



U.S. Department of Energy  
Emergency Support Function 12

Hurricane Gustav Situation Report # 9

September 5, 2008 (3:00 PM EDT)

[http://www.oe.netl.doe.gov/emergency\\_sit\\_rpt.aspx](http://www.oe.netl.doe.gov/emergency_sit_rpt.aspx)

Summary

Electricity		
Impacted State	Electric Customer Outages	% of State Out
Arkansas	22,676	2%
Louisiana	654,104	30%
Mississippi	10,941	1%
<b>TOTAL:</b>	<b>687,721</b>	
Petroleum & Natural Gas		
	Amount	% Capacity Out*
Crude Oil Production Shut-In (b/d)	1,176,738	90.5%
Natural Gas Production Shut-in (mmcf/d)	5,907	79.8%
Refinery Capacity Shut down (b/d)	922,003	NA

Total state customers are based on 2006 EIA Customer Data.

Note: due to a large number of service providers, including investor owned utilities and cooperatives, the number of customer outages reported may not be comprehensive.

Source:

Crude Oil and Natural Gas Production Data from Minerals Management Service.

Refinery Status confirmed by company or on company web site and through various trade press sources.

\* % capacity out represents percent of production capacity in the Gulf of Mexico.

Highlights:

- In the States of Arkansas, Louisiana and Mississippi, as of approximately 2:00 PM EDT September 5, there are 687,721 customers reported without power, including 654,104 in Louisiana, 10,941 in Mississippi, and 22,676 in Arkansas. This represents a decrease of 52,712 customers without power from Situation Report #8 when 740,433 customer outages were reported. Since that report, power has been restored to about 31,650 customers in Louisiana, about 3,140 customers in Arkansas, and about 17,900 customers in Mississippi.
- As of 12:30 PM EDT September 5, Entergy has restored power to more than 450,000 customers in Louisiana, Mississippi, and Arkansas who lost power due to Hurricane Gustav. See the **Restoration Updates** section below for specific restoration status.
- On September 4, Federal Energy Regulatory Commission (FERC) granted Entergy a waiver of the one-month minimum term for unit power sales and resales between the Entergy operating companies to permit the affected Entergy operating companies to enter into transactions for periods shorter than one month. FERC also is allowing Entergy’s operating companies to enter



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into transactions that include capacity from the Grand Gulf nuclear power plant without advance FERC approval. These waivers will be in effect only where an Entergy operating company has experienced a significant loss of load as a result of the hurricane, and only until the emergency conditions from the hurricane have subsided.

- As of 10:00 AM EDT September 5, the LOOP reported that it has resumed tanker offloading and made its first pipeline delivery.
- Shell reports that it is moving crude oil through the Capline from Liberty, MS to the pipeline's termination point in Patoka, IL. Shell expects to restart the remaining parts of its pipeline in Louisiana over the weekend using a combination of portable generators and local utility power as it comes online.
- As of 4:00 PM EDT, September 4, the Sabine Pipeline reports the Port Neches compressor stations is down which is impacting 3 points along the mainline system. Available compression at the Henry Hub remains limited as temporary generators maintain operations. Sabine Pipeline's force majeure remains in effect for those points along the mainline.
- As of 5:00 AM EDT, September 5, Entergy's Waterford 3 and River Bend nuclear power plants remain shut down. **The Federal Emergency Management Agency and the Nuclear Regulatory Commission completed inspections at Waterford 3 Nuclear Plant and found no issues that would prohibit startup. Start-up inspections at the River Bend Station may be completed today, September 5.**
- **As of 100 PM EDT September 5**, the Gulf Intracoastal Waterway is open from the Louisiana/Mississippi border (mile marker 40) east to St. Marks, FL. It is still closed at alternate route Baptiste Collette Mississippi River Gulf Outlet. The Mississippi River is open, with drafts restricted to 42 feet on the lower Mississippi. **The Houma Navigational Canal is now open.** The Morgan City: Port Allen alternate route is open; but effectively closed at the Bayou-Sorrel Pontoon Bridge. **Mobile Harbor, AL is now open with no restrictions.**

## ESF 12 Actions:

- ESF-12 personnel are staffing the FEMA Region VI Regional Response Coordination Center (RRCC) in Denton, TX, FEMA Region VI Joint Field Office (JFO) in Baton Rouge, LA, the FEMA Region IV RRCC in Atlanta, GA, the FEMA Region III RRCC in Philadelphia, PA and the National Response Coordination Center (NRCC) in Washington, DC.



## Situation Report Detail

### Petroleum & Gas Information

Oil & Gas Offshore Production Shut In Status for Affected Area			
Location	Amount Shut In	Pre-event Production	% Shut In
Crude Oil (B/D)	1,176,738	1,300,000	90.5%
Natural Gas (MMCF/D)	5,907	7,400	79.8%

Source: Minerals Management Service

- As of 12:30 PM EDT, September 5, the Minerals Management Service (MMS) reports 5,907 million cubic feet per day (MMcf) of the Gulf’s natural gas production remains shut-in, equivalent to 79.8 percent of the Gulf production. MMS reports 1,176,738 barrels/day of the Gulf’s crude production remains shut-in, equivalent to 90.5 percent of the Gulf’s crude production. A total of 334 production platforms, or 46.6 percent of the Gulf’s 717 manned platforms, have been evacuated. Personnel from 34 rigs, representing 28.1 percent of those operating in the region, had been removed.
- As of September 5, six refineries are still shut down in the Gulf Coast. (See table below). Five refineries have begun restart procedures: Chalmette, ConocoPhillips Westlake, ExxonMobil Baton Rouge, Marathon Garyville, and Motiva Norco.
- Plantation has received generators and expects to increase flows on the line. Colonial pipeline is operating on reduced flows. In addition, Centennial pipeline is working to restart its operations.
- As of 6:00 PM EDT September 4, the Strategic Petroleum Reserve (SPR) reports that the status of its facilities has not changed. The Bryan Mound, TX, Big Hill, TX, and West Hackberry, LA facilities are operational. Its facility in Bayou Choctaw, LA, remains shut down due to lack of commercial power.
- As of 1:30 PM EDT, September 5, there are five natural gas pipelines that report all points along their system remain shut-in: Garden Banks Gas Pipeline, Manta Ray Offshore Gathering, Mississippi Canyon Pipeline, Nautilus Pipeline Co., and Venice Gathering System. Those pipelines that are flowing at reduced rates or have portions of their system shut-in continue to conduct inspections at their facilities. As of 11:00 AM EDT, September 5, Discovery Gas Transmission reported that their system will begin to accept gas flow today, but some points will remain shut-in.



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Refineries in the Path of Gustav						
Refinery Impacted	Location	Capacity (B/D)				
		Operating	Shut Down	Restarting	Reduced Runs	Back to Normal
Shell	Saraland, AL	86,000				
Calcasieu	Lake Charles, LA	78,000				78,000
Chalmette Refining	Chalmette, LA	192,760		192,760		
Citgo	Lake Charles, LA	429,500			429,500	
ConocoPhillips	Belle Chasse, LA	247,000	247,000			
ConocoPhillips	Westlake, LA	239,400		239,400		
ExxonMobil	Baton Rouge, LA	503,000		503,000		
Marathon	Garyville, LA	256,000		256,000		
Motiva	Convent, LA	235,000	235,000			
Motiva	Norco, LA	236,400		236,400		
Murphy Oil	Meraux, LA	120,000	120,000			
Placid Refining	Port Allen, LA	56,000		56,000		
Shell	Saint Rose, LA	55,000	55,000			
Alon (Formerly Valero)	Krotz Springs, LA	80,000	80,000			
Valero	Norco, LA	185,003	185,003			
Chevron	Pascagoula, MS	330,000			330,000	
BP	Texas City, TX	467,720			467,720	
Citgo	Corpus Christi, TX	156,000				
ConocoPhillips	Sweeny, TX	247,000				
Deer Park	Deer Park, TX	329,800				
ExxonMobil	Baytown, TX	567,000				567,000
ExxonMobil	Beaumont, TX	348,500				348,500
Flint Hills Resources	Corpus Christi, TX	288,126				
Houston Refining	Houston, TX	270,600				
Marathon	Texas City, TX	76,000				
Motiva	Port Arthur, TX	285,000			285,000	
Pasadena Refining	Pasadena, TX	100,000			100,000	
Total Petrochemicals	Port Arthur, TX	232,000		232,000		
Valero (formerly Premcor)	Port Arthur, TX	289,000			289,000	
Valero	Corpus Christi, TX	142,000				
Valero	Houston, TX	83,000				83,000
Valero	Texas City, TX	199,500				199,500
Valero	Three Rivers, TX	93,000				
<b>TOTAL</b>		<b>7,503,309</b>	<b>922,003</b>	<b>1,715,560</b>	<b>1,901,220</b>	<b>1,276,000</b>

**Note:** The table does not include all refineries in the PADD III, Gulf Coast Region.

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

- As of 2:00 PM EDT, September 5, there are 10 confirmed natural gas processing plants that remain shut down, but are ready to operate once power is restored and/or gas flow from upstream commences service. In addition, there are 14 plants that have resumed operations either at reduced or normal levels. Four plants that are shut down have reported that clean up and restoration efforts are underway. Currently, there is no timeline of when these facilities will return to service. See table below



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Natural Gas Processing Plants in the Path of Gustav						
Plant Name	Location	Capacity (million cubic feet per day) <sup>1</sup>				
		Design System Operation	Shut Down	Capable to Restart <sup>2</sup>	Operating at Reduced Level	Back to Normal
Yscloskey	St. Bernard, LA	1,850	1,850			
Calumet	St. Mary, LA	1,680		1,680		
North Terrebonne	Terrebonne, LA	1,350		1,350		
Venice	Plaquemines, LA	1,300	1,300			
Eunice	Acadia, LA	1,200	1,200			
Toca I & II	St. Bernard, LA	1,100		1,100		
Bluewater	Acadia, LA	950			950	
Sea Robin	Vermilion, LA	950		950		
Neptune	St. Mary, LA	650			650	
Larose	Lafourche, LA	600		600		
Pelican	St. Mary, LA	600		600		
Patterson II	St. Mary, LA	600		600		
Cameron Meadows	Cameron, LA	500				500
Iowa Gas	Jefferson Davis, LA	500				500
Grand Chenier II	Cameron, LA	400				400
Sabine Pass	Cameron, LA	300			300	
Stingray	Cameron, LA	300		300		
Lowry	Cameron, LA	265			265	
Barracuda	Cameron, LA	225			225	
Baton Rouge	W. Baton Rouge, LA	225	225			
Plaquemine	Iberville, LA	225		225		
Gillis	Calcasieu, LA	180				180
Dubach Plant	Lincoln, LA	175	NA	NA	NA	NA
Burns Point	St. Mary, LA	160		160		
Mobile Bay (Williams)	Mobile, AL	700			700	
Mobile Bay (Duke)	Mobile, AL	300	300			
Yellowhammer	Mobile, AL	200	NA	NA	NA	NA
Pascagoula	Jackson, MS	1,500			1,500	
Port Arthur	Jefferson, TX	200			200	
Markham	Matagorda, TX	300			300	
West Beaumont	Jefferson, TX	100				100

<sup>1</sup> The capacity in each column represents the design capacity of the plants and does not represent the actual gas flow through these plants.

<sup>2</sup> Those plants that are capable to restart after electricity is restored or when upstream gas flow commences service.

Note: "NA" (Not available or confirmed) identifies those plants that were in the path of Gustav that have not yet been confirmed of their status.

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



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## Electricity Updates: Louisiana:



As of: 9/5/2008 2:00 PM EDT

Electricity Outages: Utility Detail			
Louisiana			
Utility	Outages	Total Utility	% w/o Power
Cleco Power LLC	68,928	265,556	26.0%
Entergy Gulf States, Entergy Louisiana, and Entergy New Orleans (combined)	473,339	1,140,194	41.5%
Southwestern Electric Power	295	174,213	0.2%
All Cooperatives	111,542	413,231	27.0%
All Municipal		156,155	0.0%
<b>TOTAL</b>	<b>654,104</b>	<b>2,149,349</b>	<b>30.4%</b>

Total state and utility customers are based on 2006 EIA Customer Data; Electric Cooperative customer totals provided by Louisiana Public Service Commission.

Note: due to a large number of service providers, including investor owned utilities and cooperatives, the number of customer outages reported may not be comprehensive.

## Mississippi:



As of: 9/5/2008 12:30 PM EDT

Electricity Outages: Utility Detail			
Mississippi			
Utility	Outages	Total Utility	% w/o Power
Entergy Mississippi	2,203	428,036	0.5%
Mississippi Power		181,208	0.0%
Total Cooperative	8,738	695,781	1.3%
Total Municipal Power		128,421	0.0%
<b>TOTAL</b>	<b>10,941</b>	<b>1,433,446</b>	<b>0.8%</b>

Total state and utility customers are based on 2006 EIA Customer Data.

Note: due to a large number of service providers, including investor owned utilities and cooperatives, the number of customer outages reported may not be comprehensive.



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## Arkansas:



As of: 9/5/2008 12:30 PM EDT

Electricity Outages: Utility Detail			
Arkansas			
Utility	Outages	Total Utility	% w/o Power
Entergy Arkansas	22,576	681,298	3.3%
Southwestern Electric Power	100	111,109	0.1%
Empire District Electric		4,289	0.0%
Oklahoma Gas and Electric	0	63,020	0.0%
Total Cooperative		453,001	0.0%
Total Municipal Power		173,243	0.0%
<b>TOTAL</b>	<b>22,676</b>	<b>1,485,960</b>	<b>1.5%</b>

## Restoration Updates:

- Entergy estimates electric power service will be restored to New Orleans customers by Monday night September 8. Electric power restoration estimates for all Entergy customers are shown in the table below.

**Electric Power Restoration Estimates for Entergy Customers**

Estimated date* for 100% restoration	Parishes
September 5	Caldwell, Catahoula, Concordia, Franklin, Grant, LaSalle, Lincoln, Natchitoches, Ouachita, Richland, Tensas
September 6	Avoyelles, Jackson, Sabine, Winn
September 8	Acadia, Lafayette, Orleans, St. Landry, Vermillion
September 9	Jefferson (upper portion, including Metairie and Kenner), Livingston, St. Helena, St. Tammany, Tangipahoa, Washington
September 10	Ascension (except Donaldsonville), St. James, St. John the Baptist
September 12	Pointe Coupee, West Baton Rouge, West Feliciana
September 15	Jefferson (lower portion only), Plaquemines, St. Bernard, St. Charles
September 16	East Feliciana
September 24	Ascension (Donaldsonville only), Assumption, East Baton Rouge, Iberville, St. Martin
October 1	Terrebonne, Lafourche

- Entergy reports large amounts of customer load have been added in the Metropolitan New Orleans area, as transmission and generation constraints are largely eliminated. As of 12:00 PM September 5, damage to the Entergy transmission system includes 136 structures damaged or destroyed requiring replacement, and 120 damaged that may be repairable. A status of transmission damage as of 12:00 PM September 5 is shown on the next table.



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State	Total Lines Affected by Gustav	Lines Restored	Lines Out
Louisiana	216	113	103
Arkansas	13	10	3
Mississippi	11	9	2
<b>Total Lines</b>	<b>240</b>	<b>132</b>	<b>108</b>
	Total Substations Affected by Gustav	Restored	Out
Louisiana	270	171	99
Arkansas	53	53	0
Mississippi	28	28	0
<b>Total Substations</b>	<b>351</b>	<b>252</b>	<b>99</b>

- The Federal Emergency Management Agency and the Nuclear Regulatory Commission completed inspections at Waterford 3 Nuclear Plant and found no issues that would prohibit startup. Start-up inspections at the River Bend Station may be completed today, September 5.
- Entergy is making steady progress in Arkansas and expects to restore power to most customers by September 6.
- Over 14,000 workers are assisting in restoration of the Entergy system. This includes 3,000 Entergy workers and contract employees plus 11,000 from 25 states, the District of Columbia and Canada.
- As of 11:00 AM September 5, SLEMCO has restored power to 75,357 customers. There are 9,901 customers who remained without power. Restoration efforts continue in St. Landry, Avoyelles and Evangeline parishes as well as in Lafayette and Acadia parishes north of I-10 and in St. Martin parish east of LA Highway 31.
- CLECO is continuing to make progress and as of 7:00 AM September 5 has restored power to over 47,000 customers since yesterday.
- SWEPCO has restored power to virtually all of its customers.
- DEMCO continues to repair the damage to infrastructure resulting from Hurricane Gustav and is receiving assistance from 2,000 workers from more than eight states. It has restored power to more than 25,000 customers.