

**OFFICE OF ELECTRICITY DELIVERY AND ENERGY RELIABILITY (OE)**  
**U.S. DEPARTMENT OF ENERGY**  
**Gulf Coast Hurricanes<sup>1</sup> Situation Report #12**  
**October 7, 2005 (5:00 PM EDT)**

**HIGHLIGHTS**

- Currently, 319,196 customers are without electric power in Texas and Louisiana.
- Entergy hopes to complete restoration to those Louisiana customers who can take service in the New Orleans area by the end of this weekend.
- As of October 6, there are 20 natural gas processing plants, with capacities equal to or greater than 100 million cubic feet per day, in Texas, Louisiana, and Mississippi that are not active. A number of the inactive plants are expected to be operating within 4 weeks. These plants have capacity of 2.86 Bcf/d and pre-hurricane flow of 1.61 Bcf/d. Based on company reports covering 96 percent of capacity, the reported pre-hurricane flow volumes indicate that the average utilization of these plants was roughly 48 percent. Based on pre-hurricane flow volumes and capacity data for companies who did not report flow volumes, the largest flow volume associated with the inactive gas processing plants would be 6.66 Bcf/d.
- Yesterday EPA extended the reformulated gasoline (RFG) waiver for the St. Louis, MO, area until Oct 27. The Internal Revenue Service also extended the penalty relief period during which dyed diesel fuel can be sold for use or used on the highway. The penalty relief will apply throughout the United States and is effective until October 25.
- Entergy reports 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.
- 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.
- 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.
- 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 in Austin, TX.

**OIL AND GAS INFORMATION**

- According to MMS, 1,162,913 barrels of oil per day were shut-in which equates to 77.53 percent of the normal daily oil production in the Gulf. Shut-in gas production was 6.441 billion cubic feet per day. This shut-in gas production is equivalent to 64.41 percent of the normal daily gas production in the Gulf. Evacuations are equivalent to 33.46 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 - 10/07/05</b>	9/13/04 - 02/14/05
Gas (BCF)	<i>Combined with Rita</i>	<b>246.515</b>	172.259
Oil (bbls)	<i>Combined with Rita</i>	<b>50,105,764</b>	43,841,245
Evacuation Highs			
Platforms	754	660	575
Rigs	107	89	
Platforms in the Path	1600	1300	150

Source: US MMS October 7, 2005

- The following tables highlight the current shut downs by major energy facilities in the path of Hurricane Rita as of October 7:

**OIL OPERATIONS IN THE PATH OF HURRICANE RITA**

**Refineries**

Company	Location	Capacity (B/D)	Status
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Company	Location	Capacity (B/D)	Status
<b>PORT ARTHUR/ LAKE CHARLES</b>			
Citgo	Lake Charles, LA	324,300	Power restored – restarting
ConocoPhillips	West Lake, LA	239,400	Power restored - restarting
Calcasieu	Lake Charles, LA	30,000	Operating at full rate
ExxonMobil	Beaumont, TX	348,500	Shut down – power restored
Shell (Motiva)	Port Arthur, TX	285,000	Shut down; partial power restored, repairs in-progress
Total	Port Arthur, TX	233,500	Shut down – partial power restored;
Valero (Premcor)	Port Arthur, TX	255,000	Shut down; "significant damage" to two cooling towers and a flare stack; partial power restored
Total		1,715,700	Shutdown – 1,122,000
<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	Reduced rates; fluid Cat Cracker down
ExxonMobil	Baytown, TX	557,000	Operating at full rate
BP	Texas City, TX	437,000	Shut down
Valero	Texas City, TX	209,950	Operating at full rate
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 – 437,000
<b>TOTAL OF ALL AREAS including Corpus Christi</b>		<b>4,713,676</b>	Total Shutdown – 1,559,000
Three refineries (all in LA) from Hurricane Katrina remain shut down – 554,000 barrels per day		<b>554,000</b>	Total including Katrina – 2,113,000 Chevron Pascagoula, MS – restarted October 6; estimate normal production by late October. Exxon Mobil Chalmette – partial power 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 now back to normal and are operating at full rates due to availability of crude oil.
- 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**

<b>Company</b>	<b>Locations</b>	<b>Status</b>
<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>		
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 7.

<b>On-Shore and Off-Shore Pipelines with Reported Supply Issues</b>	<b>Status</b>
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

On-Shore and Off-Shore Pipelines with Reported Supply Issues	Status
	unavailable for service due to sustained damage. Portions of the following off-shore pipelines have returned to service: 30” Eugene Island, 24” Ship Shoal, 24” Loop, and 20” South Marsh Island.
Chevron	Western LA facilities shut-in
Columbia Gulf Transmission	Force Majeure, effective immediately for meters upstream of and including the Egan Measurement Stations. Repair to Pecan Island facility is a prerequisite to flow of any gas in the offshore system.
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. Nautilus has lifted Force Majeure and is accepting nominations for gas as of Oct 6.
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 lifted on Natural Gas Pipeline Company of America lines on Oct 7. Force Majeure previously lifted on Border, Texas, North Texas, and Tejas lines.
Sabine	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. Force Majeure lifted for six more interconnects.
Southern Union’s (Panhandle Energy) Trunkline and Sea Robin	Trunkline's Terrebonne System started accepting nominations for gas on Sept 27. Only four receipt and delivery points total are unavailable due to damage, but 10 additional offshore receipts points are unavailable due to producer related operational issues. Due to damage to offshore systems, Trunkline will prohibit nominations for flow on the entire Vermilion system.  Florida Gas Transmission is limiting receipts at three interconnections due to quality of gas issues.  Sea Robin has damage at its delivery point; it is not accepting nominations.

<b>On-Shore and Off-Shore Pipelines with Reported Supply Issues</b>	<b>Status</b>
Tennessee Gas	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.
Williams	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.

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

## **ELECTRICITY INFORMATION**

### **STATE OUTAGE DATA**

<b>Utility</b>	<b>Customers w/o Power</b>	<b>% Customers w/o Power</b>
Louisiana	194,436	9.4%
Texas	124,760	1.4%

- Louisiana data is reported by the Louisiana Public Service Commission as of 10/7 10:00 AM and their percentage outage numbers are used in calculating the percentage of total outage. Texas data is from the TX JFO/EOC 10/6 12:00 PM.

- Entergy's transmission system continues to have considerable damage requiring repair. The company reported that there are approximately 105 transmission lines and 63 substations out of service. Hurricane Rita at its peak took out of service 82 percent of Entergy's Texas transmission lines and 38 percent of the transmission lines in southwest Louisiana, including all of the lines west of Lafayette. Approximately 3,803 miles of line were taken out. At peak, Hurricane Rita took 343 transmission lines and 436 substations out of service.
- Entergy owns and/or operates 14 fossil units in the affected area (of Hurricane Rita). Of those 14, nine are operational (both units at Lewis Creek, both units at Toledo Bend, three units at Nelson and two units at Sabine) and five are currently not operational. The five unavailable units are awaiting storm damage repairs (three at Sabine, two at Nelson).

## **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.

- Two counties report 100 percent of customers without electricity: Newton and Tyler. Hardin, Jasper, and Orange counties report over 71% of customers currently without service. Currently, 80% of outages are in four counties: Hardin, Jasper, Jefferson, and Orange.
- Entergy reports that it has sufficient generation on-line to support current southeast Texas and southwest Louisiana requirements. Peak load in SE-TX/SW-LA on 10/5 was 2,859 MW, 72% of 2004 norm.

## **Louisiana**

- In Louisiana, 194,436 customers remain without power, as reported by the Louisiana Public Service Commission (LAPSC) (10:00 AM, 10/7). Of the total outage number 154,693 are due to Hurricane Katrina and 39,743 are due to Hurricane Rita.
- Entergy's Nelson 6 generation unit has been repaired and will begin start-up on 10/7. The company reports that sufficient generation is on-line and in-reserve to support current southeast Louisiana requirements and return of additional load as restoration progresses. Peak load in southeast Louisiana on 10/5 was 4,155 MW, 84% of 2004 norm.

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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.