



# Hurricanes Nate, Maria, Irma, & Harvey

## October 11 Event Summary (Report #62)

<b>REPORT TIME &amp; DATE:</b>	12:00 PM EDT   October 11, 2017
<b>INCIDENT START DATE:</b>	Friday, August 25, 2017
<b>PRIMARY LOCATION(S):</b>	TX, LA, FL, GA, NC, SC, MS, AL, Puerto Rico, & USVI
<b>REPORT DISTRIBUTION:</b>	Public

### EXECUTIVE SUMMARY

Restoration efforts for power outages caused by Hurricanes Maria and Irma continue across Puerto Rico and the U.S. Virgin Islands, which caused significant damage across the region.

DOE continues to support response efforts for Hurricane Maria and restoration efforts related to Hurricanes Harvey and Irma. ESF #12 responders are 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 from the Western Area Power Administration is on St. Thomas to provide mutual aid.

### Electricity Sector Summary (as of 10:30 AM EDT Wednesday)

- Puerto Rico: At least 10.6% of customers have had power restored, which is a decrease from yesterday due to a suspected fault along a transmission line in San Juan. Puerto Rico and USACE are working to correct the issue. DOE is coordinating closely with FEMA, Puerto Rico, and the U.S. Army Corps of Engineers to support restoration efforts and facilitate mutual aid.
- USVI: As of October 10, DOE estimated that at least 14.4% of customers on St. Thomas and 12% of customers on St. Croix have been restored. Several key areas, including the University and FAA Control Tower were energized on Tuesday. At this time, there continues to be no grid power on St. John. Restoration efforts continue across the Territory, focusing on critical facilities and backbone feeders for the grid. Additional mutual aid is expected this week.

### Oil and Natural Gas Sector Summary (as of 10:30 EDT Wednesday)

- *Hurricane Nate:* Several refineries and offshore facilities remain shut-in but are in the process of restarting following Hurricane Nate. Most are expected to restart over the next few days.
- *Puerto Rico & USVI:*
  - As of October 10, 860 out of 1,110 retail gas stations were 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

### IMPACTS TO PUERTO RICO AND U.S. VIRGIN ISLANDS

ELECTRICITY OUTAGES AS OF 11:00 AM EDT 10/11/2017			
Impacted State	Current Estimated Customer Outages	Percent of Estimated Customers without Power	24-hr Peak Customer Outages
Puerto Rico	~1,403,398	~89.4%	~1,403,398
St. Thomas	~21,899	~85.6%	~21,899
St. John	~2,893	~100.0%	~2,893
St. Croix	~21,704	~88.0%	~21,704
<b>Total</b>	<b>~1,449,894</b>	--	--

- U.S. Army Corps of Engineers (USACE) temporary power response teams have been on the ground in Puerto Rico and U.S. Virgin Islands, assessing power needs, and installing generators at critical facilities.

#### Puerto Rico

- As of 11:00 AM EDT, Wednesday, October 11, Puerto Rico reported approximately 1.4 million (89.4%) of customers are without power. This is an increase in the number of customers without power due to a tie line between the Palo Seco and San Juan power plants which is believed to have tripped on Tuesday afternoon, causing outages in San Juan. PREPA is working to mitigating impacts.
- PREPA has reported that as of 9:00 PM EDT, Tuesday, October 10, approximately 224 of 1,112 (20.2%) transmission lines or line sections of various voltages have been energized. An increase of 33 lines or 3%.
- PREPA has reported that as of 9:00 PM EDT, Tuesday, October 10, approximately 108 of 342 (31.6%) substations of various voltages are energized. An increase of 10 substations or 2.9%.
- The 230 kV line between Guayanilla to Central Cambalache has been restored. Once additional 115 kV lines and the 230 kV line between Mora and Central Cambalache have been restored, a transmission loop on the western side of Puerto Rico will be completed. The estimated time of restoration for this project is now being assessed.
- Jacksonville Electric Authority (JEA) has sent linemen and assets to assist the U.S. Army Corps of Engineers and Puerto Rico in restoration efforts.
- The New York Power Authority has sent crews to provide mutual aid, supporting damage assessments and restoration efforts.
- DOE is coordinating with PREPA, FEMA, the U.S. Army Corps of Engineers, and industry to provide technical subject matter experts and to facilitate mutual aid.



**U.S. Virgin Islands**

- The majority of customers across the U.S. Virgin Islands (USVI) remain without power. Most customers on St. Croix lost power due to Hurricane Maria. St. Thomas and St. John previously experienced extensive power outages from Hurricane Irma. There has been restoration efforts underway across the islands, focusing on critical facilities.
- Governor Kenneth Mapp announced VIWAPA is aiming for 90% of the USVI to be restored by late December.
- DOE is working closely with industry and FEMA to facilitate mutual assistance for the USVI

**St. Thomas & St. John**

- As of 5:45 PM EDT, Tuesday, October 10, VIWAPA estimates that approximately 3,700 customers (~14.4%) on St. Thomas are receiving power from the grid out of 25,599 total customers. None of the approximately 2,893 customers on St. John are receiving power from VIWAPA. Only facilities connected to temporary generators have power on St. John at this time.
- On St. Thomas, crews made significant progress in energizing portions of several electrical feeders on Tuesday, October 10. On Feeder 6A, a circuit from the Randolph Harley Power Plant to the university campus was energized, as well as the Sports & Fitness Center, the FAA control tower and West Bay Supermarket. The feeder path from Banco Popular to Nisky Shopping Center was energized.
- In Sugar Estate, crews will install new lines Wednesday, October 11 on the recently installed replacement poles.
- On St. Thomas, the area behind the Schneider Regional Medical Center was reenergized on Tuesday, October 10, which includes a number of medical office complexes.
- Off island crews are continuing to reconstruct the distribution network that will interconnect VIWAPA's Tutu and East End electrical substations. This work is making steady progress as crews advance toward Fredenhøj Ballpark, en route to the substation in Nazareth. An assessment now underway will determine the feasibility of undergrounding significant portions of Feeders 9A and 10A. These feeders provide electrical service to the Crown Bay Marina, several shipping companies, sand fill operations and the general Crown Bay area.
- On St. John, crews continued to rebuild various electrical circuits in Cruz Bay as well as in the Gallows Point and Grande Bay areas.

**St. Croix**

- As of Friday, October 6, DOE estimates that approximately 2,960 customers (~12%) on St. Croix are receiving power from the grid out of 24,664 total customers.
  - *NOTE: VIWAPA reports restoration in terms of MW of load restored on each feeder line. The percentage of load restored is then used by DOE to approximate the number of customers restored. As such, the number of reported customers should be only be considered calculated estimates.*
- On St. Croix, Tuesday, October 10, crews energized areas in the vicinity of the Henry Rohlsen Airport on Feeder 8B as well as on a double circuit of Feeder 6A. Removal of storm debris which include downed poles, power lines, transformers and fuses continued into Frederiksted in the Mount Pleasant, William's Delight and Two Brothers areas.
- On St. Croix at the Estate Richmond Power Plant, there is one unit online and another available.



## OIL &amp; GAS SECTOR

## PORTS

- The U.S. Coast Guard has set the following conditions for ports and waterways in Sector San Juan. All ports in the sector are listed.

Status of Ports as of 10:00 AM EDT 10/11/2017			
Port	Average Imports (b/d) <sup>A</sup>	Status	Date Stamp
<b>Puerto Rico</b>			
San Juan	64,000	Port Readiness Condition IV. Open.	09/27/17
Ponce	45,000	Port Readiness Condition IV. Open with restrictions. Max draft 38 ft.	09/30/17
Guayanilla		Port Readiness Condition IV. Open.	09/25/17
Yabucoa	38,000	Port Readiness Condition IV. Open with restrictions. Daylight operations only. Max draft 37 ft.	09/30/17
Arecibo	<sup>B, C</sup>	Port Readiness Condition IV. Open with restrictions. Daylight operations only. Max draft 15 ft.	09/27/17
Fajardo		Port Readiness Condition IV. Open.	10/08/17
Culebra		Port Readiness Condition IV. Open with restrictions. Daylight operations only.	09/24/17
Vieques		Port Readiness Condition IV. Open.	10/08/17
Guanica		Port Readiness Condition IV. Open.	10/09/17
Guayama	<sup>B, C</sup>	Port Readiness Condition IV. Open with restrictions. Tug/barge only. No deep draft vessels. No vessels greater than 500 GT.	09/24/17
Mayaguez	<sup>B, C</sup>	Port Readiness Condition IV. Open with restrictions. Draft less than 28 ft.	10/10/17
Roosevelt Roads/Ceiba	<sup>B</sup>	Port Readiness Condition IV. Open with restrictions. Daylight transit only. Draft less than 33 ft.	10/02/17
Salinas/Aguirre	<sup>B, C</sup>	Port Readiness Condition IV. Open.	09/24/17
Tallaboa	<sup>B</sup>	Port Readiness Condition IV. Open.	09/24/17



U.S. Virgin Islands			
Christiansted, St. Croix	30,000	Port Readiness Condition IV. Open with restrictions. Daylight transit only. Draft less than 9 ft through Schooner Channel.	10/03/17
Limetree Bay, St. Croix		Port Readiness Condition IV. Open.	10/06/17
Krause Lagoon, St. Croix		Port Readiness Condition IV. Open.	10/03/17
Frederiksted, St. Croix		Port Readiness Condition IV. Open.	09/27/17
Cruz Bay, St. John	<sup>B, C</sup>	Port Readiness Condition IV. Open with restrictions. Daylight transit only.	09/24/17
St. Thomas	<sup>B, C</sup>	Port Readiness Condition IV. Charlotte Amalie Harbor and East/West Gregorie Channels are open without restrictions. Red Hook is open for daylight operations only.	09/27/17

<sup>A</sup> All petroleum products, excluding asphalt.

<sup>B</sup> No direct foreign imports but receives petroleum products from larger ports by barge.

<sup>C</sup> Receives fuel for oil-fired power plant.

Source: Receipt data from U.S. Customs via Reuters EIKON (Jan-Aug. 2017 average)



**SUMMARY OF WAIVERS** *(A complete list of waivers can be found at the end of the report)*

- Jones Act
  - On September 28, the Department of Homeland Security, at the request of the Department of Defense, [waived](#) the Jones Act requirements for Puerto Rico for a 10-day period. This waiver applies to all products shipped from U.S. coastwise points to Puerto Rico, through October 8, and applies to all covered merchandise loaded on board a vessel within the 10-day period of the waiver and delivered by October 18.
- EPA
  - On September 26, the U.S. EPA issued to allow parties in Puerto Rico to sell, distribute, and use heating oil and ECA marine fuel that exceeds the 15 ppm through October 15.
  - On September 23, the EPA issued an order authorizing the installation and operation of temporary water treatment units in the U.S. Virgin Islands. Effective through October 8.
  - 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. This covers mobile power generators that are imported for use in Puerto Rico until January 31, 2018.
- PHMSA
  - On September 28, PHMSA issued a waiver on Hazardous Materials Regulations to persons conducting operations under the direction of the Puerto Rico Public Service Commission within the Hurricane Maria emergency and disaster areas of Puerto Rico. The Waiver is granted to support the government of Puerto Rico in facilitating the transport of essential fuel. The waiver is effective until October 22.
  - On September 20, PHMSA issued an Emergency Stay of Enforcement for pipeline operators that may be affected by Maria. The waiver will expire on November 4.
- State of Emergency
  - On September 18, Puerto Rico and the U.S. Virgin Islands declared a State of Emergency. On September 20, President Trump approved of the emergency declarations.



# Hurricane Nate

## OIL & GAS SECTOR

### PRODUCTION

- As of 12:30 PM EDT, October 10, 1,024,251 b/d (58.5%) of the oil production and 1,485 MMcf/d (46.1%) of the natural gas production in the federally administered areas of the Gulf of Mexico were shut in, according to estimates by the Bureau of Safety and Environmental Enforcement. Now that the storm has passed, facilities will perform integrity checks and begin restart.

Gulf of Mexico Oil & Gas Production Status						
As of 12:30 PM EDT 10/10/2017						
Production	Pre-Event Production	Shut-in Volumes				
		10/06	10/07	10/08	10/09	10/10
Crude Oil (b/d)	1,750,000	1,243,753	1,615,966	1,620,612	1,489,101	1,024,251
Natural Gas (MMcf/d)	3,220	1,713	2,480	2,503	2,085	1,485
Infrastructure	Pre-Event Count	Evacuated Count				
		10/06	10/07	10/08	10/09	10/10
Manned Platforms	737	66	302	298	142	66
Rigs	31	5	13	14	7	1

Source: Bureau of Safety and Environmental Enforcement

## PETROLEUM

### PETROLEUM REFINERIES

- As of 10:00 AM EDT, October 10, one refinery remained shut after Hurricane Nate. This refinery has a capacity of 340,000 b/d or 3.5% of total U.S. Gulf Coast refining capacity. One refinery that was previously shut has begun restarting.



## PORTS

- The U.S. Coast Guard has set the following conditions for ports and waterways in the U.S. Gulf Coast region as a result of Nate. In the table below, select ports and waterways are listed that either import crude oil or outload petroleum products.

<b>Status of Ports as of 10:00 AM EDT 10/11/2017</b>			
<b>Port</b>	<b>Avg. Crude Imports (b/d)<sup>A</sup></b>	<b>Status</b>	<b>Date Stamp</b>
<b>Sector Houma</b>			
Louisiana Offshore Oil Port (LOOP)	339,000	Returning to pre-hurricane staffing at all locations. Offshore vessel terminal will resume operations. No impacts reported.	10/09/17
Morgan City, LA		Port Condition Normal. Open without restrictions.	10/08/17
Houma, LA		Port Condition Normal. Open without restrictions.	10/08/17
SW Pass Lightering Area	<sup>B</sup>	Port Condition Normal. Open without restrictions.	10/08/17
<b>Sector New Orleans</b>			
Baton Rouge, LA	33,000	Port Condition Normal. Open without restrictions.	10/08/17
New Orleans, LA	209,000	Port Condition Normal. Open without restrictions.	10/08/17
South Louisiana	153,000	Port Condition Normal. Open without restrictions.	10/08/17
Lower Mississippi River	<sup>B</sup>	Port Condition Normal. Open without restrictions.	10/08/17
<b>Sector Mobile</b>			
Mobile, AL	23,000	Port Condition Normal. Open with restrictions. Daylight transit only south of Theodore Ship Channel.	10/10/17
Pascagoula, FL	147,000	Port Condition Normal. Open with restrictions. 32 ft max draft. Daylight transit only.	10/09/17
Panama City, FL	<sup>C</sup>	Port Condition Normal. Open without restrictions.	10/08/17
Pensacola, FL	<sup>C</sup>	Port Condition Normal. Open with restrictions. 12 ft max draft.	10/10/17
Gulf Intracoastal Waterway (GICWW)		Port Condition Normal. Open with restrictions. Daylight transit only between MM 118- MM 133.	10/10/17

<sup>A</sup> January to May 2017, from EIA Company Level Imports

<sup>B</sup> Major waterway for transit of crude and/or products.

<sup>C</sup> Receive petroleum products by barge

Source: U.S. Coast Guard





# Emergency Declarations & Waivers

## EMERGENCY DECLARATIONS

- On October 6, the Federal Motor Carrier Safety Administration issued a Notice of Enforcement Discretion Determination for the states of Alabama, Florida, Louisiana and Mississippi that it would not be enforcing the Temporary Operating Authority Registration fee for motor carriers supporting emergency relief efforts. This notice will expire on November 6.
- 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. The declarations exempted FCMSR in every state along the motor carrier’s route as long as the final destination was with the declared disaster areas. 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. On October 3, President Trump amended the U.S. Virgin Islands disaster declaration by authorizing an increase in the level of Federal funding for emergency work undertaken in the U.S. Virgin Islands as a result of Hurricane Maria. The president increased the Federal cost share to 100 percent for debris removal and emergency protective measures, including direct Federal assistance, for 180 days from the start of the incident period, and then a 90 percent Federal cost share thereafter.
- The table below summarizes emergency declarations and HOS waivers issued by states in response to the impacts of Hurricanes Nate, Maria, Irma, and Harvey. 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.

State Emergency Declarations and HOS Waivers <i>as of 10:00 AM EDT 10/11/2017</i>				
State	Details	Effective Dates		Status
		Start	End	
Regional (Multi-State)	<p>Regional Emergency Declarations and FMCSR waivers issued by FMCSA.</p> <p>On September 29, the FMCSA extended the Regional Emergency Declaration for the following: Alabama, Arkansas, Colorado, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Puerto Rico, and the U.S. Virgin Islands.</p>	Extended: 09/29/17	Extension on 9/29: 10/30/17	Active



	<p>On October 4, the FMCSA extended the Regional Emergency Declaration for Florida, Georgia, Puerto Rico, and the U.S. Virgin Islands.</p> <p>On October 6, the FMCSA issued a Regional Emergency Declaration for Alabama, Florida, Louisiana and Mississippi due to Hurricane Nate.</p>	<p>Extended: 10/4</p> <p>Extended: 10/6</p>	<p>Extension on 10/4: 11/6/17</p> <p>Extension on 10/6: 11/6/17</p>	
Alabama	State of Emergency	10/05/17	11/04/17	Active
Florida	State of Emergency/HOS waiver	Extended for Nate: 10/05/17	11/03/17	Active
Louisiana	State of Emergency.	Extended for Nate: 10/06/17	TBD	Active
Mississippi	State of Emergency for George, Hancock, Harrison, Jackson, Pearl River, and Stone counties; and preemptively for any other areas in the state expected to be impacted by Tropical Storm/ Hurricane Nate.	10/06/17	TBD	Active
Puerto Rico	State of Emergency	Declared for Maria: 09/18/17	--	Active
Tennessee	Limited State of Emergency. EO-67 suspends certain vehicle restrictions for vehicles providing emergency supplies, equipment, or mobile housing units	09/11/17	11/08/17	Active
Texas	State of Disaster declared for 61 counties in Texas.	Expanded: 09/01/17	TBD	Active
Virginia	State of Emergency/HOS waiver issued for petroleum products through the state.	For Irma: 09/07/17	For Irma: 06/30/18, or rescinded.	Active
U.S. Virgin Islands	State of Emergency	Declared for Maria: 09/18/17	--	Active

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) and other Federal and State agencies for Hurricanes Maria, Irma, and Harvey. 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.

State Fuel Waivers as of 10:00 AM EDT 10/11/2017					
State	Waiver	Issued By	Effective Dates		Status
			Start	End	
SC	RVP standards of 9.0 psi waived. Permits the sale or distribution of winter gasoline with an 11.5 psi RVP. Allows the comingling of RFG with conventional gasoline. Waives butane blending and T V/L = 20 requirements.	State of South Carolina	09/07/17	10/31/17	Active
VA	Waived the RVP limit for gasoline ethanol blends prescribed by regulations. Extended waiver to apply through duration of Hurricane Irma impact on 9/8.	State of Virginia	Extended: 09/08/17	Until further notice.	Active

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

**OTHER WAIVERS**

- **Department of Homeland Security**

- On September 28, the Department of Homeland Security, at the request of the Department of Defense, [waived](#) the Jones Act requirements for Puerto Rico for a 10-day period. This waiver applies to all products shipped from U.S. coastwise points to Puerto Rico, through October 8, and applies to all covered merchandise loaded on board a vessel within the 10-day period of the waiver and delivered by October 18.

- **Department of Transportation (DOT)**

- On September 28, DOT’s Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a waiver on Hazardous Materials Regulations to persons conducting operations under the direction of the Puerto Rico Public Service Commission within the Hurricane Maria emergency and disaster areas of Puerto Rico. The Waiver is granted to support the government of Puerto Rico in facilitating the transport of essential fuel. The waiver is effective until October 22.
- 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.
- On September 8, PHMSA issued an Emergency Waiver Order under 49 U.S.C. 5103 and Stafford Act declarations made for the U.S. Virgin Islands, Puerto Rico, Florida, and South Carolina, to persons conducting operations under the direction of the Environmental Protection Agency and the U.S. Coast Guard that support appropriate actions to prepare for, respond to, and recover from a threat to public health, welfare, or the environment caused by actual or potential oil and hazardous materials incidents resulting from Hurricane Irma in Puerto Rico, U.S. Virgin Islands, Florida, and South Carolina. On September 10, 2017, based on a Stafford act emergency declaration, PHMSA amended this order to include Georgia.

- **Environmental Protection Agency (EPA)**
  - On September 26, the U.S. EPA issued to allow parties in Puerto Rico to sell, distribute, and use heating oil and ECA marine fuel that exceeds the 15 ppm through **October 15**.
  - 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.

