



U.S. Department of Energy
Emergency Support Function 12

Hurricane Ike Situation Report # 15

September 22, 2008 (12:00 PM EDT)

http://www.oe.netl.doe.gov/emergency\_sit\_rpt.aspx

Summary

Table with 3 columns: Impacted State, Electric Customer Outages, % of State Out. Includes sub-sections for Electricity and Petroleum & Natural Gas.

Notes:

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:

- As of 9:00 AM EDT September 22, there are an estimated 877,338 customers without power. The largest outages remain in Texas where 797,982 customers have no electricity service.
As of 5:00 AM EDT, September 22, the Nuclear Regulatory Commission reported that Entergy's River Bend nuclear unit in LA began its restart.
As of 8:00 AM EDT September 21, vessels with drafts over 34 feet are limited to daylight transit only from Sims Bayou to the Houston ship channel turning basin.



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Neches Rivers going into the Port Arthur area are limited to drafts of 36 feet in the day and 30 feet at night. Part of the Gulf Intracoastal Waterway (GIWW) in TX has re-opened, but it is still closed from mile marker 350 to 319 and has some closures in LA as well. There are some tow and horsepower restrictions from mile marker 253 to 319. The Calcasieu Channel is open to vessels with a draft of 39' or less. On September 19, a safety zone went into effect for the Lower Mississippi River above mile marker 191 to about mile marker 230 for vessels with a draft greater than 30 feet; they are limited to daylight hours only. Port of Pascagoula is still limiting tankers with drafts greater than 36 feet to occasional daylight transits.

- Gasoline stations continue to re-open in the hurricane affected areas as power is restored. As of 3:30 PM September 21, approximately 90 percent of Shell-branded stations in Houston and Beaumont were now open, which is up from September 20 when 75 percent of their gasoline stations were reported open.

## ESF 12 Actions:

- ESF-12 is staffing the FEMA Region VI Joint Field Office (JFO) in Austin, TX, the Region V RRCC in Chicago, IL, and the National Response Coordination Center (NRCC) in Washington, DC. In addition, a petroleum expert has been deployed to San Antonio, TX to serve as part of FEMA's National Incident Management Assistance Team (IMAT) and an electricity expert has been deployed to join the Region IV IMAT in Houston, TX. The FEMA Region VI JFO in Baton Rouge, LA and the FEMA Region VI Regional Response Coordination Center in Austin, TX has been demobilized.

## 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)	1,160,174	1,300,000	89.2%
Natural Gas (MMCF/D)	5,576	7,400	75.4%

Source: Minerals Management Service

- As of September 19, the Minerals Management Service (MMS) reports 5,576 million cubic feet per day (MMcf/d) of the Gulf's natural gas production remains shut-in, equivalent to 75.4 percent of the Gulf production. MMS reports 1,160,174 barrels/day of the Gulf's crude production remains shut-in, equivalent to 89.2 percent of the Gulf's crude production. A total of 262 production platforms, or 36.5 percent of the Gulf's 717 manned platforms, remain evacuated. Personnel from 6 rigs, representing 5.0 percent of those operating in the region, remain evacuated. (MMS reported no updates over the weekend.)
- On September 19, the Louisiana's Department of Natural Resources reports that 27,381 b/d or 18 percent of the normal Louisiana oil production has been restored. Operators in 17 parishes and



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in-State offshore areas normally produce 155,767 barrels/day (the numbers are in addition to MMS reports of Federal offshore production). Shut-in oil production is 94,980 b/d and the status of remaining 33,405 b/d is unknown. The estimated amount of restored gas production is 437 MMcf/d or 27 percent of the daily gas production capacity, which is 1,642 MMcf/d. The estimated amount of shut-in gas production is 891 MMcf/d; the status of the remaining 312 MMcf/d has not been confirmed.

- No changes have been reported on the status of the petroleum pipelines since Situation Report #12.
- According to the Texas Commission on Environmental Quality (TCEQ), Pasadena Refining reported that its refinery in Pasadena, TX planned to begin restart on or about September 20. Motiva and BP both reported to the TCEQ that they planned to restart units on Sunday morning September 21 at their shutdown refineries in Port Arthur, TX and Texas City, TX respectively. None of these three restarts have been confirmed. See Situation Report #13 for list of refineries. Nine refineries in Texas, with a total operable capacity of 2.3 million b/d, remain shut down due to Hurricane Ike including the Pasadena Refining, Pasadena, TX, Motiva Port Arthur, TX and BP Texas City, TX refineries.
- As of 8:00 AM EDT, September 22, Marathon reported that power had been restored to its 76,000 b/d Texas City, Texas, refinery and that it was in the process of repairing equipment. The refinery is still shut down.
- As of 10:15 AM EDT September 22, eleven of the 26 major natural gas pipelines in the Gulf Coast area continue to report complete shut-in of their systems. The remaining pipelines report that portions of their systems remain at reduced levels of gas flow due to Hurricane Ike. Damage assessments continue to be performed both on onshore and offshore facilities and the pipelines continue to provide updates to their customers on those points along the systems that were impacted and are now approved to flow gas as the integrity of the line was verified. See table below.
- Since returning to service back on September 14, the Independence Hub platform, located about 150 miles offshore LA in Mississippi Canyon has averaged over 0.83 Bcf/d of gas production. This platform is the largest producing platform representing approximately 12% of the offshore Gulf of Mexico natural gas production and in July 2008, production from the Hub averaged over 800 MMcf/d.
- There are 39 major natural gas processing plants in the path of Hurricane Ike with a total operating capacity of 17.7 billion cubic feet per day (Bcf/d). As of 9:30 AM EDT September 22, the Energy Information Administration (EIA) has confirmed that 8 plants remain shut down which includes those plants still impacted from Gustav, totaling an operating capacity of 5.08 Bcf/d (just under 30 percent of the capacity in Hurricane Ike's path). In addition, EIA reports 22 plants have resumed operations at reduced or normal levels with a total operating capacity of 8.73 Bcf/d. Eight plants are capable to restart (totaling 3.65 Bcf/d operating capacity) once power is restored and/or upstream gas flow are sufficient. See table below.



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**Force Majeure / Critical Notice Posting by Natural Gas Pipelines as of 9/22/08 10:00 AM EDT**

Pipeline Name	Time Stamp	Notice (Status)
ANR Pipeline Co.	9/22/08	ANR Southeast Area locations along system are at restrictions and only limited delivery capacity is available as a result of current operational conditions and line pressures.
Chandeleur Pipeline Co.	9/21/08	Operationally Scheduled Volumes indicates pipeline is flowing at 70% of pre hurricane levels.
Columbia Gulf Transmission	9/21/08	Flow from offshore points has been reduced to approximately 50% of normal operating capacity.
Destin Pipeline Co.	9/18/08	Pascagoula processing plant Force Majeure declared Sept. 15 now lifted and flows will resume to normal.
Discovery Gas Transmission	9/19/08	Larose processing plant fully operational. Offshore receipts remain unavailable pending assessments; Pipeline is accepting flow from: Tennessee Gas Pipeline and all Paradis Gas Gathering producers (PGGS), Tetco, Transco, Bridgeline and GulfSouth.
Enbridge (UTOS)	9/19/08	All UTOS facilities remain under Force Majeure and are currently down and all points are shut-in. Damage assessments are still underway.
Garden Banks Gas Pipeline	9/19/08	Assessment and repair continue. Garden Banks' pipeline facilities are essentially ready for return to service; availability of downstream outlets for gas and condensate will determine when pipeline operation will resume.
High Island Offshore System	9/18/08	Force Majeure from Sept 10 remains in effect - HIOS is currently securing equipment to locate a potential leak on its 42-inch line north of HIA-264. The equipment is expected to be on location in three (3) days.
KinderMorgan (Texas & Tejas)	9/20/08	All firm storage customers can resume injections at 100% of their firm injection rights. There is no interruptible space available at this time.
Manta Ray Offshore Gathering	9/19/08	Assessments continue on offshore platforms and facilities. A significant amount of repair work is expected to be completed by Sep 25, 2008. Partial service expected by Friday, Sept 26.
Mississippi Canyon Pipeline	9/20/08	Force Majeure is lifted. All repairs to the system have been completed and gas flow can resume Sept 21. Two points remain unavailable at this time (Tennessee Gas Pipeline & Venice Gas Plant).
Natural Gas Pipeline Co of America	9/20/08	Power at Compressor station 302 has been restored and station 346 is ready for service. Force Majeure still in effect but gas flow can resume on the LA line at restricted capacity. Compressor stations 342 and 343 remain shut down and not available for service.
Nautilus Pipeline Co.	9/19/08	Due to upstream restrictions and ongoing damage assessment at Burns Point, pipeline remains under Force Majeure. Nautilus is not accepting nominations at this time.
Sabine Pipe Line (Henry Hub)	9/18/08	Force Majeure has been lifted for some additional points along the system. Partial compression has been restored at the Henry Hub complex and the pipeline is closely monitoring its system.
Sea Robin Pipeline Co.	9/17/08	Sea Robin will begin accepting flow on Sep 22, 2008. The Hess Processing Plant will operate at a minimum volume of 150,000 Dth/d until at least Sep 24, 2008.
Southern Natural Gas Co.	9/20/08	Due to material delays, pipelines interconnected with Sabine Pipeline sustained damage and are projected to be available the evening of Sept 22. Gas flow is limited at this point until repairs are made.
Stingray Pipeline Co.	9/19/08	Some onshore facilities (office building) sustained water damage; offshore facilities have minor damage and crews are working to repair visual damage and will perform further inspections in the coming days. Crews are being flown into onshore facilities due to the hazardous road conditions. System repairs could take up to 2 weeks.
Tennessee Gas Pipeline	9/20/08	TGP has completed assessments of multiple facilities: Johnson Bayou Plant restart 9/24/2008, East Leg Bluewater restart 2weeks, Pecan Island Plant restart one month, and Compressor Station 25 partial restart 9/24/08. Tennessee estimates current supply loss at this time to be at approximately 0.9 Bcf.
Texas Eastern Transmission	9/22/08	TE estimates that producers have shut-in 400-500 MMcf/d of supply on its system. Damage assessments continue on facilities impacted by Gustav and Ike. Receipt points along the Cameron System and South Pass line remain at zero flow. Several compressor stations continue to run on backup generators as commercial power is unavailable.
Texas Gas Transmission	9/17/08	All systems on the pipeline are operational, but they are closely monitoring receipt points.
Transcontinental Gas Pipe Line	9/19/08	Supply impact at 700 MMcf/d that remains shut-in. Southwest, Central and Southeast, LA laterals of system remain at zero flow.
Trunkline Gas Pipeline	9/19/08	Declared Force Majeure event impacting gas flow deliveries on the ELA (East Louisiana). Flooding at Centerville Compressor Station limiting gas flow to Henry Hub. Pipeline integrity to Patterson has been confirmed and 11 receipt points have been cleared for flow.
Venice Gathering System	9/18/08	Remains shut-in from the effects of Gustav. Processing plant will not be available until first week in October – gas flow will remain at zero until plant is fully operational.
Dauphin Island Gathering	9/16/08	Force Majeure lifted as Mobile Bay (Duke) processing plant completed maintenance. System will resume normal operations.
Black Marlin Pipeline	9/15/08	Force Majeure declared Friday, Sept 12. - No gas flow being accepted.
Gulf South Pipeline	9/18/08	Critical Period has been lifted as of gas day Sept 18.
Northern Natural	9/22/08	Matagorda Offshore Pipeline System accepting gas flow at normal levels.



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Natural Gas Processing Plants in the Path of Ike & Gustav as of 9/22/08 9:30 AM EDT							
Plant Name	Location	Impact	Capacity (million cubic feet per day) <sup>1</sup>				
			Design System Operation	Shut Down	Capable to Restart <sup>2</sup>	Operating at Reduced Level	Normal
<b>EAST LA / AL</b>							
Yscloskey	St. Bernard, LA	G	1,850	1,850			
Venice	Plaquemines, LA	G	1,300	1,300			
Pelican	St. Mary, LA	G	600		600		
Larose	Lafourche, LA	G + I	600			600	
Plaquemine	Iberville, LA	G	225		225		
Burns Point	St. Mary, LA	G	160		160		
Mobile Bay (Duke)	Mobile, AL	M	300				300
<b>WEST LA / EAST TX</b>							
Eunice	Acadia, LA	G + I	1,200			1,200	
Sea Robin	Vermilion, LA	G + I (M)	950		950		
Bluewater	Acadia, LA	G + I	950		950		
Cameron Meadows	Cameron, LA	G + I	500	500			
Iowa	Jefferson Davis, LA	G + I	500				500
Grand Chenier II	Cameron, LA	G + I	400	400			
Sabine Pass	Cameron, LA	G + I	300	300			
Stingray	Cameron, LA	G	300	300			
Lowry	Cameron, LA	G + I	265		265		
Barracuda	Cameron, LA	G + I	225	225			
Gillis	Calcasieu, LA	G + I	180			180	
Dubach	Lincoln, LA	G	175				175
East Texas (MarkWest)	Panola, TX	I	780				780
East Texas (DCP)	Panola, TX	-	750				750
Godley (Forth Worth II)	Johnson, TX	I	300			300	
Port Arthur	Jefferson, TX	G + I	200		200		
Carthage	Panola, TX	I	175				175
Indian Springs <sup>3</sup>	Polk, TX	I	150			150	
<b>CENTRAL EAST TX</b>							
Houston Central	Colorado, TX	-	700				700
Markham	Matagorda, TX	G + I	300		300		
Matagorda <sup>4</sup>	Matagorda, TX	G + I	250	-	-	-	-
Armstrong	De Witt, TX	I	250				250
Point Comfort	Calhoun, TX	I	200	200			
Old Ocean	Brazoria, TX	I	200				200
Wilcox	Lavaca, TX	I	220				220
La Grange	Fayette, TX	I	200			200	
Waskom	Harrison, TX	-	270				270
<b>SOUTH EAST TX</b>							
King Ranch	Kleberg, TX	-	925				925
Shoup	Nueces, TX	-	290				290
La Gloria	Jim Wells, TX	-	265				265
Gregory	San Patricio, TX	I	150				150
Gulf Plains	Nueces, TX	-	150				150

**Note:** Storm column indicates hurricanes impacting processing plant: G = Gustav; I = Ike, G+I = Both storms, M = Maintenance, and - = no impact

"N/A" (Not Available or Confirmed) identifies those plants that are in the path of Ike that have not yet been confirmed of their status.

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

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

<sup>3</sup> The Indian Springs processing plant has reported that the plant is currently conditioning natural gas only and is not processing the gas.

<sup>4</sup> The Matagorda processing plants has been idle (mothballed) prior to Hurricane Gustav/Ike.

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



**Electricity Updates:**

**Texas:**

As of: 9/22/2008 9:00 AM EDT



<b>Electricity Outages: Utility Detail</b>			
<b>Texas</b>			
<b>Utility</b>	<b>Outages</b>	<b>Total Utility</b>	<b>% w/o Power</b>
SWEPCO	293	84,696	0.3%
Entergy Texas	53,478	397,451	13.5%
CenterPoint	690,290	2,076,978	33.2%
ONCOR	415	179,442	0.2%
TX New Mexico Power Co	23,027	113,370	20.3%
All Cooperatives	30,479	462,645	6.6%
<b>TOTAL</b>	<b>797,982</b>	<b>3,314,582</b>	

Total utility customers are based on TXPUC outage reports.

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.

- As of 9:00 AM EDT September 22, there are 797,982 customers reported without power in Texas. Over 93,000 customers have had power restored since Ike Situation Report No. 14.

**Additional State Reports:**

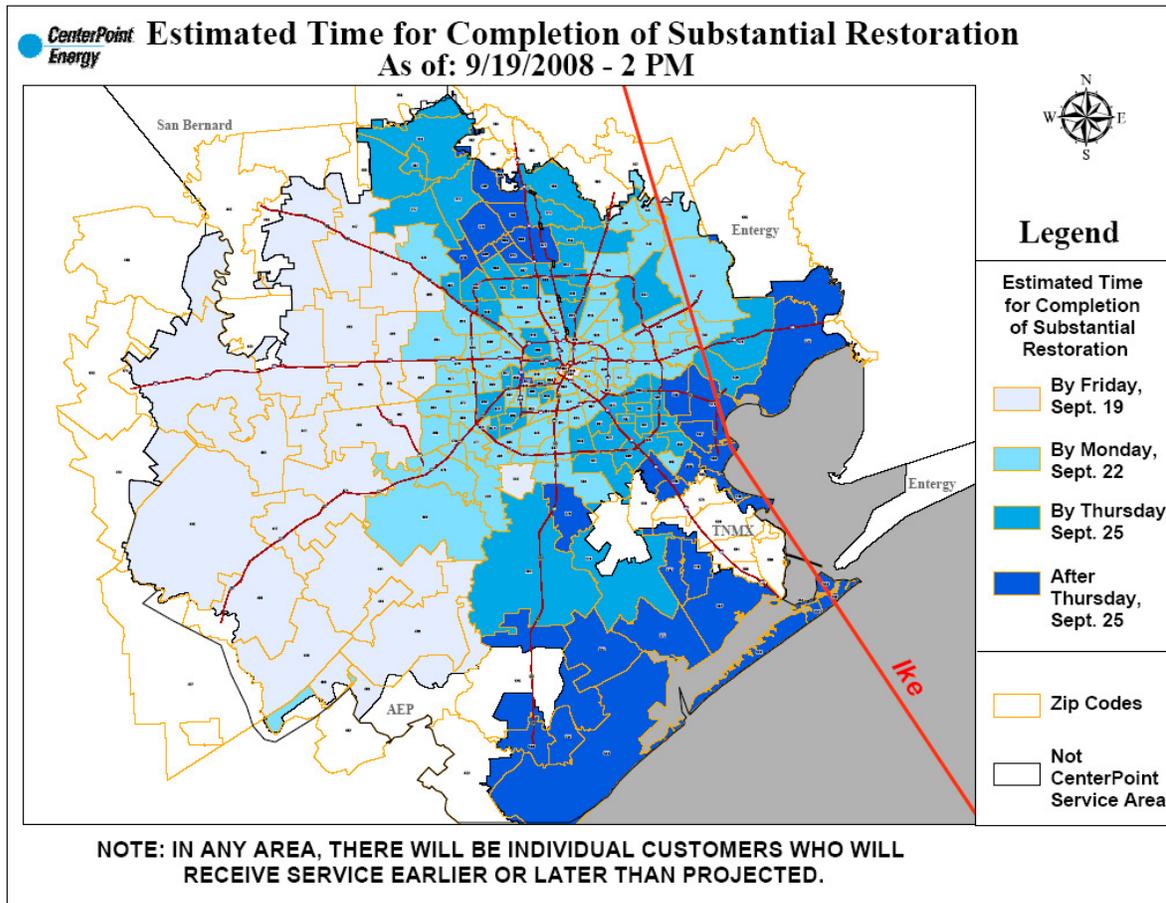
- In Louisiana, as of 6:00 AM EDT September 22 Entergy now estimates about 4,425 customer outages inaccessible due to flooding. Restoration estimates are: Terrebonne Parish - essentially complete by September 27; Grand Isle and Lafitte areas of Jefferson Parish and Lafourche Parish - essentially complete by Oct. 1. CLECO reports its remaining 504 outages suffered flood damage. Entergy reports remaining Gustav damage in Louisiana includes 10 of 241 transmission lines and 6 of 354 substations out of service. Cooperative utilities reported a combined 7,358 customer outages as of September 18.
- In other States impacted by Ike, remaining outages as of 8:00 AM EDT September 22 include:
  - Ohio – 47,825 outages, less than 1 percent of total customers
  - Kentucky – 19,244 outages, less than 1 percent of total customers

**Restoration Updates:**

- As of 6:00 AM EDT September 22, CenterPoint has restored power to over 1.37 million customers of the 2.1 million that lost power due to Ike. See map below for CenterPoint restoration estimates as of September 19:



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- CenterPoint reports that 8,000 mutual assistance crews plus 4,200 internal crews and contractors are involved in the restoration. Entergy has approximately 14,000 crews restoring service.
- Restoration updates from CenterPoint include:
  - 686 circuits have been restored out of the original 1,379 that were out.
  - 693 distribution circuits, out of a total of 1,492, are out.
  - In Galveston, all eight Seawall underground circuits are hot.
  - 89 transmission lines have been restored out of the original 94 that were out.
  - 5 transmission lines are out. **One substation on Galveston Island remains without transmission service as of September 22.**
  - Transmission line inspections are complete on those transmission circuits that were out as a result of the storm. There were no steel transmission towers, steel poles, or concrete poles destroyed during the storm.
- As of 3:00 PM EDT September 20, CenterPoint equipment outages include:
  - Distribution circuits - 631 or 42 percent
  - Transmission circuits – 4, or 1 percent
  - Power Transformers – 16, or 3 percent
  - Auto Transformers – restored



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- As of 6:00 AM EDT September 21, Entergy reports transmission and distribution outages caused by Ike include:
  - 71 of 237 transmission lines
  - 80 of 378 substations
  - 132 transmission structures destroyed, and 205 damaged; 6,426 poles; 2,664 transformers; 4,153 cross arms ; 5,355 service connections damaged or destroyed; and 9,368 spans of wire knocked down.
- **In Texas, Entergy reports as of September 22, that 8,200 customers are unable to receive power due to service locations that were damaged, destroyed or made inaccessible due to Ike.** Entergy restoration estimates by area are:
  - September 21 - Orange, Vidor
  - September 22 - Navasota
  - September 23 - Port Arthur, Port Neches, Nederland, Groves
  - September 25 - Winnie, Anahuac, Dayton, Ames, Daisetta, Batson, Saratoga, The Woodlands
  - September 29 – Woodville, Silsbee, Lumberton, Kountze, Conroe, Huntsville, Madisonville
  - October 5 - New Caney, Cleveland
  - October 6 - Beaumont, Bevil Oaks, Sour Lake
  - Flooded – no date determined- Taylor Landing, Bolivar Peninsula, and Sabine Pass
- **In Ohio, customer outages have dropped from over 1 million to 47,825 (less than one percent of customers) as of 8:00 AM September 22.** The majority of outages are in the Dayton Power and Light (DP&L) service area where 1,500 crews from 10 states are restoring service. DP&L has the necessary materials such as transformers, poles, cross-arms and wire, to make the repairs and these materials are staged throughout the DP&L service area. Restoration to individual pockets of outages is expected by mid-week. Duke Energy and AEP have restored all by scattered outages.