



Tropical Storm Harvey

Event Report (Update #7)

REPORT TIME & DATE:	8:30 AM EDT Tuesday, August 29, 2017
INCIDENT START DATE:	Friday, August 25, 2017
PRIMARY LOCATION(S):	Gulf Coast (Texas and Louisiana)
REPORT DISTRIBUTION:	Public

EXECUTIVE SUMMARY

Harvey continues to produce heavy rain across southeastern Texas and Louisiana, which has led to significant flooding. Harvey will continue to impact the region through middle of the week with an additional 7 – 13 inches of rain expected through Friday.

Electricity Sector Impacts (as of 7:30 AM EDT)

- Texas: 272,271 customer power outages (2.3% of total customers)
 - AEP Texas is the most significantly impacted utility
 - AEP estimates 95% of outages in Corpus Christi area will be restored by late Wednesday and expects 95% of outages restored for most other areas by Saturday
 - AEP has requested an additional 1,000 personnel to assist with restoration efforts
 - CenterPoint Energy is unable to address impacted customers in downtown Houston until floodwaters receded and electric infrastructure can be inspected
 - Restoration in severely damaged or flooded areas will be delayed and utilities are reminding customers that before electricity can be restored to homes or business impacted by flooding, customers need to have electrical equipment inspected.
- Louisiana: 2,662 customer power outages (<1% of total customers)
 - Entergy Louisiana expects additional outages as the storm continues

Oil and Natural Gas Sector Impacts (as of 7:30 AM EDT)

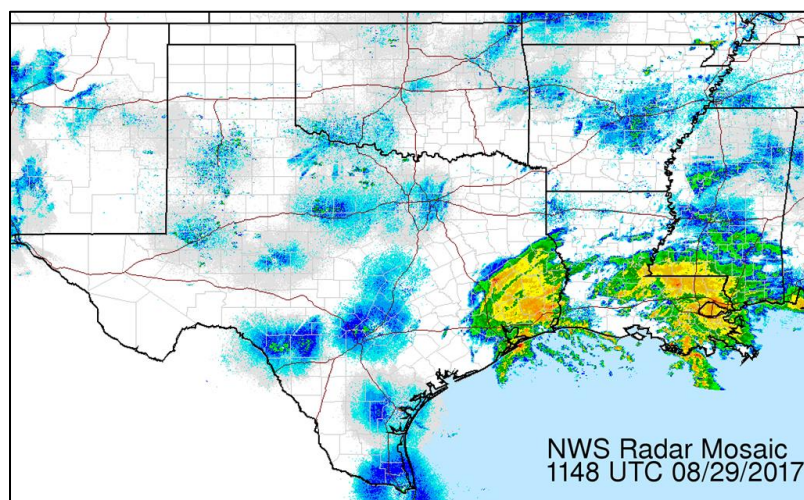
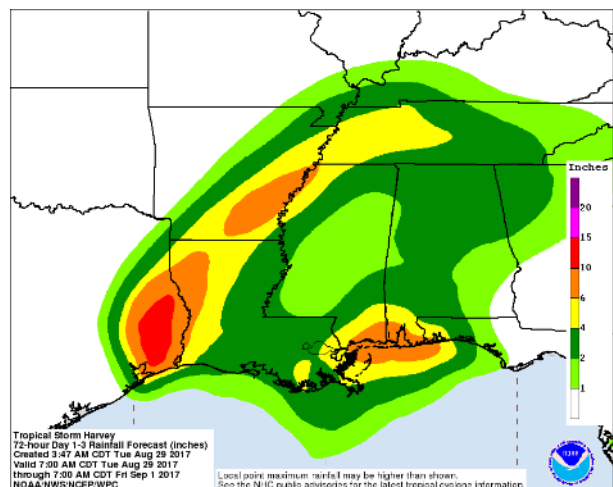
- As of Monday 19% of oil production 18% of natural gas production in Gulf of Mexico was shut-in
- Six refineries in the Corpus Christi area and five refineries in the Houston/Galveston area are shut down. Four refineries in the Houston/Galveston region area, one in the Beaumont/Port Arthur, and two in the Lake Charles area were operating at reduced rates
- Retail gas station outages have been reported in the impacted region; however, overall stocks of gasoline and distillate in the region are at or above the top-end of the 5-year range.

INCIDENT OVERVIEW

As of 8:00 AM EDT, Harvey was 90 miles east-southeast of Port O’Connor, Texas moving east-northeast at 3 MPH, with maximum sustained winds of 45 MPH (tropical storm). Tropical-storm-force winds extend outward up to 175 miles. A turn toward the northeast is expected later today, followed by a turn toward the north-northeast on Wednesday. On the forecast track, the center of Harvey is expected to be just offshore of the middle and upper coasts of Texas through tonight, then move inland over the northwestern Gulf coast on Wednesday.

Harvey is expected to produce additional rain accumulations of 7 to 13 inches through Friday over the upper Texas coast and into southwestern Louisiana. Isolated storm totals may reach 50 inches over the upper Texas coast, including the Houston/Galveston metropolitan area. Elsewhere, Harvey is expected to produce total rain accumulations of 5 to 15 inches farther east across south-central Louisiana. Storm surge of 1 to 3 feet is still possible throughout the coastal areas under a tropical storm warning.

A tropical storm warning is currently in effect from Mesquite Bay, Texas to Intercostal City, Louisiana and flood and flash flood warnings have been issued throughout the region.



ELECTRICITY SECTOR

OVERVIEW

Impacted utilities, including Entergy, AEP Texas, and CenterPoint Energy have issued statements and are expecting power outages to last several days. Restoration efforts cannot begin until weather conditions are safe for workers. Sustained wind conditions must be below 34 miles per hour before bucket trucks can be deployed. High rainfall total and flooding could extend restoration times in many affected areas. Before equipment in flooded areas can be reenergized, waters will need to recede and equipment at substations will need to dry out and be inspected for damage. There are no unmet needs by any electric utility at this time. The Southeastern Electric Exchange and the Midwest Mutual Assistance Group are actively monitoring the need for mutual assistance and crew deployments to respond to power outages in Texas and Louisiana. A federal major disaster declaration was approved on August 25, 2017 for the State of Texas and August 28, 2017 for the State of Louisiana. The Electric Reliability Council of Texas (ERCOT) reports “normal” system status..

ELECTRICITY OUTAGES AS OF 7:30 AM EDT 08/29/2017			
Impacted State	Current Confirmed Customer Outages	Percent of Confirmed State Customers without Power	24-hr Peak Customer Outages
Louisiana	2,662	<1%	3,968
Texas	272,271	2.3%	312,698
Total	274,933		*

**There is no sum of the Peak Customer Outage column because peaks for individual utilities occur at different times; a total would not reflect peak outages.*

- Louisiana
 - As of 7:30 AM EDT, August 29, the State of Louisiana has 2,662 customer outages. This represents <1% of customers in the state.
 - Entergy Louisiana has 1,862 customer outages
 - CLECO Power Inc. has 364 customer outages.
 - Beauregard Electric Coop (BECi) has 218 customer outages.
 - Southwestern Electric Power Co. (SWEPCO) has 113 customer outages.
 - Entergy Louisiana expects extended outages due to floodwaters.
 - CLECO Power Inc. crews, along with contractor crews, are currently on stand-by and prepared to restore service. CLECO is monitoring the storm.
 - The President approved the Governor’s request for a Federal Emergency Declaration.
 - The Governor of Louisiana has declared a state of emergency.
 - The Louisiana Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP) has deployed two Emergency Management Assistance Compact (EMAC) Advance Team personnel to Texas in response to the storm. Texas made the request for personnel through the EMAC.

- Texas
 - As of 7:30 AM EDT, August 29, the State of Texas has 272,271 customer outages. This represents 2% of customers in the state.
 - AEP Texas has 127,619 customer outages. This is a 12.5% decrease from last report.
 - CenterPoint Energy has 108,984 customer outages. This is a 17% increase from last report.
 - Entergy Texas has 23,352 customer outages. This is a 27.5% decrease from last report.
 - Texas New Mexico Power has 7,262 customer outages. This is a 7.5% decrease from last report.
 - AEP Texas has requested an additional 1,000 personnel in addition to the 3,600 already committed to the restoration of power in the Coastal Bend. Crews from Kentucky, Illinois, Missouri, and other states are working to restore power.
 - AEP Texas has assessed 70% of its transmission equipment in the impacted area and restored 10 transmission lines and 20 transmission stations since the height of the storm. There are another 55 transmission lines and 44 stations identified up to this point as being out of service. Some transmission facilities will take longer than a week to restore.
 - AEP Texas projects that by 11 PM EDT Wednesday, crews will have restored power to 95% of the customers within the City of Corpus Christi and the Sinton area. Restoration for the majority of all other areas impacted by the storm is expected to reach the 95% by 11 PM EDT Saturday, September 2. Restoration dates and times are still to be determined for Matagorda County, Rockport, Port Aransas, Fulton, Woodsboro, Port Lavaca, Lamar and Bayside. The damage in these communities is the most severe and will require the most amount of repairs.
 - CenterPoint Energy is unable to address impacted customers in downtown Houston until floodwaters have receded and electric infrastructure has dried out. Restoration times are being assessed.
 - CenterPoint Energy has reported an additional 70 crews arrived to assist in restoration Monday morning.
 - Texas-New Mexico Power does NOT have plans to shut off power to the City of Dickinson or other portions of its service territory despite public speculation.
 - Texas-New Mexico Power will release new estimates of complete restoration the morning of Tuesday, August 29. All estimates are subject to change.
 - Entergy Texas has reported their Lewis Creek Dam remains stable and secure due to recent hardening efforts and increased inspections of the facility.
 - Entergy Texas personnel cannot access some of their electrical facilities that provide service due to debris and flooding. Within their service territory, they are reporting flooding in the cities of Beaumont, Dayton, Winnie, The Woodlands, Navasota, and Cleveland, which may result in slower restoration.



OIL AND GAS SECTOR

OFFSHORE PRODUCTION

- As of 12:30 PM EDT, August 28, 331,370 b/d (18.94%) of the oil production and 583.39 MMcf/d (18.12%) of the natural gas production in the federally administered areas of the U.S. Gulf of Mexico are shut-in, according to estimates by the Bureau of Safety and Environmental Enforcement (BSEE).

U.S. Gulf of Mexico Oil & Gas Production Status <i>as of 12:30 PM EDT 08/28/2017</i>			
Production	Pre-Event	Shut-In (08/27)	Shut-In (08/28)
Crude Oil (b/d)	1,750,000	378,633	331,370
Natural Gas (MMcf/d)	3,220	827	583.39
Infrastructure	Pre-Event Count	Evacuated (08/27)	Evacuated (08/28)
Manned Platforms	737	105	98
Rigs	31	6	5

Source: BSEE

ONSHORE PRODUCTION

- On August 26, the Texas Railroad Commission estimated that approximately 300,000 to 500,000 b/d of crude production had been shut-in in the Eagle Ford region from a pre-storm production estimate of 870,000 b/d. In addition, approximately 3.0 Bcf/d of natural gas production had been shut-in from a pre-storm production estimate of about 6.0 Bcf/d. The Commission had expected most idled production to come back online in the next few days.

PETROLEUM REFINERIES

- As of 08:00 AM EDT, August 29, all six refineries in the Corpus Christi area and five refineries in the Houston/Galveston area were shut down, according to public reports. These refineries have a combined refining capacity of 2,361,149 b/d, equal to 24.4% of total Gulf Coast (PADD 3) refining capacity and 12.8% of total U.S. refining capacity. In addition, four refineries in the Houston/Galveston region area, one refinery in the Beaumont/Port Arthur area, and two refineries in the Lake Charles area were operating at reduced rates.



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 Harvey.
- In addition, Louisiana Offshore Oil Port (LOOP) facilities are currently reporting normal operations. LOOP is executing its Inclement Weather Plan and will update Shippers accordingly.

Status of Texas and Louisiana Gulf Coast Ports <i>as of 8:00 AM EDT 08/29/2017</i>		
Port	Status	Date Stamp
Sector Corpus Christi		
Brownsville	Open.	08/26/17
Corpus Christi	Port Condition Zulu. Closed. Port is assessing damage. Working to restore normal operations by 9/4.	08/28/17
Sector Houston and Galveston		
Freeport	Port Condition Zulu. Closed. To remain at Zulu for next 48 hours.	08/28/17
Galveston	Port Condition Zulu. Closed. To remain at Zulu for next 48 hours.	08/28/17
Houston	Port Condition Zulu. Closed. To remain at Zulu for next 48 hours.	08/28/17
Texas City	Port Condition Zulu. Closed. To remain at Zulu for next 48 hours.	08/28/17
Sector Port Arthur and Lake Charles		
Beaumont	Port Condition Zulu. Closed.	08/28/17
Lake Charles	Port Condition Zulu. Closed.	08/28/17
Orange	Port Condition Zulu. Closed.	08/28/17
Port Arthur	Port Condition Zulu. Closed.	08/28/17
Sabine Pass	Port Condition Zulu. Closed.	08/28/17

Source: U.S. Coast Guard

WAIVERS

- The U.S. Environmental Protection Agency (EPA) has approved a request made by the Texas Commission on Environmental Quality (TCEQ) to waive requirements for reformulated gasoline (RFG), Reid vapor pressure (RVP), and Texas Low Emission Diesel (TxLED) that apply in some counties covered by the Governor’s Disaster Proclamation. The waiver was issued after consultation with the U.S. Department of Energy to address a fuel supply emergency caused by refinery shutdowns and evacuations associated with Hurricane Harvey. This waiver was expanded on August 26 to include additional counties in Texas.



- On August 28, the EPA approved a waiver for diesel fuel sulfur standards in Texas. Under this waiver, the EPA will allow the sale, distribution and use of dyed non-road diesel fuel in the state, but the diesel fuel cannot exceed the 15 ppm standard.
- On August 28 the EPA approved a waiver for RVP and ethanol volume in Louisiana in designated parishes.

State Fuel Specification Waivers <i>as of 8:00 AM EDT 08/29/2017</i>				
State	Waived Requirement	Effective Dates		Status
		Start	End	
Texas	RFG requirement waived in Houston-Galveston-Brazoria areas. Waiver expanded to four-county Dallas-Fort Worth RFG area 8/26. Allows the sale or distribution of conventional gasoline.	08/25/17	09/15/17	Active
Texas	7.8 psi RVP standard waived for gasoline sold in 20 counties where low-RVP gasoline is required and are also under the Governor's Disaster Declaration. Waiver expanded to 98 counties required to use low-RVP fuel 8/26. Allows sale of gasoline up to 9.0 psi RVP.	08/25/17	09/15/17	Active
Texas	TxLED requirement waived in 29 counties that require TxLED and are also under the Governor's Disaster Declaration. . Waiver expanded to the entire 110-county area required to use TxLED 8/26.	08/25/17	09/15/17	Active
Texas	ULSD requirement waived in Texas. Allows use of dyed non-road diesel fuel meeting 15 ppm standard.	08/28/17	09/15/17	Active
Louisiana	7.8 psi RVP standard waived for gasoline sold in designated parishes where low-RVP gasoline is required. Allows sale of gasoline up to 9.0 psi RVP.	08/28/17	09/15/17	Active
Louisiana	Ethanol volume requirement waived. Allows gasoline with less than 9% ethanol to qualify for the EPA's "special provisions for alcohol blends" requirement."	08/28/17	09/15/17	Active

Source: U.S. Environmental Protection Agency

- In response to Harvey, the Federal Motor Carrier Safety Administration (FMCSA) declared that an emergency exists that warrants issuance of a Regional Emergency Declaration in the States of Texas and Louisiana and an exemption from certain Federal Motor Carrier Safety Regulations (FMCSRs), including hours-of-service (HOS) regulations, to addresses possible emergency conditions creating a need for immediate transportation of supplies, equipment and persons into and from those States.



- Texas and Louisiana have declared state emergencies due to Harvey. These declarations automatically waive select FMCSRs, including hours-of-service (HOS) regulations, for motor carriers hauling resources to aid in restoration efforts. The declarations exempt FCMSR in every state along the motor carrier’s route as long as the final destination is with the declared disaster areas in Texas or Louisiana.

State Emergency Declarations and HOS Waivers <i>as of 8:00 AM EDT 08/29/2017</i>				
State	Details	Effective Dates		Status
		Start	End	
Regional (Texas & Louisiana)	Regional Emergency Declaration and FMCSR waiver issued by FMCSA.	8/25/17	10/26/17	Active
Texas	State of Disaster declared for Aransas, Austin, Bee, Calhoun, Chambers, Colorado, Brazoria, DeWitt, Fayette, Fort Bend, Galveston, Goliad, Gonzales, Harris, Jackson, Jefferson, Jim Wells, Karnes, Kleberg, Lavaca, Liberty, Live Oak, Matagorda, Nueces, Refugio, San Patricio, Victoria, Waller, Wharton, and Wilson counties.	8/23/17	TBD	Active
Louisiana	State of Emergency declared.	8/23/17	TBD	Active

Sources: [U.S. Department of Transportation](#); Governor Office Websites; NOLA.com; Houston Chronicle

