Hurricanes Maria & Irma
November 27 Event Summary (Report #79)

REPORT TIME & DATE: 12:00 PM EST | November 27, 2017
INCIDENT START DATE: Friday, August 25, 2017
PRIMARY LOCATION(S): Puerto Rico & U.S. Virgin Islands
REPORT DISTRIBUTION: Public

Beginning the week of December 4, the U.S. Department of Energy (DOE) plans to issue a single situation report per week, with updates on the response and recovery efforts in Puerto Rico and the U.S. Virgin Islands, at 12:00 PM EST on Wednesdays.

EXECUTIVE SUMMARY
The U.S. Department of Energy (DOE) continues to support restoration efforts related to 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. A team of 25 personnel from the DOE Western Area Power Administration were proving mutual aid support on St. Thomas, but began a staggered demobilization on November 20 now that work on the transmission system has been complete. 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 and currently has a person deployed to assist FEMA with ESF #15 – External Affairs.

Electricity Sector Summary (as of 11:00 AM EST Monday)
- Puerto Rico: Approximately 57.9% of normal peak load has been restored and 59 of 78 municipalities are partially energized or have energized facilities. 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, including additional mutual aid as requested by PREPA.
- USVI: VIWAPA reports that approximately 19,297 customers across the USVI have been restored (38.9% of total customers). Approximately 51.8% of customers on St. Thomas, 72.4% of customers on St. Croix, and 59.4% of customers on St. John remain without power. Restoration efforts continue across the Territory, mainly focusing on the backbone feeders for the grid.

Oil and Natural Gas Sector Summary (as of 11:00 AM EST Monday)
- As of November 27, a total of 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.
ELECTRICITY SECTOR

Puerto Rico

<table>
<thead>
<tr>
<th>Impacted Territory</th>
<th>Total Average Peak Load (MW)</th>
<th>Total Average Peak Load Percentage of Pre-Storm Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Puerto Rico</td>
<td>1415</td>
<td>57.90%</td>
</tr>
</tbody>
</table>

- As of 6:00 AM AST, November 27, Puerto Rico reported that restored load was 57.90% of normal peak load (approximately 1,415 MW of 2,444 MW normal peak load).
  - NOTE: Due to technical limitations, PREPA is not able to provide the number or percentage of customers without power. As such, the current metric for restoration progress is the percent of normal peak load that has been restored. The percent of normal peak load restored is not a direct proxy for the number of customers restored. DOE will begin reporting customer level data as soon as the information is available.
- As of November 27, a total of 59 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.
- On November 26, the U.S. Army Corps of Engineers (USACE) reported 61.5% of Puerto Rico’s 1,146 transmission lines or line segments are functioning.
- On November 26, USACE reported 76.9% of Puerto Rico’s 344 substations are functioning.
- DOE is coordinating with PREPA, FEMA, the U.S. Army Corps of Engineers (USACE), and industry to support restoration efforts, including providing technical subject matter experts and to felicitating mutual assistance.
  - On Monday, October 16, USACE awarded a contract to support transmission and distribution systems restoration efforts on Puerto Rico.
  - On Wednesday, October 18, USACE awarded a contract for the repair of the distribution system in the western region of Puerto Rico.
  - On October 31, PREPA formally requested mutual assistance from industry for restoration efforts across the Territory.
U.S. Virgin Islands

<table>
<thead>
<tr>
<th>ELECTRICITY OUTAGES AS OF 3:05 PM AST 11/22/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impacted Territory</strong></td>
</tr>
<tr>
<td>St. Thomas</td>
</tr>
<tr>
<td>St. John</td>
</tr>
<tr>
<td>St. Croix</td>
</tr>
<tr>
<td><strong>USVI Total</strong></td>
</tr>
</tbody>
</table>

- As of 3:05 PM AST, November 22, the U.S. Virgin Islands Water and Power Authority (VIWAPA) reported approximately 30,288 customers (61.08%) remain without power within the territory.
  - On St. Thomas, 13,073 customers (51.78%) were reported to be without power.
  - On St. John, 1,840 customers (59.35%) were reported to be without power.
  - On St. Croix, 15,375 customers (72.40%) were reported to be without power.
- NOTE: As the extent of damage is confirmed and additional data becomes available, the baseline number of VIWAPA customers reported will be updated based on data from VIWAPA. DOE will continue to validate customer outage data as it is collected. At this time, the number of customers who are unable to receive power is unknown but still included in the number of total customers per pre-storm levels.

- Over 680 personnel are assisting in restoration efforts across the U.S. Virgin Islands.
  - On St. Thomas, 271 line personnel were reported to be assisting on restoration efforts.
  - On St. John, 105 line personnel were reported to be assisting on restoration efforts.
  - On St. Croix, 308 line personnel were reported to be assisting on restoration efforts.

- VIWAPA crews continue to work toward the goal of 90% restoration by the end of December.
- The Mission Assignment for the 25 DOE Western Area Power Administration's personnel was extended until December 1, 2017.
- 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).
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 (Multi-State)</td>
<td>Regional Emergency Declarations and FMCSR waivers issued by FMCSA.</td>
<td>Extended: 10/04/17 - 11/06/17</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>On October 4, the FMCSA extended the Regional Emergency Declaration for Puerto Rico, and the U.S. Virgin Islands. The FMCSA extended the Declaration again on November 6.</td>
<td>Extension to 11/06/17 - 01/08/18</td>
<td></td>
</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 Islands</td>
<td>State of Emergency</td>
<td>Extended: 09/18/17 - --</td>
<td>Active</td>
</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.

### Fuel Waivers as of 10:00 AM EST 11/27/2017

<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       | Expired |

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.
  - On November 21, the EPA announced that it will extend enforcement discretion for PREPA facilities that have been impacted or damaged by Hurricane Maria through January 31, 2018. The action extends a “no action assurance” issued by EPA on October 6 and will continue to provide the utility relief from some Clean Air Act permit conditions and permitting requirements, including emission limits, hours of operation limits, fuel usage restrictions, and restrictions on the shutdown or bypass of pollution control equipment for most of their electric generating units operating in Puerto Rico.