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Hurricane Ike Situation Report #8

# September 17, 2008 (3:00 PM EDT)

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

## Summary

	Elect	ricity			
Impacted State	Electric Custo	omer Outages	% of State Out		
Louisiana		24,515	1%		
Arkansas		7,719	1%		
Kentucky		231,800	11%		
Indiana		52,600	2%		
Pennsylvania		33,000	1%		
Ohio		742,050	13%		
Texas		1,897,901	18%		
TOTAL:		2,989,585			
	Petroleum &	Natural Gas			
		Amount	% Capacity Out*		
Crude Oil Production Shut-In (b/d)		1,246,470	95.9%		
Natural Gas Production Shut-in (mmcf/d)		6,087	82.3%		
Refinery Capacity Shut down (b/d)		2,996,320	NA		

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 1:00 PM EDT September 17, there are an estimated 2,989,585 customers without power in the States most heavily impacted by Ike (see summary table above) plus an additional 3,600 customers without power in New York, Illinois, West Virginia, and Missouri. Largest outages remain in Texas where 1,897,901 customers are without power.
- On September 15 the U.S. Department of Energy announced it would deliver 250,000 barrels of emergency oil from the Strategic Petroleum Reserve to Marathon Petroleum Company's Midwest refineries along the Capline pipeline system. On September 16, DOE announced it would deliver an additional 239,000 barrels of emergency exchange oil from the Strategic Petroleum Reserve to Conoco Phillips Company's Wood River refinery along the Capline pipeline system.



• As of 1:30 PM EDT, September 17, the Port of Corpus Christi has limited vessels to drafts of less than 25 feet in the Matagorda area. The Ports of Freeport, Galveston, Port Arthur waterways, and the Houston Ship Channel are all open to vessels with a draft of less than 16 feet. Vessels with drafts up to 38 feet are also being allowed in and out of Shell's Deer Park, TX facility (in the Houston Ship Channel) during daylight hours so that oil tankers can make deliveries. Galveston allows vessels up to 30 foot draft in daylight hours. The waterways for the Port of Texas City are operating at normal depths for daylight transit (so oil tankers can make deliveries) and are limited to vessels with a draft less than 16 feet at all other times. The Gulf Intracoastal Waterway is still closed from the Houston Ship Channel, west to the Port Arthur, TX bridge and has closures in LA as well. At 1:00 PM EDT September 17, the Calcasieu Channel was opened to vessels with drafts of less than 38 feet which will allow tankers to make crude deliveries to refineries in Lake Charles, LA.

#### ESF 12 Actions:

• ESF-12 is staffing the FEMA Region VI Regional Response Coordination Center (RRCC) in Denton, TX, the FEMA Region VI Joint Field Office (JFO) in Austin, TX, the FEMA Region VI (JFO) in Baton Rouge, LA, 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.

## **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)	1,246,470	1,300,000	95.9%				
Natural Gas (MMCF/D)	6,087	7,400	82.3%				

Source: Minerals Management Service

- As of September 17, the Minerals Management Service (MMS) reports 6,087 million cubic feet per day (MMcf/d) of the Gulf's natural gas production remains shut-in, equivalent to 82.3 percent of the Gulf production. MMS reports 1,246,470 barrels/day of the Gulf's crude production remains shut-in, equivalent to 95.9 percent of the Gulf's crude production. A total of 425 production platforms, or 59.3 percent of the Gulf's 717 manned platforms, remain evacuated. Personnel from 50 rigs, representing 41.3 percent of those operating in the region, remain evacuated.
- MMS reports that Hurricane Ike destroyed 28 of the 3,800 offshore production platforms in the Gulf. MMS estimates that the platforms which were destroyed produced a total of 11,000 barrels/day of crude and 82 MMcf/d of natural gas. As of 6:30 PM September 16, Shell reported



that repair work was needed at some of their Eastern Gulf of Mexico platforms (Mars, Ursa, West Delta 143 and Cognac) damaged by Hurricane Gustav. Shell is using this downtime to complete regular maintenance at several of these facilities. Assessments continue at Shell's Central Gulf Gathering System and Western Gulf systems. As of September 16, BP and ExxonMobil report minimal damage to their offshore facilities. ConocoPhillips reports no damage to its offshore facilities.

- Reconnaissance flights on September 16 indicated that some Chevron platforms were affected by Hurricane Ike, with several reported as toppled in the eastern and western shelf areas of the Gulf of Mexico.
- The U.S. Coast Guard notes that the platform in Eugene Island 397 is missing. This platform would represent approximately 25% of the 82 MMcf/d production MMS identified from destroyed platforms.
- On September 16, the Louisiana's Department of Natural Resources reports that 27,555 barrels/day or 18 percent of the normal Louisiana oil production has been restored. Operators in 17 parishes and 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 94,541 barrel/day or 61 percent of the normal production and the status of remaining 33,671 barrels/day is unknown. The estimated amount of restored gas production is 392 MMcf/d or 24 percent of the daily gas production capacity, which is 1,642 MMcf/d. The estimated amount of shut-in gas production is 917 MMcf/d and the status of the remaining 331 MMcf/d has not been confirmed.
- Major crude pipelines originating in Texas and Louisiana shut down operations in advance of Hurricane Ike, and many have terminals at the origin that remain shut. Capline and LOOP reported on September 16 that they are operating near normal rates. Colonial pipeline reported at 7:30 PM EDT September 16 that the main lines and several stub lines are operating. Colonial is receiving supplies from LA refineries and terminals in Texas and anticipates supply from restarted Corpus Christi refineries and marine deliveries. Despite some difficulties at the origin, NuStar pipeline is operating its product line at normal levels. (See table below.)



Pipelines in the Path of Gustav / Ike as of 9/17/08 2:00 PM EDT								
Туре	Name	Start	Terminus	Capacity (barrels/day)	Shut Down	Partial Shut Down	Reduced Rates	Operating
Crude	Capline	LA	IL	1,200,000				1,200,000
Crude	LOOP/Locap	LA	LA	1,200,000				1,200,000
Crude	Genesis gathering/refinery	TX, MS, Al	TX, MS, AL	NA	NA			
Crude	Marathon gathering	GOM	LA/TX	NA	NA			
Crude	Sunoco Logistics/Western	ТΧ	ТΧ	NA	NA			
Product	Centennial	ТΧ	IL	210,000	210,000			
Product	Central Florida	FL	FL	115,000				115,000
Product	Colonial	ТΧ	NJ	2,400,000			2,400,000	
Product	CP Seaway Products	ТΧ	OK	85,000	85,000			
Product	CP Sweeny to Pasadena	ТΧ	ТΧ	115,000		115,000		
Product	Explorer	LA/TX	IN	700,000		700,000		
Product	Longhorn	ТΧ	ТΧ	72,000	72,000			
Product	Magellan	ТΧ	CO, MN, WI, IL	120,000			120,000	
Product	NuStar/Texas Gulf Coast	ТΧ	ТΧ	100,000				100,000
Product	Plantation	LA	VA	600,000			600,000	
Product	TEPPCO	ТΧ	PA, NY	330,000		330,000		
NGL	Dixie	ТΧ	NC	100,000		100,000		
NGL	Enterprise	ТΧ	IL, MN	641,000		641,000		

Source: Status of pipelines from Association of Oil Pipe Lines; Capacity data from company web sites

• As of 2:00 AM EDT September 17, twelve refineries in Texas and Louisiana remain shut down due to Hurricane Ike. These refineries located in Lake Charles/Port Arthur and Houston/Texas City, and have a total operable capacity of 3.0 million b/d. (See table below.)



Ref	ineries in the Patl	h of Gu	stav / lke as	s of <u>9/17/08</u>	3 2:00 PM <u>E</u>	DT	
Capacity (B/D)						)	
Refinery Impacted	Location	Storm	Operating	Shut Down	Restarting	Reduced Runs	Back to Normal
Pascagoula/Mobile Regi	on						
Chevron	Pascagoula, MS	G	330,000				330,000
Shell	Saraland, AL	-	86,000				
Pasca	goula/Mobile Total		416,000	0	0	0	330,000
Lower Mississppi River	Region						
Alon (Formerly Valero)	Krotz Springs, LA	G	80,000			80,000	
Chalmette Refining	Chalmette, LA	G	192,760				192,760
ConocoPhillips	Belle Chasse, LA	G	247,000		247,000		
ExxonMobil	Baton Rouge, LA	G	503,000		,	503,000	
Marathon	Garyville, LA	G	256,000			,	256,000
Motiva	Norco, LA	G	236,400			236,400	,
Motiva	Convent, LA	G	235,000		235,000		
Murphy Oil	Meraux,LA	G	120,000			120,000	
Placid Refining	Port Allen, LA	G	56,000			0,000	56,000
Shell	Saint Rose, LA	G	55,000			55,000	
Valero	Norco, LA	G	185,003			00,000	185,003
	sissppi River Total		2,166,163	0	482,000	994,400	689,763
Lake Charles Region			2,100,100	0	402,000	334,400	000,100
Calcasieu	Lake Charles, LA	G+I	78,000	78,000			
Citgo	Lake Charles, LA	G+I	429,500	78,000		429,500	
ConocoPhillips	Westlake, LA	G+I	239,400			239,400	
Conocornillips	Lake Charles Total	GŦI	<b>746,900</b>	78,000	0	<b>668,900</b>	C
Port Arthur Region	Lake Glianes Total		740,300	10,000	Ŭ	000,300	
ExxonMobil	Beaumont, TX	G+I	348,500	348,500			
Motiva							
	Port Arthur, TX	G+l G+l	285,000	285,000			
Total Petrochemicals	Port Arthur, TX		232,000	232,000			
Valero (formerly Premcor)		G+I	289,000	289,000		0	
	Port Arthur Total		1,154,500	1,154,500	0	0	
Houston/Galveston Reg							
BP	Texas City, TX		467,720	467,720			
ConocoPhillips	Sweeny, TX	l	247,000		247,000		
Deer Park	Deer Park, TX		329,800		329,800		
ExxonMobil	Baytown, TX	I	567,000	567,000			
Houston Refining	Houston, TX	I	270,600	270,600			
Marathon	Texas City, TX		76,000	76,000			
Pasadena Refining	Pasadena, TX	G+I	100,000	100,000			
Valero	Houston, TX		83,000	83,000			
Valero	Texas City, TX		199,500	199,500			
Houst	on/Galveston Total		2,340,620	1,763,820	576,800	0	
Corpus Christi Region							
Citgo	Corpus Christi, TX	I	156,000				156,000
Flint Hills Resources	Corpus Christi, TX	I	288,126			288,126	
Valero	Corpus Christi, TX	1	142,000			·	142,000
Valero	Three Rivers, TX	1	93,000			93,000	
	orpus Christi Total		679,126	0	0	381,126	298,000
TOTAL	-			2,996,320	1,058,800	2,044,426	1,317,763

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

Storm column indicates hurricanes impacting refineries: G = Gustav; I = Ike, G+I = Both storms, and - = no impact. Sources: Confirmed by company or on company web site. Various trade press sources.



- The Independence Hub platform, located about 150 miles offshore LA in Mississippi Canyon reported gas flow of almost 900 million cubic feet on September 16, which is an increase of approximately 200 million cubic feet from September 15, 2008. 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.
- As of 4:00 PM EDT September 16, the Sabine Pipeline reports that the Force Majeure has been lifted for some additional points along its system. Compression at the Henry Hub complex remains unavailable at this time and Sabine advises its customers that gas flow through the system must be received at sufficient pressure.
- As of 11:00 AM EDT September 17, Southern Natural Gas Company reports minor damage to its interconnection with the Henry Hub (Sabine Pipeline) due to Hurricane Ike and has notified customers that gas flow will be allowed at reduced levels. The company expects all repairs to be completed within 3-5 days.
- As of 9:15 AM EDT September 17, Spectra Energy reports that there is no significant damage or effects to their facilities due to the two Hurricanes and anticipates that the remaining inspections will be completed by the end of this week. Spectra owns and operates the Texas Eastern Transmission pipeline as well as joint venture in DCP Midstream which operates multiple gathering and processing plants in the Gulf Coast area.
- 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).<sup>1</sup> As of 1:00 PM EDT, September 17, the Energy Information Administration (EIA) has confirmed that 15 plants remain shut down which includes those plants still impacted from Gustav, totaling an operating capacity of 7.31 Bcf/d (approximately 40 percent of the capacity in Hurricane Ike's path). In addition, EIA reports that 14 plants have resumed operations at reduced or normal levels totaling 5.60 Bcf/d operating capacity and 9 plants are capable to restart totaling 4.55 Bcf/d operating capacity once power is restored or upstream gas flow commences.
- As of September 16, Targa Resources, Inc. reports that the Venice and Yscloskey processing plants were impacted by high water levels and are expected to return to service in 4-5 weeks. The plants have an operating capacity of 1.3 Bcf/d and 1.85 Bcf/d, respectively. In Cameron Parish, LA, Targa reports that the Stingray and Barracuda remain shut down due to flooding and inspections of the plants have been delayed because of access restrictions to the area. The combined operating capacity of these two plants is 0.53 Bcf/d.
- As of September 17, Enterprise Products Partners L.P reports that the North Terrebonne plant in LA (1,350 MMcf/d operating capacity) is inoperable due to water damage after Hurricane Ike. While North Terrebone is being repaired, natural gas can be diverted to another Enterprise plant for processing. In addition, the 1,100 MMcf/d operating capacity Toca processing plant in St. Bernard Parish, LA has been reported by Enterprise as ready for operations but is waiting for upstream gas flow. Both of these plants are not depicted on the table below.

<sup>&</sup>lt;sup>1</sup> The Waskom processing plant operating capacity is 270 MMcf/d and not 150 MMcf/d as reported earlier.



Force Majeure / Critical Notice Posting by Natural Gas Pipelines as of 9/17/08 2:00 PM EDT						
Pipeline Name	Time Stamp	Notice (Status)				
ANR Pipeline Co.	9/16/08	Preliminary inspections of ANR Southeast Area facilities have begun. Houston office remains clo				
Chandeleur Pipeline Co.	9/16/08	Operationally Scheduled Volumes indicates pipeline is flowing at 75% of pre hurricane levels.				
Columbia Gulf Transmission	9/14/08	Flow from offshore points has been reduced to approximately 20% of normal operating capacity.				
Destin Pipeline Co.	9/15/08	Pascagoula processing plant declares Force Majeure Monday, Sept. 15.				
Discovery Gas Transmission	9/17/08	Offshore receipts remain unavailable pending assessments; some onshore receipt & delivery pts accepting gas flow at reduced levels.				
Enbridge (UTOS)	9/15/08	The onshore facilities have 4 to 5 feet of standing water. Operations personnel will be attempting to gain access Tuesday, September 16.				
Garden Banks Gas Pipeline	9/15/08	Force Majeure declared Tuesday, Sept 9. Initial flyover for damage assessment is being conducted.				
High Island Offshore System	9/16/08	Force Majeure from Sept 10 remains in effect until evaluation of facilities is completed.				
KinderMorgan (Texas & Tejas)	9/17/08	Force Majeures remains in effect from Friday, Sept 12 All firm storage customers can resume injections at 50% of their firm injection rights until further notice				
Manta Ray Offshore Gathering	9/15/08	Force Majeure declared Tuesday, Sept 9. Some damage reported to platforms & offshore facilities. Repair crews are en route.				
Mississippi Canyon Pipeline	9/15/08	Force Majeure carried over from Gustav – Personnel onsite; no major damage reported. Venice plant reported under water.				
Natural Gas Pipeline Co of America	9/16/08	Force Majeure declared Thursday, Sept 11. Compressor Stations 342, 346, 302, 343 remain shut down in TX and LA. A leak was discovered during evaluation of Station 342 and pipeline section has been isolated.				
Nautilus Pipeline Co.	9/15/08	Force Majeure declared Tuesday, Sept 9. – No confirmed damage; assessments underway.				
Sabine Pipe Line (Henry Hub)	9/16/08	Force Majeure has been lifted for certain points along the system. Henry Hub is accepting gas flow but compression remains unavailable.				
Sea Robin Pipeline Co.	9/16/08	Inspection of facilities underway. Sea Robin processing plant remains shut down, pending assessment. Some offshore systems have experienced some damage that will limit a full return to service.				
Southern Natural Gas Co.	9/17/08	Force Majeure declared Wednesday, Sept 17. – Damage at interconnect with Sabine (Henry Hub) resulting in reduced gas flow. Repairs expected to be completed in 3-5 days.				
Stingray Pipeline Co.	9/15/08	Forced Majeure declared Wednesday, Sept 10 Damage assessments underway. Potential leaks in interconnecting gathering lines.				
Tennessee Gas Pipeline	9/16/08	Estimates current supply loss to be at approximately 1.0 Bcf.				
Texas Eastern Transmission	9/16/08	Flow at zero at points on the Cameron, South Pass & Main Pass lines.				
Texas Gas Transmission	9/16/08	Henry Hub point available for gas flow.				
Transcontinental Gas Pipe Line	9/17/08	Emergency Gas Supply Procedures remain in effect for only receipts on Southwest, Central and Southeast, LA laterals of system. Central TX gathering system accepting gas flow today.				
Trunkline Gas Pipeline	9/16/08	Force Majeure declared Monday, Sept 15. Some offshore systems have experienced some damage that will limit a full return to service. Flooding at Centerville Compressor Station limiting gas flow to Henry Hub.				
Venice Gathering System	9/10/08	Remains shut in from the effects of Gustav.				
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	9/12/08	Critical Period still in effect-Flow on certain segments reduced. Houston office remains closed (Sept 15)				
Northern Natural	9/16/08	Scheduled gas flow through portions of the Matagorda Offshore Pipeline System.				

Natu	ral Gas Processing	g Plants ir	h the Path of lke			Natural Gas Processing Plants in the Path of Ike & Gustav as of 9/17/08 1:00 PM EDT						
			Capacity (million cubic feet per day) <sup>1</sup>									
Plant Name	Location	Impact	Design System Operation	Shut Down	Capable to Restart <sup>2</sup>	Operating at Reduced Level	Normal					
EAST LA / AL						1 1						
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	М	300				16					
WEST LA / EAST TX			•	-		•						
Eunice	Acadia, LA	G + I	1,200			1,200						
Sea Robin	Vermilion, LA	G + I	950	950	950							
Bluewater	Acadia, LA	G + I	950		950							
Cameron Meadows	Cameron, LA	G + I	500	500								
lowa	Jefferson Davis, LA	G + I	500				50					
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+1	225	225								
Gillis	Calcasieu, LA	G+1	180	220	180							
Dubach	Lincoln, LA	G	175		100		17					
East Texas (MarkWes	-		780	780	780		17					
East Texas (DCP)	Panola, TX	-	750	100	750							
Godley (Forth Worth II)		1	300	300	700							
Port Arthur	Jefferson, TX	G + I	200	500	200							
Carthage	Panola, TX		175		175							
Indian Springs	Polk, TX		173	150	175							
CENTRAL EAST TX	FUIK, IA		150	150								
Houston Central	Colorado TV		700	1			70					
Markham	Colorado, TX Matagorda, TX	- G+I	700		300		70					
	-											
Matagorda <sup>3</sup>	Matagorda, TX	G + I	250	-	-	-	-					
Armstrong	De Witt, TX		250				25					
Point Comfort	Calhoun, TX		200	200								
Old Ocean	Brazoria, TX		200	200			20					
Wilcox	Lavaca, TX		220				22					
La Grange	Fayette, TX		200	200								
Waskom	Harrison, TX	-	270				27					
SOUTH EAST TX												
King Ranch	Kleberg, TX	-	925				92					
Shoup	Nueces, TX	-	290				29					
La Gloria	Jim Wells, TX	-	265				26					
Gregory	San Patricio, TX	I	150			150						
Gulf Plains	Nueces, TX	-	150				15					

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 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: Louisiana:

As of: 9/17/2008 1:00 PM EDT

- As of 1:00 PM EDT September 17, there are 24,515 customers without power in Louisiana:
  - Entergy 11,702 customer outages
  - SWEPCO 736 customer outages
  - CLECO 489 customer outages
  - Cooperative utilities have a combined 11,588 customer outages
- The remaining 7,271 outages are due to Gustav. Entergy has restored power to over 950,000 customers who lost power due to Gustav and Ike. Entergy reports that remaining Gustav damage to the transmission system includes 14 lines and 7 substations out of service.

#### **Texas:**

**As of:** 9/17/2008 1:00 PM EDT

Electricity Outages: Utility Detail							
Texas							
Utility	Outages	Total Utility	% w/o Power				
SWEPCO	5,666	168,589	3.4%				
Entergy Texas	322,682	398,635	80.9%				
CenterPoint	1,361,729	2,076,978	65.6%				
ONCOR	30,209	2,253,929	1.3%				
TX New Mexico Power Co	50,110	113,370	44.2%				
All Cooperatives	127,505	389,073	32.8%				
TOTAL	1,897,901	5,400,574					

Total utility customers are based on field 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 1:00 PM EDT September 17, there are 1,897,901 customers reported without power in Texas.
- As of 7:00 PM EDT September 16, CenterPoint equipment outages include:
  - Distribution circuits 936 or 63 percent
  - Transmission circuits 21, or 6 percent
  - Power Transformers 44, or 8 percent
  - Auto Transformers 2, or 3 percent

#### **Additional State Reports:**







- Ike caused major power outages in Arkansas and parts of the Midwest, Ohio Valley and Northeast. Outages as of 1:00 PM EDT September 17:
  - Ohio 742,050 outages, 13 percent of total customers
  - Kentucky 231,800 outages, 11 percent of total customers
  - Indiana 52,600 outages, 2 percent of total customers
  - Pennsylvania 33,000 outages, less than 1 percent of total customers
  - Arkansas 7,719 outages, less than 1 percent of customers
  - New York 710 outages, less than 1 percent of total customers
  - Missouri 1,530 outages, less than 1 percent of total customers
  - Illinois 250 outages, less than 1 percent of total customers
  - West Virginia 1,110 outages, less than 1 percent of total customers

## **Restoration Updates:**

- As of 1:00 PM EDT September 17, CenterPoint has restored power to over 780,000 customers. Centerpoint estimates that 50 to 75 percent of its customers will have power restored within seven to ten days; the reminder within three weeks, based on current assessments.
- CenterPoint reports that 8,000 mutual assistance crews plus 4,200 internal crews and contractors are involved in the restoration. Highlights of CenterPoint's recent restoration include:
  - Restored all transmission connections between CenterPoint Energy and the rest of the ERCOT network
  - restored service to most of its large industrial customers at transmission voltage including the Houston Ship Channel energy and petrochemical companies
  - 52 of 77 area hospitals
  - 52 of 80 water pumping stations
  - 117 of 245 sewer lifts
  - Restored service to City of Houston METRORail (Light Rail)
- Entergy reports Current transmission outages caused by Ike include 156 transmission lines and 216 substations out of service across the service territory. In addition, the storm destroyed 132 transmission structures and damaged 205 more. Estimated distribution system damage caused by Hurricane Ike to Entergy's system include 4,031 poles 1,564 transformers, 4,153 cross arms and 5,355 service connections damaged or destroyed, and 9,368 spans of wire knocked down.
- Entergy reports that expected return to service today (September 17) of Entergy's Lewis Creek plant near Willis, Texas, combined with transmission repairs, will allow Entergy in its area north of Houston to serve 10 times more customer load than is currently possible and avoid potential rolling blackouts.
- The loss of generation from Entergy's Sabine plant due to flooding from Hurricane Ike's storm surge resulted in a generation shortfall in the Western region of Entergy Texas, Inc.'s territory. Until damage to the plant can be assessed and restoration time can be estimated Entergy is



balancing system load and generation. Flood waters at Sabine have receded and safety assessment and environmental clean-up has begun.

- Entergy restoration reports 12,800 crews across Arkansas, Louisiana and Texas, down from 14,000 as some contract crews were recalled to restore power in other states affected by Ike.
- In Texas, 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-Country Club Estates near Port Arthur, Bolivar Peninsula, and Sabine Pass
- In Louisiana, Entergy reports that restoration should be essentially complete in Lafayette and Jennings on September 17 and in Lake Charles and Sulphur September 18. Restoration estimates by Parish are:
  - September 16 Acadia, Allen, East Feliciana
  - September 17 Assumption, East Baton Rouge
  - September 18 Calcasieu, Jefferson (lower portion only, except Grand Isle), Plaquemines, St. Bernard
  - September 20 Lafourche (except Fourchon)
  - September 24 Ascension (Donaldsonville), Iberville, St. Martin
  - September 25 Lafourche (Fourchon)
  - September 27 Terrebonne
  - October 1 Jefferson (Grand Isle)