers within two days. Some public power utilities in East Texas lost power due to transmission outages in the area, but their distribution systems did not incur substantial damage. Walt Baum, the Executive Director of the Texas Public Power Association, an APPA member, testified before

the House Science, Space, & Technology Committee on October 3, 2017, on recovery efforts in Texas after Hurricane Harvey and the industry's efforts to maintain a reliable and resilient grid, including the importance of mutual aid to resiliency. APPA encourages the National Security Subcommittee to review Mr. Baum's insightful testimony to the Science Committee, which is available [here](#).

Hurricane Irma impacted public power utilities in USVI, Puerto Rico, Florida, South Carolina, and Georgia. The hurricane inflicted significant damage to the islands of St. Thomas and St. John in USVI. Virgin Islands Water and Power Authority (USVI WAPA) requested mutual aid after Irma and the Western Area Power Administration, as well as public power utilities from New England, responded by sending crews and equipment to assist in the recovery efforts. Given the extensive damage done by the hurricane, USVI requested additional mutual aid through APPA. In addition to 23 public utilities from New England, 22 public power utilities from Florida, Iowa, Missouri, Nebraska, Oklahoma, South Carolina, and Wisconsin, joined contractor crews and assisted USVI WAPA in its recovery efforts. Power was restored to all USVI customers that could accept power by March 8, 2018.

Puerto Rico was also hit by Irma, knocking out power to a majority of the island. The Puerto Rico Electric Power Authority (PREPA), an APPA member, had restored power to most of its customers before being devastated by Hurricane Maria just over a week later.

APPA member Keys Energy Services in Key West, Florida, was directly hit by Hurricane Irma, which took down most of its distribution and transmission facilities. As the storm moved up through Florida, it impacted every single public power utility in the state. More than 800,000 public power customers in Florida were without power at the height of the outages, but 98 percent of them had their power restored within seven days. In addition, there were significant outages among some of our Georgia members.

Mutual aid played a key role in restoring the power quickly in the Southeast. Public power utilities aided one another in the restoration efforts. They also aided IOUs, and IOUs assisted public power utilities with needed materials. The Florida Municipal Electric Association, an APPA member, played a central role in coordinating mutual aid for the utilities impacted by the hurricane in the state and coordinated municipal aid crews from 26 states. The restoration effort after Irma was one of the largest ones in U.S. history and the speed of the recovery was acknowledged by the U.S. Energy Information Administration.

Hurricane Maria knocked out power to St. Croix in USVI, the one island not substantially impacted by Hurricane Irma, and all of Puerto Rico. APPA member New York Power Authority (NYPA) sent technical subject matter experts and drones down to Puerto Rico as part of a state-led mission initiated by New York Governor Andrew Cuomo, at the request of Puerto Rico Governor Ricardo Rossello. NYPA's personnel worked with PREPA on damage assessments of specific PREPA generation, transmission, and substation facilities.

In addition, FEMA, the U.S. Army Corps of Engineers (USACE), and Department of Energy (DOE)

sent personnel to Puerto Rico. In early October, FEMA put USACE in charge of the mission to restore power. USACE selected contractors to assist in the recovery efforts. Four public power utilities from Florida also went to Puerto Rico in October to assist PREPA in the recovery efforts as subcontractors to one of PREPA's own contractors. They completed their assigned work and returned to the mainland by Thanksgiving.

On October 31, 2017, PREPA requested mutual aid from APPA and the Edison Electric Institute (EEI). This request was updated in early November to include the National Rural Electric Cooperative Association. Since receiving this request, the Association has worked with PREPA, our government partners and their contractors, and the industry to support the power restoration process. Public power utilities from Arizona, Connecticut, California, Indiana, Texas, and the Commonwealth of the Northern Mariana Islands traveled to Puerto Rico to assist in the joint recovery efforts. The testimony of Mr. Scott Aaronson of EEI, who is testifying at today's hearing, provides a timeline of the mutual assistance response by the industry and some of the challenges faced during the recovery efforts.

The Challenge of Providing Mutual Aid to Islands

APPA has a long history of facilitating mutual aid to our members in the U.S. territories. Public power utilities have helped restore power to the U.S. Virgin Islands after Hurricane Marilyn in 1995 and Hurricane Hugo in 1989. The main difficulty with providing mutual aid to islands hit by natural disasters is the logistics of getting crews and supplies to them. When a natural disaster is expected to hit a region in the continental U.S., utilities can request mutual assistance ahead of being struck by a storm, as well as enter into contracts with private contractors. Once a storm has passed, mutual aid crews can drive from across the country to restore power in a short period of time and supplies can be trucked in. When a natural disaster strikes an island that is not connected to the continental U.S., crews and supplies must either rely on planes or ships to get them to such locations.

For example, after Hurricane Marilyn hit USVI in 1989, crews and equipment were flown down and back via military aircraft. In 1995, utility equipment was flown down and barged back to the mainland after power was restored.

For the restoration efforts in Puerto Rico, trucks and equipment were sent via barge, which is less expensive, but takes more time to arrive than if they were sent via plane. APPA worked with the industry and our federal government partners to identify locations where barges would pick up equipment for shipment down to Puerto Rico. Crews drove trucks to specific ports and then flew down to San Juan to arrive just ahead of the equipment arriving. Should a future hurricane hit Puerto Rico or USVI, early designation of ports for transportation of equipment will facilitate mutual aid efforts.

Lessons Learned from the 2017 Hurricane Season

Mr. Aaronson in his testimony discusses some of the lessons learned from the 2017 hurricane season. APPA concurs in his discussion, and welcomes the opportunity to discuss with our government partners

at FEMA, the Department of Homeland Security, and DOE how to incorporate the lessons we all have learned to improve recovery efforts in the future.

APPA appreciates the opportunity to submit this statement for the record to the National Security Subcommittee and provide background on the mutual aid process for public power utilities. Thank you for holding this important hearing on bureaucratic challenges to hurricane recovery in Puerto Rico.