

ONE HUNDRED FIFTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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MEMORANDUM

April 9, 2018

To: Subcommittee on Oversight and Investigations Democratic Members and Staff
Fr: Committee on Energy and Commerce Democratic Staff
Re: Hearing on “Update on the Restoration of Puerto Rico’s Electric Infrastructure”

I. INTRODUCTION

On **Wednesday, April 11, 2018, at 2:00 p.m. in room 2322 of the Rayburn House Office Building**, the Subcommittee on Oversight and Investigations will hold a hearing entitled “Update on the Restoration of Puerto Rico’s Electric Infrastructure.” The hearing will focus on federal efforts to restore Puerto Rico’s electric infrastructure in the aftermath of Hurricanes Irma and Maria.

II. BACKGROUND

The historic 2017 hurricane season included three major hurricanes—Harvey, Irma, and Maria—that made landfall in Puerto Rico and the U.S. Virgin Islands, as well as the Gulf Coast. Hurricane Irma of 2017 became the strongest Atlantic hurricane on record, with winds of 185 miles per hour.¹ Hurricane Irma hit the U.S. Virgin Islands and Puerto Rico on September 6, 2017, after moving across the Caribbean as a Category 5 hurricane. Approximately 70 percent of Puerto Rico electricity customers were without electricity following Hurricane Irma.²

On September 20, 2017, just two weeks after Hurricane Irma, Hurricane Maria struck Puerto Rico and the U.S. Virgin Islands as a Category 4 hurricane, causing widespread flooding

¹ *Hurricane Irma Is Now The Strongest Hurricane Ever Recorded In The Atlantic*, Quartz (Sept. 6, 2017).

² Congressional Research Service, *Repair or Rebuild: Options for Electric Power in Puerto Rico* (Nov. 2017).

and catastrophic damage to the island's electrical grid, telecommunications system, and other infrastructure. The storm left nearly all of Puerto Rico's 3.4 million people without power and was the strongest storm to hit Puerto Rico in almost one hundred years.

III. PREPA BACKGROUND AND RESTORATION CONTRACTS

The Puerto Rico Electric Power Authority (PREPA) is a government-owned corporation of Puerto Rico, created by the Puerto Rico Electric Power Authority Enabling Act in 1941.³ PREPA is responsible for nearly two-thirds of the territory's power generation and has a lengthy history of financial struggles.⁴

In addition to contracts for electricity grid reconstruction issued by PREPA, the Federal Emergency Management Agency (FEMA) signed a mission agreement with the U.S. Army Corps of Engineers (USACE) on September 28, 2017, tasking them with overseeing grid restoration. USACE signed contracts with Fluor Corporation and PowerSecure (a subsidiary of the Southern Company) to help restore Puerto Rico's grid. The first contract with Fluor was signed on October 19, 2017, for \$240 million. USACE later announced it modifications to the contract with Fluor that increased it by an additional \$600 million. On December 2, 2017, USACE awarded a second contract for \$831 million to Fluor to support ongoing work to restore Puerto Rico's power grid.⁵

In February 2018, when power had been restored to approximately 86 percent of customers, reports indicated USACE would begin a "responsible drawdown" of its contractor workforce on the island.⁶ The decision was met with concern and frustration by some, as certain areas at the time had only restored power to about half of residents.⁷ On April 7, 2018, USACE announced an extension of the FEMA mission assignment until May 18, 2018, increasing the PowerSecure contract by an additional \$140.5 million, to a total of \$510.6 million.⁸

³ The Puerto Rico Electric Power Authority Enabling Act, Act No. 83 of May 2, 1941.

⁴ U.S. Energy Information Administration, *Puerto Rico Temporary Profile and Energy Estimates* (Sept. 21, 2017) (www.eia.gov/state/analysis.php?sid=RQ); Congressional Research Service, *Repair or Rebuild: Options for Electric Power in Puerto Rico* (Nov. 2017).

⁵ U.S. Army, USACE Awards \$831 Million Contract to Fluor Corp. for Power Grid Repair in Puerto Rico (Dec. 2, 2017) (www.army.mil/article/197645/usace_awards_831_million_contract_to_fluor_corp_for_power_grid_repair_in_puerto_rico).

⁶ *In Puerto Rico's 'Last Mile,' Power is Still Elusive as Next Hurricane Season Looms*, Washington Post (Apr. 4, 2018); *Contractors Are Leaving Puerto Rico, Where Many Still Lack Power*, New York Times (Feb. 26, 2018).

⁷ *Contractors Are Leaving Puerto Rico, Where Many Still Lack Power*, New York Times (Feb. 26, 2018).

⁸ U.S. Army, USACE Awards Additional \$140.5 Million for Power Grid Restoration Efforts in Puerto Rico (Apr. 7, 2018) (www.army.mil/article/203561/).

IV. ELECTRICITY GRID CRISIS IN PUERTO RICO

Hurricanes Irma and Maria caused extensive wind and flooding damage to Puerto Rico's electrical grid, destroying transmission and distribution lines across the island and causing widespread wind and flooding damage to other system infrastructure, including distribution, generation, and substation facilities.⁹ Damage to the transmission system, which carries power from generation facilities to the distribution system, compromised the integrity of the interconnected system, causing a total loss of power to key distribution substations.¹⁰ The distribution system, including both underground and overhead systems, was also significantly damaged, with up to 75 percent of circuits needing repair.¹¹

More than six months after Hurricane Maria, 95.8 percent of customers have power restored. However, approximately 62,000 customers remain without power.¹² According to a Rhodium Group analysis of comparable data, the blackout experience following Hurricane Maria amounts to the largest blackout in American history.¹³

Even where power has been restored since Hurricanes Irma and Maria, some facilities continue to rely on generators. More than 1,200 FEMA-provided generators remain the primary power source for hospitals, police and fire stations, water treatment facilities, and correctional facilities.¹⁴ Recent blackouts, including a February incident at a power plant that affected power for nearly one million people, have underscored the continued fragility of the system.¹⁵

Given the fragility of the grid and PREPA's history of financial struggles, questions remain as to how the grid restoration effort will continue once the USACE mission assignment to restore electrical service ends in May. Experts agree a transformed electric power system for Puerto Rico is needed to modernize the grid and increase resiliency to withstand future storms. However, PREPA's financial problems are exacerbating continued uncertainty around prioritizing and implementing critically important power system improvements.

⁹ Puerto Rico Energy Resiliency Working Group, *Build Back Better: Reimagining and Strengthening the Power Grid of Puerto Rico* (Dec. 2017).

¹⁰ *Id.*

¹¹ *Id.*

¹² U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, *Hurricane Maria & Irma Event Report (Update #98)* (Apr. 4, 2018) (www.energy.gov/sites/prod/files/2018/04/f50/Hurricanes%20Maria%20%20Irma%20Event%20Summary%20April%204%2C%202018.pdf).

¹³ Rhodium Group, *America's Biggest Blackout* (Oct. 26, 2017).

¹⁴ *In Puerto Rico's 'Last Mile,' Power is Still Elusive as Next Hurricane Season Looms*, Washington Post (Apr. 4, 2018).

¹⁵ *Id.*

V. WITNESSES

The following witnesses have been invited to testify:

Panel I

Charles Alexander

Director of Contingency Operations and Homeland Security Headquarters
U.S. Army Corps of Engineers

Bruce Walker

Assistant Secretary
Office of Electricity Delivery and Energy Reliability
U.S. Department of Energy

Jeffrey Byard

Associate Administrator
Office of Response and Recovery
Federal Emergency Management Agency

Panel II

Carlos D. Torres

Power Restoration Coordinator
Edison Electric Institute

Eugene Shlatz

Director, Energy
Navigant Consulting, Inc.