

**OFFICE OF ELECTRICITY DELIVERY AND ENERGY RELIABILITY (OE)**  
**U.S. DEPARTMENT OF ENERGY**  
**Gulf Coast Hurricanes<sup>1</sup> Situation Report #11**  
**October 6, 2005 (3:00 PM EDT)**

**HIGHLIGHTS**

- Currently, 330,636 customers are without electric power in Texas and Louisiana.
- Entergy reports on 10/5 that electricity service to the ten refineries affected by hurricanes Katrina and Rita and served by Entergy in the Beaumont/Port Arthur, Lake Charles, and New Orleans areas is continuing and that refineries now have at least a single source feed for clean-up power and six have full operational capacity.
- Entergy reports that 39% of customers have gas service available (a total of 56,810 customers have had gas restored). The restored customers are Central Business District (100%), Central City (35%), Garden District (61%), French Quarter (95%), Upper 9<sup>th</sup> Ward (9%), Lower 9<sup>th</sup> Ward (0%), Audubon (60%), City Park (8%), Gentilly (45%), Lakeview (24%), Mid City (12%), Downtown (12%), New Orleans East (0%), Warehouse District (93%), and Algiers (100%).
- Full commercial power has been restored at the Trunkline LNG facility at Lake Charles. The terminal is now operating at normal levels with full re-gasification and send-out capability. An LNG tank ship completed a cargo transfer yesterday evening. The next shipment is scheduled for a Friday arrival.
- Henry Hub has resumed limited operation without compressors. Limited interconnects are working at this time.
- On 10/4 the US Environmental Protection Agency (EPA) extended the waiver allowing high sulfur (dyed) diesel fuel to be used on highways until October 25, 2005, in the following States: Alabama, Arkansas, Georgia, Florida, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Tennessee, Texas, and Virginia. The previous waivers issued on September 13 and September 30 expired yesterday.
- On 09/30, 26 natural gas processing plants, with capacities equal to or greater than 100 million cubic feet per day in Texas, Louisiana, and Mississippi, were not active; now there are 20. Nine of these 21 plants with a total capacity of 5.4 billion cubic feet per day are not active owing to external factors, including lack of electric power or gas supplies. Eleven of the 21 plants are inactive because of damage to the facilities themselves. These plants have capacity of 7.7 billion cubic feet per day.
- 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

for several weeks. Three staff are in Austin, TX, and additional staff are on the way to Louisiana for the New Orleans and Lake Charles JFOs. As requested, beginning 10/4 DOE ESF-12 will have representatives at the Texas EOC from 8:00 a.m. to 5:00 p.m., rather than 7:00 a.m. to 8:00 p.m.

**OIL AND GAS INFORMATION**

- According to MMS, 1,202,364 barrels of oil per day were shut-in which equates to 80.16 percent of the normal daily oil production in the Gulf. Shut-in gas production was 6.628 billion cubic feet per day. This shut-in gas production is equivalent to 66.28 percent of the normal daily gas production in the Gulf. Evacuations are equivalent to 35.29 percent of 819 manned platforms and 4.47 percent of 134 rigs currently operating in the Gulf. For further information see MMS web site at [www.mms.gov](http://www.mms.gov). MMS reports 65 destroyed platforms and 32 damaged platforms in the Gulf of Mexico (GOM).

**Damage to GOM Oil & Gas Infrastructure**

**Ivan vs. Katrina vs. Rita**

	Rita	Katrina	Ivan
Platforms Destroyed	65	46	7
Platforms Extensive Damage	32	20	20
Rigs Adrift	13	6	5
Rigs Extensive Damage	10	9	4
Rigs Destroyed	1	4	1
Rigs Unaccounted For	3	0	0
Number of Pipelines Damaged	23	21	102
Shut-in Production High	26-Sep	30-Aug	16-Sep
Gas (BCF)	8.623	9.418	6.515
Oil (bbls)	1,564,679	1,557,981	1,410,002
Cumulative (To Date)	<i>Combined with Rita</i>	<b>8/26/05 - 10/06/05</b>	9/13/04 - 02/14/05
Gas (BCF)	<i>Combined with Rita</i>	<b>240.074</b>	172.259
Oil (bbls)	<i>Combined with Rita</i>	<b>48,959,351</b>	43,841,245
Evacuation Highs			
Platforms	754	660	575
Rigs	107	89	
Platforms in the Path	1600	1300	150

Source: US MMS October 6, 2005

- Shell reports it currently has 55,000 barrels per day of crude coming in from its western Gulf pipeline systems. In the eastern Gulf, Shell is testing its Delta 20" line and anticipates placing it back into service this week. Shell expects the Delta 20" to start

flowing at 100,000 barrels per day and ramping up towards 300,000 barrels per day near the end of the month, pending the outcome of additional tests.

- The following tables highlight the current shut downs by major energy facilities in the path of Hurricane Rita as of October 6:

### OIL OPERATIONS IN THE PATH OF HURRICANE RITA

#### Refineries

Company	Location	Capacity (B/D)	Status
<b>PORT ARTHUR/ LAKE CHARLES</b>			
Citgo	Lake Charles, LA	324,300	Shut down; minor damaged reported- <b>power restored.</b>
ConocoPhillips	West Lake, LA	239,400	Shut down – wind damage; power restored. Estimated restart in mid-October
Calcasieu	Lake Charles, LA	30,000	Shut down; <b>power restored.</b>
ExxonMobil	Beaumont, TX	348,500	Shut down – <b>power restored.</b>
Shell (Motiva)	Port Arthur, TX	285,000	Shut down; wind damage, flooding, partial <b>power restored as of October 5.</b>
Total	Port Arthur, TX	233,500	Shut down – <b>partial power restored</b>
Valero (Premcor)	Port Arthur, TX	255,000	Shut down; "significant damage" to two cooling towers and a flare stack; <b>partial power restored.</b>
Total		1,715,700	Shutdown – 1,715,700
<b>HOUSTON/TEXAS CITY</b>			
Shell Deer Park	Deer Park, TX	333,700	Operating at reduced rates
Lydonell Citgo	Houston, TX	270,200	Operating at reduced rates
Astra Oil (Crown Central)	Pasadena, TX	100,000	Operating at full rate
Valero	Houston, TX	83,000	<b>Reduced rates , Fluid Cat Cracker down</b>
ExxonMobil	Baytown, TX	557,000	Operating at normal rates
BP	Texas City, TX	437,000	Shut down
Valero	Texas City, TX	209,950	Operating at reduced rates
Marathon	Texas City, TX	72,000	Operating at full rate
ConocoPhillips	Sweeny, TX	229,000	Operating at full rate
Total		2,291,850	Shut down – <b>437,000</b>
<b>TOTAL OF ALL AREAS including Corpus Christi</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  Chevron Pascagoula, MS – <b>power restored, estimate normal production by late October.</b>  Exxon Mobil Chalmette – <b>partial power</b>

Company	Location	Capacity (B/D)	Status
			ConocoPhillips Belle Chasse – partial power Murphy Oil Meraux – partial power

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

- Valero reports its Krotz Springs, LA, and Ardmore, OK, refineries are currently at reduced rates due to crude availability and pipeline issues.
- Chevron Corporation announced Wednesday that it has successfully and safely initiated the startup procedures for its Pascagoula, MS, refinery which was shut down prior to Hurricane Katrina. The refinery could return to normal operations by the end of the month, ahead of previous estimates. Hurricane Katrina damaged the refinery's marine terminal, cooling towers and other equipment. It did not suffer significant flooding because of a perimeter dike installed after Hurricane Georges in 1998.
- Approximately 90 percent of Chevron's retail gasoline stations in Texas and Louisiana are open and selling fuel.
- Several pipelines shut down their systems as a result of Hurricane Rita. Shown below is a status of the pipelines as of October 6.

#### Pipelines/Ports

Company	Locations	Status
<b>CRUDE PIPELINES</b>		
Capline	St. James, LA, to Patoka, IL	Operating at 80% of capacity
Sun Pipeline	Nederland, TX, terminal	Nederland terminal resumed limited operations, opening its 20" (ExxonMobil) line on October 1. All lines are expected to re-open soon. Three docks are ready to receive vessels. Repairs to the other four docks are expected to be completed by Saturday, October 8.
<b>PRODUCT PIPELINES</b>		
Explorer	LA to OH	Operating at full capacity out of Houston/Pasadena which is 2/3 of the company's normal volumes. Not operating out of origin facilities in Lake Charles and Port Arthur.
Colonial	Houston, TX	Operational; 100 % gasoline, 80 % distillate
Magellan Pipeline	TX/OK	Operational but supply constrained.
TEPPCO	Beaumont, TX to NY	Operating at 65% capacity on 20" line; 14 and 16" line at 75%. No commercial power at Beaumont.
<b>PORTS</b>		

Company	Locations	Status
Port Arthur	Port Arthur, TX	Maximum 38 ft draft – daylight only.

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

- The Sabine-Neches waterway is now open to a maximum of 38 ft draft – daylight hours only.
- Shown below is a list of natural gas pipelines impacted by Hurricane Rita as of October 5.

On-Shore and Off-Shore Pipelines with Reported Supply Issues	Status
ANR	Many of ANR’s facilities have been inspected and approved for flow. The 24" Line from Vermilion 397 to EI 188, including connecting laterals remains unavailable for service due to sustained damage. As of October 4, ANR is accepting nominations at its Garden Banks interconnect.
Chevron	Western LA facilities shut-in
Columbia Gulf Transmission	Force Majeure, effective immediately for meters upstream of and including the Egan Measurement Stations.
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.
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.
Enbridge Inc.’s Offshore System, which includes Garden Banks, Manta Ray, Nautilus, Stingray, and MS Canyon	MS Canyon, Manta Ray, Sting Ray, and UTOS pipelines are still out of service. Garden Banks is operational and is able to supply ANR and Transco. <b>Nautilus has lifted Force Majeure and is accepting nominations for gas as of Oct 6.</b>
Enterprise Product Partners GulfTerra Texas Pipeline	Shut-in September 23, 2005.
Gulf South – Lake Charles	May be required to schedule only primary firm capacity and implement scheduling reductions for Oct 4.
Gulf South – High Island Offshore System	HIOS declared Force Majeure and will not accept nominations until further notice.
Kinder Morgan	Force Majeure continues on portions of Natural Gas Pipeline Company of America lines. Force Majeure lifted on Border, Texas, North Texas, and Tejas lines.
Sabine	<b>Due to the temporary unavailability of compression at Henry Hub, Sabine is accepting nominations for receipts and deliveries only to the extent that volumes can be received and delivered without the need for compression.</b>
Southern Union’s (Panhandle Energy) Trunkline and Sea Robin	Trunkline’s Terrebonne System started accepting nominations for gas on Sept 27. <b>Only four receipt and delivery points total are unavailable due to damage, but 10 additional offshore receipts points are unavailable</b>

On-Shore and Off-Shore Pipelines with Reported Supply Issues	Status
	<p>due to producer related operational issues. Due to damage to offshore systems, Trunkline will prohibit nominations for flow on the entire Vermilion system.</p> <p>Florida Gas Transmission is limiting receipts at three interconnections due to quality of gas issues.</p> <p>Sea Robin has damage at its delivery point; it is not accepting nominations.</p>
Tennessee Gas  Williams	<p>Tennessee reported on many of its damage assessments on Oct 5 and there are a significant number of facilities damaged and leaking. Facilities continue to be repaired and lines re-configured to allow for the maximum flow of gas throughout the useable system. There are still several points that remain shut in due to Force Majeure.</p> <p>Most Williams' facilities have returned to service. As of October 4, Transco is accepting nominations at its Garden Banks interconnect. The only report of significant damage so far is at the company's Cameron Meadows natural gas processing plant near Johnson Bayou, LA.</p>

(Sources: Company web sites, DOT, and Trade associations)

## **ELECTRICITY INFORMATION**

### **STATE OUTAGE DATA**

Utility	Customers w/o Power	% Customers w/o Power
Louisiana	205,876	10.0%
Texas	124,760	1.6%

- Louisiana data is reported by the Louisiana Public Service Commission as of 10/5 10:00 PM and their percentage outage numbers are used in calculating the percentage of total outage. Texas data is from the TX JFO/EOC 10/5 5:00 PM.

- Entergy reports that it has returned 228 transmission lines and 347 substations to service since Rita's landfall, leaving 115 transmission lines and 89 substations still out as of 9:30 PM 10/5.
- Entergy reported that on 10/5 it had returned another generation unit to the grid, Sabine 3. Seven of the 14 generation units in the area severely impacted by Rita are now online. Lewis Creek (1 and 2), Nelson (1, 2 and 3) and Sabine (3 and 5). Five units (three at Sabine, two at Nelson) require repair of storm damage.
- Entergy is reporting some mutual assistance crews and contractors may be pulled back in preparation for potential outages by Tropical Storm Tammy and an area of disturbed weather that may head toward Florida. Entergy is working to secure additional resources to replace those that may leave this restoration effort.

## **STATE REPORTS**

### **Texas**

- In Texas there are currently 124,760 customers without power. Of these, 89,461 are in the Entergy service area. In addition, NRECA reports 35,229 electric cooperative customers without power with Sam Houston in Livingston; Jasper-Newton in Kirbyville; and Deep East Texas in St. Augustine.
- Three counties report 100 percent of customers without electricity: Newton, Orange and Tyler. Hardin, Jasper, Jefferson, and Sabine counties report over 71% of customers currently without service. Currently, 89% of outages are in five counties: Hardin, Jasper, Jefferson, Orange, and Tyler.

### **Louisiana**

- In Louisiana, 205,876 customers remain without power, as reported by the Louisiana Public Service Commission (LAPSC) (10:00 PM, 10/5). Of the total outage number 158,176 are due to Hurricane Katrina and 47,700 are due to Hurricane Rita.
- Three parishes remain devastated by the Hurricanes: Orleans where 59% of customers remain without electricity, Plaquemines where 68% are still without power, and St. Bernard where no electricity customers have power.

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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.