Hurricanes Maria & Irma
November 2 Event Summary (Report #73)

REPORT TIME & DATE: 12:00 PM EDT | November 2, 2017
INCIDENT START DATE: Friday, August 25, 2017
PRIMARY LOCATION(S): Puerto Rico & U.S. Virgin Islands
REPORT DISTRIBUTION: Public

The U.S. Department of Energy (DOE) will issue situation reports with updates about the response and recovery efforts in Puerto Rico and the U.S. Virgin Islands on Mondays and Thursdays.

EXECUTIVE SUMMARY
DOE continues to support response and restoration efforts for Hurricanes Maria and Irma. ESF #12 responders remain deployed to St. Thomas, St. Croix, and Puerto Rico in support of FEMA Incident Management Assistance Teams. ESF #12 responders are also deployed to the National Response Coordination Center and a team of 25 personnel from the DOE Western Area Power Administration are on St. Thomas to provide mutual aid. DOE has also deployed seven subject matter experts to provide technical assistance to the U.S. Army Corps of Engineers for restoration planning on Puerto Rico.

Electricity Sector Summary (as of 10:30 AM EDT Thursday)
- Puerto Rico: Approximately 36.9% of normal peak load has been restored and 39 of 78 municipalities are partially energized or have energized facilities. Installation of two generators installed by the U.S. Army Corps of Engineers (USACE) at the Palo Seco Power Plant site is complete on October 26. DOE continues to coordinate closely with FEMA, Puerto Rico, and the U.S. Army Corps of Engineers to support restoration efforts and facilitate industry support.
- USVI: VIWAPA reports that approximately 6,853 customers across the USVI have been restored (14.5% of total customers). Approximately 79% of customers on St. Thomas, 94.2% of customers on St. Croix, and 95.7% of customers on St. John remain without power. The undersea transmission line from St. Thomas to St. John was energized on October 26 and VIWAPA began restorations to the Cruz Bay area of St. John on October 27. Restoration efforts continue across the Territory, mainly focusing on the backbone feeders for the grid.

Oil and Natural Gas Sector Summary (as of 10:30 EDT Thursday)
- As of November 1, 927 out of 1,100 retail gas stations are operational on Puerto Rico.
- Fuel stocks are adequate across the region; however, DOE continues to monitor the situation in coordination with the Energy Information Administration.
Hurricane Maria
ELECTRICITY SECTOR

Puerto Rico

<table>
<thead>
<tr>
<th>Impacted Territory</th>
<th>Current Estimated Customer Outages</th>
<th>Percent of Estimated Customers without Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Puerto Rico</td>
<td>~990,541</td>
<td>~62.1%</td>
</tr>
<tr>
<td>PR Total</td>
<td>~990,541</td>
<td>~62.1%</td>
</tr>
</tbody>
</table>

Note: Estimate number of customers without power is based on percent of average peak load restored. On November 1, PREPA indicated that it would take at least a month before the utility was able to directly provide customer outage information.

- As of 11:00 AM EDT, November 2, Puerto Rico reported that restored load was 36.9% of normal peak load (approximately 991 MW of 2,685 MW normal peak load).

- As of 11:00 AM EDT, November 2, DOE estimates 990,541 customers (63.1%) remain without power on Puerto Rico.
  - A total of 39 out of 78 municipalities on Puerto Rico are at least partially energized. A map listing of these areas is available at: status.pr/Maps/Map/AEE.

- As of 1:30 PM EDT, November 1, USACE is reporting approximately 33.3% of Puerto Rico’s 1,112 transmission lines or line segments are functioning.

- As of 1:30 PM EDT, November 1, USACE is reporting approximately 36.5% of Puerto Rico’s 342 substations are functioning.

- Two emergency distributed generation units, providing a total of 50 MW additional generation to help stabilize the electric system, have been installed by the U.S. Army Corps of Engineers (USACE) at the Palo Seco Power Plant.

- Jacksonville Electric Authority (JEA) and Kissimmee Utility Authority have sent linemen and assets to assist the U.S. Army Corps of Engineers and Puerto Rico in restoration efforts. Crews from the New York Power Authority have demobilized.

- DOE is coordinating with PREPA, FEMA, the U.S. Army Corps of Engineers (USACE), and industry to provide technical subject matter experts and to facilitate mutual aid.
  - On Wednesday, October 18, USACE awarded a contract for the repair of the distribution system in the western region of Puerto Rico.
  - On Monday, October 16, USACE awarded a contract to support transmission and distribution systems restoration efforts on Puerto Rico.
U.S. Virgin Islands

<table>
<thead>
<tr>
<th>Impacted Territory</th>
<th>Current Customer Outages</th>
<th>Percent of Customers without Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Thomas</td>
<td>20,042</td>
<td>79.0%</td>
</tr>
<tr>
<td>St. John</td>
<td>2,665</td>
<td>95.8%</td>
</tr>
<tr>
<td>St. Croix</td>
<td>17,684</td>
<td>94.2%</td>
</tr>
<tr>
<td>USVI Total</td>
<td>40,391</td>
<td>85.5%</td>
</tr>
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</table>

Note: As the extent of damage is confirmed and additional data becomes available, the baseline number of VIWAPA customers reported has been updated based on data from VIWAPA. DOE will continue to validate customer outage data as it is collected.

- As of 10:00 AM EDT, November 2, the U.S. Virgin Islands Water and Power Authority (VIWAPA) reported approximately 40,391 (85.5%) customers remain without power within the territory.
  - On St. Thomas, 20,042 customers (79.0%) were reported to be without power.
  - On St. John, 2,665 customers (95.8%) were reported to be without power.
  - On St. Croix, 17,684 customers (94.2%) were reported to be without power.
- On St. Thomas, crews energized commercial and residential customers in Estates Tutu, Anna’s Retreat, and Estate Thomas. Primary circuits on Feeders 7A and 8A, from the Harley Power Plant to Nisky Center, were energized. Crews worked on Feeder 6A near Fortuna and on St. Peter Mountain Road, as well as in Wintberg and Mandahl.
- After energizing the undersea transmission line from St. Thomas on October 26, electrical service was restored to portions of Cruz Bay, St. John. On November 1, power was restored to Caneel Bay Resort. Work continues to restore additional primary circuits on both Feeders 7E and 9E.
- On St. Croix, restoration work continued in the Sion Farm area where additional poles were planted on Wednesday, November 1.
- Additional manpower, equipment, and supplies arrived in the territory over the weekend to augment the restoration efforts. There are now more than 500 off-island linemen equally divided between both districts assisting the restoration efforts.
- VIWAPA has removed electrical meters at locations where damage was apparent to either the meter base and/or weather head and reminding customer that the customer is responsible for ensuring repairs and inspection are complete, which is standard practice during a restoration. DOE is working with FEMA Public Affairs to help amplify the message to residents to ensure it does not delay restoration.

OIL & GAS SECTOR

PORTS

- The U.S. Coast Guard has reopened all ports that receive marine delivery of petroleum products in Sector San Juan (Puerto Rico and the U.S. Virgin Islands). Draft restrictions and daylight-only restrictions remain in place at several ports.
Emergency Declarations & Waivers

**EMERGENCY DECLARATIONS**

- On September 18, Puerto Rico and USVI declared emergencies due to Hurricane Maria. These declarations automatically waived select Federal Motor Carrier Safety Regulations (FMCSRs), including hours-of-service (HOS) regulations, for motor carriers hauling resources to aid in restoration. Some HOS waivers applied specifically to the movement of petroleum products in or through the state. On September 20, President Trump approved a major disaster declaration.

- On September 26, President Trump amended the Puerto Rico and U.S. Virgin Islands disaster declarations to authorize increased cost sharing to 100 percent Federal funding for debris removal and emergency protective measures beginning September 17. The declaration includes direct Federal assistance for 180 days from the start of the incident period and a 90 percent Federal cost share thereafter.

- The table below summarizes emergency declarations and hours of service (HOS) waivers issued by states and FMCSA. Please see earlier Situation Reports for details about waivers that have expired.

<table>
<thead>
<tr>
<th>State</th>
<th>Details</th>
<th>Effective Dates</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional</td>
<td>Regional Emergency Declarations and FMCSR waivers issued by FMCSA.</td>
<td>Extended: 10/04, Extension to 11/06/17</td>
<td>Active</td>
</tr>
<tr>
<td>(Multi-State)</td>
<td>On October 4, the FMCSA extended the Regional Emergency Declaration for</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Puerto Rico, and the U.S. Virgin Islands.</td>
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</tr>
<tr>
<td>Puerto Rico</td>
<td>State of Emergency</td>
<td>Extended: 09/18/17</td>
<td>Active</td>
</tr>
<tr>
<td>U.S. Virgin</td>
<td>State of Emergency</td>
<td>Extended: 09/18/17</td>
<td>Active</td>
</tr>
<tr>
<td>Islands</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Sources: U.S. Department of Transportation; Governor Office Websites
FUEL WAIVERS

- The table below lists fuel-related waivers issued by the U.S. Environmental Protection Agency (U.S. EPA). Waivers that have expired have been removed from the table. Please see earlier Situation Reports for any needed details about waivers that have since expired.

<table>
<thead>
<tr>
<th>State</th>
<th>Waiver</th>
<th>Issued By</th>
<th>Effective Dates</th>
<th>Status</th>
</tr>
</thead>
</table>
| Puerto Rico | Sulfur content requirement of 15 ppm waived. Permits the sale, distribution and use of higher sulfur heating oil and ECA marine fuel. EPA extended the waiver as it applies to mobile non-road generators or pumps used for emergency purposes. | U.S. EPA   | 09/26/17  
Extended:  
10/11/17  
10/27/17  
10/15/17  
Extended:  
10/30/17  
11/15/17 | Active          |

Sources: U.S. Environmental Protection Agency; State Governments

OTHER WAIVERS

- **Department of Transportation (DOT)**
  - On September 20, PHMSA issued an Emergency Stay of Enforcement for pipeline operators that may be affected by Maria. PHMSA will not take enforcement action relating to operator noncompliance with certain operator qualification requirements, or pre-employment and random drug testing requirements, arising from the use of personnel for pipeline activities related to response and recovery. The waiver took effect on September 20 and will expire on November 4.

- **Environmental Protection Agency (EPA)**
  - On September 22, the EPA announced that it will exercise enforcement discretion for mobile power generators being imported into the United States that will be used as emergency sources of power in Puerto Rico as a result of Hurricane Maria. EPA will not pursue enforcement actions for certain violations of the Clean Air Act for mobile power generators being imported for use in Puerto Rico that have not been certified to meet U.S. pollution control standards. This covers mobile power generators that are imported for use in Puerto Rico until January 31, 2018.