

**OFFICE OF ELECTRICITY DELIVERY AND ENERGY RELIABILITY (OE)**  
**U.S. DEPARTMENT OF ENERGY**  
**Gulf Coast Hurricanes<sup>1</sup> Situation Report #7**  
**September 30, 2005 (3:00 PM EDT)**

**HIGHLIGHTS**

- Currently, 657,763 customers are without electric power in Texas and Louisiana.
- The Kinder Morgan gas storage facility in Huffman was energized by Entergy on 9/29.
- Entergy reports that of its 14 fossil units in the area affected by Hurricane Rita, two are online and 12 are currently offline. Of the 12 offline units: five units are available for restart once transmission and distribution issues related to the plants are resolved, two units are available once offsite power is restored, and five units remain offline until storm damage repairs are completed.
- CenterPoint Energy in Texas reports that the company has completed restoration of all its electricity customers.
- In support of restoration activities in Texas, Secretary Bodman issued an order to authorize and direct CenterPoint Energy to temporarily connect and restore power to Entergy Gulf States, Inc. Under this order, CenterPoint has picked up the Sam Houston Coop load for Entergy at Long John substation and on 9/30 CenterPoint will pick up the Sam Houston Coop load for Entergy at Tarkington substation. CenterPoint and Entergy are also working on a plan to restore service to the Strategic Petroleum Reserve at Big Hill. CenterPoint planners ran studies to confirm that the motor starting load can be carried from the CenterPoint system to the east. The Stowell-Big Hill line has a damaged structure which CenterPoint will fix for Entergy on 9/30.
- Shell reports that all 400 Shell gasoline stations in Houston and the surrounding areas are now open.
- ExxonMobil reports that 33 of its Louisiana and all 84 of its Houston area gasoline stations are open with fuel
- Service restoration to the seven refineries served by Entergy in the Port Arthur and Lake Charles remain a priority following establishment of grid service to generation sources. Limited 230KV service into the Port Arthur area is projected within a few days, but the refineries are served from the 69KV system that has substantial structural damage. In the Lake Charles area, Entergy projects limited transmission service for restoration and clean up activities in a few days and start up capacity in a week to 10 days.

- DOE staff have been at the National Response Coordination Center (NRCC) at FEMA HQ, the Interagency Incident Management Team at HQ, and both the State Emergency Operation Center (EOC) and the FEMA Joint Federal Office (JFO) in Baton Rouge, LA and for several weeks. Four staff are in Austin, TX, and additional staff are on the way to Louisiana for the New Orleans and Lake Charles JFOs. **Another staffer is en route to Mississippi to study grid conditions.**

The Texas Tiger Team, in which DOE ESF-12 staff participates, is continuing to support cooperation between Texas utilities to support Entergy power restoration.

- CenterPoint Energy agreed to restore transmission and substation facilities in order to provide interconnection to the Sam Houston Electric Cooperative.
- Entergy continued to work with CenterPoint to identify additional areas that could be served by generation located in ERCOT. Meetings between Entergy and city and county officials to coordinate restoration efforts are occurring daily. Critical loads continue to be identified and prioritized.

## **OIL AND GAS INFORMATION**

- **According to MMS, 1,467,577 barrels of oil per day are currently shut-in which equates to 97.8 percent of the normal daily oil production in the Gulf. Shut-in gas production is currently 7.941 billion cubic feet per day. This shut-in gas production is equivalent to 79.4 percent of the normal daily gas production in the Gulf. Evacuations are equivalent to 57.5 percent of 819 manned platforms and 24.6 percent of 134 rigs currently operating in the Gulf. For further information see MMS web site at [www.mms.gov](http://www.mms.gov)**
- According to MMS's review of the evacuations, 35 platforms were destroyed while 16 platforms have extensive damage. Thirteen rigs went adrift, of which six are now grounded, and nine others have reported problems. The remainder are being re-manned, re-powered, or repaired. Approximately 2,900 platforms were in the path of Katrina and Rita. Eighteen deepwater facilities report no significant damage.
- ConocoPhillips reports that the company's largest offshore asset in the Gulf of Mexico, Magnolia, has minimal damage and production is expected to resume shortly, contingent on resumption of operations at related onshore infrastructure such as pipelines and utilities. Initial assessments at three smaller fields have identified damage, but the production impact is not expected to be significant.
- According to BP, the company expects gas production will begin at NaKika and Marlin platforms within the next few days. Three BP single-well caissons on the shelf were reported to be leaning. However, these wells were temporarily abandoned prior to the approach of the hurricanes, and hence have no production impact.

BP's Pascagoula gas plant stands ready to receive gas from offshore platforms and will ramp up production as deliveries are affected. Early aerial inspections of the BP-owned

and operated Grand Chenier gas plant near Cameron, LA, indicate damage to a number of facilities at the plant. The Grand Chenier plant has an operating capacity of 650 mmcf/d and delivers into the Tennessee Gas and ANR pipelines.

- The following tables highlight the current shut downs by major energy facilities in the path of Hurricane Rita:

## OIL OPERATIONS IN THE PATH OF HURRICANE RITA

9/30/05

### Refineries

Company	Location	Capacity (B/D)	Status
<b>PORT ARTHUR/ LAKE CHARLES</b>			
Citgo	Lake Charles, LA	324,300	Shut down; minor damaged reported- no restart due to power loss
ConocoPhillips	West Lake, LA	239,400	Shut down – wind damage and no power
Calcasieu	Lake Charles, LA	30,000	Shut down – assessment being made
ExxonMobil	Beaumont, TX	348,500	Shut down – assessment being made, no power
Shell (Motiva)	Port Arthur, TX	285,000	Shut down; minor damage to cooling tower and power lines
Total	Port Arthur, TX	233,500	Shut down
Valero (Premcor)	Port Arthur, TX	255,000	Shut down; "significant damage" to two cooling towers and a flare stack. 2 weeks – 1 month to repair & restart refinery.
Total		1,715,700	Shutdown – 1,715,700
<b>HOUSTON/TEXAS CITY</b>			
Shell Deer Park	Deer Park, TX	333,700	Restarting
Lydonell Citgo	Houston, TX	270,200	Confirmed restart
Astra Oil (Crown Central)	Pasadena, TX	100,000	Restarting
Valero	Houston, TX	83,000	Restarting
ExxonMobil	Baytown, TX	557,000	Restarting
BP	Texas City, TX	437,000	Shut down
Valero	Texas City, TX	209,950	Restarting
Marathon	Texas City, TX	72,000	Restarting
ConocoPhillips	Sweeny, TX	229,000	Restarting
Total		2,291,850	Shut down – 437,000
<b>TOTAL OF ALL AREAS</b>		<b>4,713,676</b>	Total Shutdown – 2,152,700
Four refineries (3 in LA and 1 in MS) from Hurricane Katrina remain shut down – 879,000 barrels per day		<b>879,000</b>	Total including Katrina – 3,031,700

Sources: Confirmed by company or on company web site. Various trade press sources.

- Several pipelines shut down their systems as a result of Hurricane Rita. Shown below is a status of the pipelines as of September 30.

**Pipelines/Ports**

Company	Locations	Status
<b>CRUDE PIPELINES</b>		
Seaway Crude Pipeline	4 lines from Texas Gulf to Cushing, OK	Operating
Capline	St. James, LA, to Patoka, IL	Operating at 80 percent of capacity
Sun Pipeline	Nederland, TX, terminal	Nederland terminal not operating due to lack of commercial power, generators secured for auxiliary power
<b>PRODUCT PIPELINES</b>		
Explorer	LA to OH	Operational from Pasadena/Houston, TX, facilities to Chicago. IL. The company's origin facilities at Lake Charles, La., and at Port Arthur, TX, are not yet resumed operations.
Colonial	Houston, TX	Operating at 66 percent of capacity
Longhorn	Houston west to NM/AZ Galena Park terminal (Houston)	Shut down
Centennial System	Beaumont, TX, to Creal Springs, IL.	Shut down – no commercial power. Generators secured for possible restart
Magellan Pipeline	TX/OK	Operational but supply constrained.
TEPPCO	Beaumont, TX to NY	Operating at 45 percent capacity
<b>PORTS</b>		
Louisiana Offshore Oil Port (LOOP)	LA	Operating
Port of Houston	Houston, TX	Open
Port of Freeport	Freeport, TX	Open
Port Arthur	Port Arthur, TX	Maximum 31 ft draft – daylight only. 24 hours for light tugs and shallow draft.
Port of Corpus Christi	Corpus Christi, TX	Open
Mississippi River		Open

Sources: Confirmed by company, company web site, or trade associations. Various trade press source

- The U.S. Coast Guard reports that vessels are restricted to drafts of 31 feet or less and daylight transit only on the Sabine/Neches Waterway and the Neches river (unless they are shallow draft tows or tugs which are unrestricted). Restrictions on the Calcasieu River are stricter with vessel limits 25 feet draft or less and all vessels including tows and tugs limited to daylight transit only.

- The USCG Captain of the Port of Morgan City reports that all waterways within the MSU Morgan City zone are open with the exception of the Houma Navigational Canal north of the Houma Navigation Bridge.

- Shown below is a list of natural gas pipelines impacted by Hurricane Rita.

On-Shore and Off-Shore Pipelines with Reported Supply Issues	Status
ANR	Many of ANR's facilities have been inspected and approved for flow. A few are still unavailable such as portions of the 20 inch Green Canyon line and the 24 inch line from Vermillion. Still on Force Majeure.
BP/Enbridge Destin pipeline	OK, Force Majeure ended Sept 27
Chevron	Western LA facilities shut-in
Columbia Gulf Transmission	Force Majeure, effective immediately for meters upstream of and including the Egan Measurement Stations due to high water at and around the Pecan Island Compressor and Separation Station resulting from Hurricane Rita. CGT requires all operators and producers located upstream of this facility to keep physical flow and scheduled volumes at zero until further notice.
Comstock Offshore	Shut-in since Sept 20
Duke Energy Field Services including CIPCO, Seabreeze and Black Lake	CIPCO has minor damage and Black Lake remains shut-in due to lack of supplies; note that most of company's natural gas assets are in Oklahoma and West TX and are not adversely affected.
Duke Energy Gas Transmission	The Texas Eastern pipeline is in balance and holding pressure. Most compressor stations and storage facilities affected by Rita are back on-line. The Gulfstream natural gas system is operational.
Enbridge Inc.'s Offshore System, which includes Garden Banks, Manta Ray, Nautilus, Stingray, and MS Canyon	No nominations until further notice; Stingray has flooding and wind damage to onshore facilities; Sea Robin delivery point damaged.
Enterprise Product Partners GulfTerra Texas Pipeline	Shut-in after completion of Schedule Day Cycle 1, September 23, 2005 (Flow Day beginning September 24, 2005) until further notice.
Gulf South – Lake Charles	May be required to schedule only primary firm capacity and implement scheduling reductions for Oct 1.
Gulf South – High Island Offshore System	HIOS hereby provides notice of a Force Majeure event on its system. Due to severe weather conditions and mandatory operations evacuations associated with Hurricane Rita, HIOS will NOT accept any nominations until further notice.
Kinder Morgan	Force Majeure continues on Border, Texas, North Texas, and Tejas pipelines and portions of Natural Gas Pipeline Company of America lines.



## ELECTRICITY INFORMATION

### **STATE OUTAGE DATA**

<b>Utility</b>	<b>Customers w/o Power</b>	<b>% Customers w/o Power</b>
Louisiana	341,334	16.5%
Texas	316,044	3%

- Louisiana data is reported by the Louisiana Public Service Commission as of 9/30 9:00 AM and their percentage outage numbers are used in calculating the percentage of total outage. Entergy reports that over 150,000 customers in New Orleans included above are unable to receive power. Texas data is from the TX JFO/EOC 9/29 6:00 PM.

- Entergy reports that Hurricane Rita caused more damage than Hurricane Katrina to its transmission and distribution systems, and power plants. Entergy plans to complete the assessment of the transmission system on 9/30. Currently, there are 247 transmission lines and 244 substations out of service.

## STATE REPORTS

### Texas

- In Texas there are currently 316,044 customers without power. Of these, 221,684 are in the Entergy service area. In addition, NRECA reports more than 90,000 electric cooperative customers without power primarily Sam Houston in Livingston; Jasper-Newton in Kirbyville; and Deep East Texas in St. Augustine.

### **Texas Outage Data by Counties with Significant Outages**

<b>COUNTY</b>	<b>OUTAGES</b>	<b>% customers w/o power</b>
Angelina	6,700	8%
Chambers	6,560	23%
Galveston	6,939	3%
Hardin	21,466	43%
Harris	6,301	<1%
Jefferson	111,346	45%
Liberty	29,629	39%
Montgomery	17,409	5%
Nacogdoches	2,425	4%
Newton	1,848	13%
Orange	38,218	45%
Polk	19,805	45%
Sabine	6,969	70%
San Augustine	3,486	39%
San Jacinto	8,168	35%
Shelby	1,925	8%
Trinity	3,058	22%

<b>Tyler</b>	11,571	54%
<b>Walker</b>	2,533	4%

-Percent customers w/o power calculated using county population estimates for 2004 from Texas State Data Center and Office of the State Demographer. Numbers in this Table are based upon 9/29 6PM.

- Entergy reports that cooler temperatures on 9/29 resulted in decreased demand, and no rolling outages have occurred north of Houston thus far. However, if demand increases customers north of Houston could again experience rolling outages until late in the evening when demand for electricity reduces.
- TXU Electric Delivery has released contract transmission lineman for restoration efforts on Entergy's system. In addition TXU is working on a request for logistics support with tents, bedding, and portable showers.
- TXU Electric Delivery has less than 6,900 customers without power and reports that it has restored service to over 90% of the customers in Commerce, Paris, Lufkin, Nachogdoches, Huntington, Diboll, Chireno, Chushing, Hudson, Wells, Burke, Zavalla, Jacksonville, Crockett, Palestine, Rusk, Tyler, Buffalo, Grapeland, Whitehouse, Teaselville, Dallas and DFW metroplex suburbs. TXU Electric Delivery restoration is completed in Anderson, Houston, Leon, and Smith counties and the Dallas Metro, Paris/Commerce, Jacksonville/Palestine/Tyler, and Cushing areas and operations are normal.

## Louisiana

- In Louisiana, 341,344 customers remain without power, as reported by the Louisiana Public Service Commission (LAPSC) (9:00 AM, 9/30/05). Of the total outage number 192,314 are due to Hurricane Katrina and 149,020 are due to Hurricane Rita.

### **Louisiana Outage Data by Utilities with Significant Outages (9:00 AM 9/30/05)**

<b>UTILITY</b>	<b>OUTAGES</b>
<b>Entergy Gulf States</b>	83,646
<b>Entergy Louisiana</b>	41,053
<b>Entergy New Orleans</b>	150,824
<b>CLECO</b>	17,494
<b>Beauregard</b>	27,989
<b>SLEMCO</b>	1,867
<b>Jefferson Davis</b>	10,459
<b>SLECA</b>	857
<b>Wash-St. Tammany</b>	1,790
<b>Valley</b>	4,320
<b>Total for state shown includes companies with low outages not include in the Table</b>	<b>341,334</b>



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<sup>1</sup> Situation Report series for Hurricanes Katrina and Rita have been combined into the Gulf Coast Hurricanes Situation Report series.