



U.S. DEPARTMENT OF ENERGY  
Office of Electricity Delivery and Energy Reliability  
Infrastructure Security and Energy Restoration

# ENERGY ASSURANCE DAILY

Wednesday Evening, December 26, 2012

## Major Developments

### Powerful Winter Storm System Cuts Power to More Than 456,000 Utility Customers from Texas to Connecticut December 25–26

A powerful winter storm system moved northeast through the Gulf Coast States Tuesday and Wednesday, knocking out power to approximately 456,397 utility customers since yesterday. As of 2:00 p.m. EST today, 256,560 utility customers remained without power. The National Weather Service forecasts the system will impact the Ohio Valley and interior Northeast over the next couple of days, bringing moderate to heavy snowfall and freezing rain and sleet. Arkansas has been the hardest-hit by the storms, which brought freezing rain, sleet, snow, and high winds since Tuesday. Nearly 200,000 utility customers in Arkansas remained without power Wednesday afternoon. Entergy Arkansas reported “extensive damage” and said high winds and wet roads were hampering restoration efforts. The utility said some of its customers could remain without power for the next 7 days, but it expected to restore power to most affected customers sooner. The utility has requested assistance from utilities in other states to help get customers back online. First Electric Cooperative, also serving customers in Arkansas, reported its restoration efforts have been hampered by transmission line issues affecting four of its substations. Although it expected those substation issues to be resolved by the end of the day today, it could not provide an estimate on when it expected to fully restore service to its affected customers.

<http://www.uticaod.com/features/x2105861741/Winds-icy-roads-hit-Gulf-Coast-over-180-flights-canceled>

<http://www.hpc.ncep.noaa.gov/discussions/hpcdiscussions.php?disc=pmdspd>

<http://www.katv.com/story/20423341/update-entergy-outages-top-140k-christmas-night>

<http://www.arkansasbusiness.com/article/89873/after-snow-some-arkansans-face-week-without-power>

<http://www.firstelectric.coop/announcements#item66>

U.S. Gulf Coast, Northeast Customer Power Outages			
December 25–26			
Electric Utility	State	Peak	Latest Reported
Alabama Power Co.	AL	47,500	7,400
AEP – SWEPCO	AR, LA, TX	13,859	10,756
Entergy – Arkansas	AR	190,492	165,026
First Electric Cooperative	AR	30,000	30,000
Connecticut Light & Power	CT	1,111	1,111
Duke Energy – Indiana	IN	2,272	2,272
Cleco	LA	9,000	595
Entergy – Louisiana	LA	5,275	707
Baltimore Gas & Electric	MD	1,946	1,946
Entergy – Mississippi	MS	5,040	909
Duke Energy – Carolinas	NC, SC	1,984	512
Public Service Electric & Gas (PSE&G)	NJ	22,800	2,500
AEP – Ohio	OH	3,124	3,124
CenterPoint	TX	75,000	1,424
Entergy – Texas	TX	19,700	7,498
Oncor	TX	1,150	859
Dominion Virginia	VA, NC	2,615	2,615
Rappahannock Electric Cooperative	VA	1,004	1,004
AEP – Appalachian	WV, VA	20,008	14,817
MonPower (FirstEnergy)	WV	2,517	1,485
<b>TOTAL*</b>		<b>456,397</b>	<b>256,560</b>

\*Total outages represent only electric utilities listed in this table.

Sources:

<https://twitter.com/alabamapower>  
<https://www.swepco.com/outages/>  
<http://viewoutage.entergy.com/ar.aspx>  
<http://outage.fecc.coop/>  
[http://arkansasmatters.com/fulltext?nxd\\_id=621652](http://arkansasmatters.com/fulltext?nxd_id=621652)  
<http://www.cl-p.com/outage/OutageMap.aspx>  
<http://www.duke-energy.com/indiana/outages/current.asp>  
<http://outage.cleco.com/scripts/ClecoOutageMap.dll/>  
<http://viewoutage.entergy.com/la.aspx>  
<http://outagemap.bge.com/>  
<http://viewoutage.entergy.com/ms.aspx>  
<http://www.local15tv.com/news/local/story/Christmas-Weather-Power/cacImKQeTE28rVeYFHxk7g.csp?rss=217>  
<http://www.duke-energy.com/north-carolina/outages/current.asp>  
[http://www.pseg.com/home/customer\\_service/outage\\_info/outagemap.jsp](http://www.pseg.com/home/customer_service/outage_info/outagemap.jsp)  
<http://www.pseg.com/info/media/newsreleases/2012/2012-12-21.jsp>  
<https://www.aepohio.com/outages/>  
<http://gis.centerpointenergy.com/outagetracker/index.html>  
<http://viewoutage.entergy.com/tx.aspx>  
<http://stormcenter.oncor.com/default.html>  
<http://www.local15tv.com/news/local/story/Christmas-Weather-Power/cacImKQeTE28rVeYFHxk7g.csp?rss=217>  
<http://www.khou.com/home/Tornado-warning-issued-for-Houston-County-until-930-am--184751241.html>  
<https://www.dom.com/storm-center/dominion-electric-outage-summary.jsp>  
<http://www.myrec.coop/outage-center/outage-summary.cfm>  
<https://www.appalachianpower.com/outages/Default.aspx>  
<http://outages.firstenergycorp.com/mdwv.html>

## ***Electricity***

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### **Winter Storm Cuts Power to 120,000 Hydro-Quebec Customers in Quebec December 21**

<http://www.theglobeandmail.com/news/national/over-70000-homes-businesses-still-without-power-in-quebec-after-storm/article6689741/>

### **PSEG's 1,096 MW Salem Nuclear Unit 1 in New Jersey at Full Power by December 23 after Turbine Trip December 21**

PSEG Nuclear reported Salem Unit 1 experienced an automatic reactor trip Friday morning due to turbine trip, according to a filing with the U.S. Nuclear Regulatory Commission. All shutdown and control rods fully inserted on the reactor trip. Prior to the trip, the unit was operating at 100 percent power when an alarm indicated a main power transformer over excitation, which actuated generator protection, which initiated the turbine trip. The cause of the main power transformer over excitation was under investigation at the time of the filing. Operators restarted Salem 1 by December 22 and ramped it up to full power by December 23. The incident had no impact on Salem Unit 2, which was operating at 100 percent power on Wednesday.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2012/>

<http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2012/20121226en.html>

### **TVA's 1,118 MW Browns Ferry Nuclear Unit 2 in Alabama Restarts, Ramps Up to 19 Percent by December 26 after Loss of Power to Reactor Protection System December 22**

The Tennessee Valley Authority (TVA) reported Browns Ferry Unit 2 automatically scrammed Saturday morning due to actuation of the Reactor Protection System (RPS) from loss of power to RPS, according to a filing with the U.S. Nuclear Regulatory Commission. At 1134 CST, the D 4kV Shutdown Board unexpectedly de-energized during performance of post-maintenance testing for the 3D Diesel Generator paralleling circuitry, resulting in loss of power to the 2B RPS subsystem. While attempting to reenergize the 2B RPS subsystem, the 2A RPS subsystem was inadvertently de-energized resulting in Unit 2 reactor automatic scram. All affected safety systems responded as expected. The 2A and 2B RPS subsystems were returned to service, and operators restarted and ramped Unit 2 up to 19 percent power by December 26. Units 1 and 3 were unaffected and continue to operate at 100 percent power.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2012/>

<http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2012/20121226en.html>

### **Update: Entergy's 1,207 MW Grand Gulf Nuclear Unit 1 in Mississippi at Full Power by December 21**

Entergy Corp. on December 21 returned Grand Gulf Unit 1 to full power after returning from an outage that began by December 9. Operators shut the unit to complete maintenance on the main turbine generator systems and to test and repair several plant components, according to a spokeswoman. The unit restarted by December 15.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2012/20121221ps.html>  
<http://www.bloomberg.com/news/2012-12-21/entergy-plant-boosts-lift-nuclear-output-to-3-month-high.html?cmpid=yahoo>

### **Update: Entergy Reports Optical Isolator Failure on Its 966 MW River Bend Nuclear Unit 1 in Louisiana**

Entergy Corp. on December 21 returned River Bend Unit 1 to full power, a day after operators reduced it to 50 percent power because of a failure to an optical isolator, a “device that is interposed between two systems to prevent one of them from having an undesired effect on the other,” according to a spokeswoman. The cause of the failure was under investigation.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2012/20121221ps.html>  
<http://www.bloomberg.com/news/2012-12-21/entergy-plant-boosts-lift-nuclear-output-to-3-month-high.html?cmpid=yahoo>

### **SWEPSCO to Reduce 528 MW Welsh Coal-Fired Unit 2 in Texas to 60 Percent Power to Reduce Emissions Until the Unit Retires in 2016**

Southwestern Electric Power Co. (SWEPSCO), an operating unit of American Electric Power, will reduce output at its 528 MW Welsh coal-fired Unit 2 in Texas now that the 600 MW Turk coal-fired power plant in Arkansas has begun commercial operation, a spokesman said on Friday. An agreement to operate Welsh Unit 2 at 60 percent until it is retired in 2016 was part of a broad legal settlement between SWEPSCO and the Sierra Club to end numerous legal challenges to the Turk plant. SWEPSCO agreed to limit output at Welsh Unit 2 to offset emissions from Turk. Welsh Unit 2 will be retired by the end of 2016 to comply with stricter federal emission standards; the utility said it needs to complete transmission upgrades before it can retire the unit.

<http://www.reuters.com/article/2012/12/21/utilities-coal-aep-idUSL1E8NL80R20121221?type=companyNews&feedType=RSS&feedName=companyNews&rpc=43>

### **Update: Entergy Reports Condenser Maintenance at Its 813 MW FitzPatrick Nuclear Unit in New York**

Entergy Corp. reported that operators had reduced its FitzPatrick nuclear unit to 52 percent capacity to conduct maintenance on one of the station's four main condenser waterboxes, according to a spokeswoman.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2012/20121221ps.html>  
<http://www.bloomberg.com/news/2012-12-21/entergy-plant-boosts-lift-nuclear-output-to-3-month-high.html?cmpid=yahoo>

### **Mountainview Power Company's 525 MW Mountainview Natural Gas-Fired Unit 4 in California Returns to Service by December 23**

The unit entered an unplanned curtailment of 285 MW that began by December 22.

<http://content.caiso.com/unitstatus/data/unitstatus201212221515.html>  
<http://content.caiso.com/unitstatus/data/unitstatus201212231515.html>

### **DTE Energy Announces Commercial Operation of 110 MW Thumb Wind Park and Construction of 110 MW Echo Wind Park in Michigan**

DTE Energy on December 21 announced the completion of construction and the start of full commercial operation of the Thumb Wind Park in Huron and Sanilac counties, Michigan. The Thumb Wind Park features sixty-nine 1.6-MW GE wind turbines. The company also announced it will build the 110 MW Echo Wind Park in Huron County by the end of 2013; that wind farm will feature up to 70 wind turbines.

<http://dteenergy.mediaroom.com/2012-12-21-DTE-Energy-announces-commercial-operation-of-Thumb-Wind-Park>

## **Update: North American Development Bank to Finance Construction of Duke Energy's 402 MW Los Vientos Wind Power Projects in Texas**

The North American Development Bank on December 20 announced it would finance the construction of the previously announced Los Vientos I and Los Vientos II wind farm projects in Willacy and Cameron Counties, Texas, which are currently under development by Duke Energy Renewables. The 200 MW Los Vientos I wind power project consists of 87 Siemens wind turbines, each with a nominal capacity of 2.3 MW. The electricity produced by Los Vientos I will be purchased by CPS Energy. Los Vientos II, at 202 MW, is comprised of 84 Mitsubishi Heavy Industry wind turbines, each with a nominal capacity of 2.4 MW. The electricity produced by Los Vientos II will be purchased by Austin Energy. The electricity generated by both wind farms will be delivered to the Rio Hondo substation on the Electric Reliability Council of Texas grid.

[http://www.nadb.org/Reports/Press\\_Releases/english/2012/122012.htm](http://www.nadb.org/Reports/Press_Releases/english/2012/122012.htm)

## **NextEra Canada Begins Commercial Operations at 22 MW Conestogo Wind Energy Centre in Ontario**

NextEra Energy Canada, ULC, on December 21 announced that its affiliate Conestogo Wind, LP, has completed construction and brought into service its 22.9 MW Conestogo Wind Energy Centre in Wellington County, Ontario. The project is comprised of 10 Siemens wind turbines. All of the power from the project is being sold to the Ontario Power Authority under the Feed-In-Tariff program.

<http://www.nexteraenergyresources.com/news/contents/2012/122112.shtml>

## ***Petroleum***

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### **ExxonMobil Cuts Feed Rates at Its 572,500 b/d Baytown, Texas Refinery December 20**

ExxonMobil reported it was cutting feed rates to minimize emissions at its Baytown refinery after the Booster Station 4 compressor C-905 tripped late last Thursday night, according to a filing with the Texas Commission on Environmental Quality. Emissions related to the incident continued until Friday evening, the filing said.

<http://www11.tceq.state.tx.us/oc/eer/index.cfm?fuseaction=main.getDetails&target=177410>

### **Phillips 66 Shuts FCCU at Its 146,000 b/d Borger, Texas Refinery for Maintenance on Wet Gas Compressor December 23**

Phillips 66 shut the Unit 29 fluid catalytic cracking unit (FCCU) at its Borger refinery Sunday night to perform maintenance on the wet gas compressor, according to a filing with the Texas Commission on Environmental Quality. Operators estimated emissions related to the maintenance and subsequent startup procedures could continue until December 30.

<http://www11.tceq.state.tx.us/oc/eer/index.cfm?fuseaction=main.getDetails&target=177437>

### **Motiva Restarts FCCU at Its 600,000 b/d Port Arthur, Texas Refinery December 23**

Motiva Enterprises reported emissions at its Port Arthur refinery Sunday afternoon were related to the restart of the No. 3 fluid catalytic cracking unit (FCCU), according to a filing with the Texas Commission on Environmental Quality.

<http://www11.tceq.state.tx.us/oc/eer/index.cfm?fuseaction=main.getDetails&target=177442>

### **Philadelphia Energy Solutions Shuts Isomerization and Debutanizer Units for Maintenance at Its 335,000 b/d Philadelphia, Pennsylvania Refinery December 17**

Philadelphia Energy Solutions shut the 331 isomerization and 431 debutanizer units at the Girard Point section of its refinery for maintenance on December 17, state regulators said Tuesday.

<http://www.bloomberg.com/news/2012-12-24/new-york-gasoline-gains-as-philadelphia-refinery.html>

### **Magellan Midstream Announces Open Season for Potential Crude Oil Distribution Originating from Galena Park, Texas**

Magellan Midstream Partners, L.P. on December 21 announced that it has launched an open season to assess firm customer interest to transport crude oil originating from the partnership's Galena Park, Texas terminal. The potential project would include construction of new pipeline infrastructure capable of transporting crude oil from Magellan's Galena Park terminal to the partnership's Houston Gulf Coast crude oil distribution system for delivery to refineries in the Houston and Texas City area.

<http://www.magellanlp.com/magellannews.aspx?id=2147483769>

### **Update: EPA Releases Update on Ongoing Hydraulic Fracturing Study**

The U.S. Environmental Protection Agency (EPA) on December 21 provided an update on its ongoing national study currently underway to better understand any potential impacts of hydraulic fracturing on drinking water resources. Results of the study, which Congress requested EPA to complete, are expected to be released in a draft for public and peer review in 2014. The update provided today outlines work currently underway, including the status of research projects that will inform the final study. The progress report only outlines the framework for the final study; it does not draw conclusions about the potential impacts of hydraulic fracturing on drinking water resources, which will be made in the final study.

<http://yosemite.epa.gov/opa/4af0024955d936ef85257adb0058aa29!OpenDocument>

<http://www.epa.gov/hfstudy/pdfs/hf-report20121214.pdf>

### **Update: Cheniere Enters into Contract with Bechtel for Liquefaction Trains 3 and 4 at the Sabine Pass LNG Export Project in Louisiana**

Cheniere Energy Partners, L.P. on Friday announced that its subsidiary, Sabine Pass Liquefaction, LLC, and Bechtel Oil, Gas and Chemicals, Inc. have entered into a lump sum turnkey contract for the engineering, procurement, and construction of the third and fourth liquefaction trains to be constructed adjacent to the Sabine Pass liquefied natural gas (LNG) terminal in Cameron Parish, Louisiana. Sabine Liquefaction intends to give Bechtel a notice to proceed with construction for the third and fourth liquefaction trains upon achieving acceptable financing arrangements and making a final investment decision. Construction for the third and fourth trains is expected to begin in the first half of 2013. Sabine Liquefaction issued NTP to Bechtel and commenced full construction for the first two liquefaction trains in August 2012. Cheniere owns the 4 Bcf/d Sabine Pass LNG receiving terminal and is developing a project to add liquefaction and export capabilities to the existing infrastructure. The first liquefaction train is expected to start operations as early as 2015, with the second liquefaction train expected to commence operations 6–9 months thereafter.

<http://phx.corporate-ir.net/phoenix.zhtml?c=207560&p=irol-newsArticle&ID=1769300>

### **Update: Apache Canada, Chevron Canada Announce Joint Venture for 1.5 Bcf/d Kitimat LNG Project in British Columbia**

Apache Corporation on Monday announced that its subsidiary Apache Canada Ltd. has signed a broad agreement with Chevron Canada Limited to build and operate the Kitimat LNG project at the Liard and Horn River basins in British Columbia, Canada. Chevron Canada, a subsidiary of Chevron Corp, and Apache Canada each will become a 50 percent owner of the Kitimat LNG plant, the Pacific Trail Pipeline, and 644,000 gross undeveloped acres in the Horn River and Liard basins. Kitimat LNG is currently completing front-end engineering and design, and early site work is under way. Current plans call for two liquefaction trains, each with expected capacity of 5 million tons of LNG per annum (about 750 MMcf/d per day). Kitimat has received all significant environmental approvals and a 20-year export license from the Canadian federal government. The 290-mile Pacific Trail Pipeline will provide a direct connection between the Spectra Energy Transmission pipeline system and the Kitimat LNG terminal.

<http://investor.apachecorp.com/releasedetail.cfm?ReleaseID=728700>

### **Engine Malfunctions Cause Emissions at Enbridge's 50 MMcf/d Reinecke Gas Plant in Texas December 23**

Enbridge reported Engine 71050 at its Reinecke plant went down three times on engine oil pressure and scrubber level between Sunday night and Monday morning, according to a filing with the Texas Commission on Environmental Quality.

<http://www11.tceq.state.tx.us/oc/eer/index.cfm?fuseaction=main.getDetails&target=177447>

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## **Other News**

Nothing to report.



### **Iraqi Kurdistan Suspends All Oil Exports Over Payment Disputes with Central Government – Kurdish Official**

An Iraqi Kurdish official on Tuesday said the Kurdistan Regional Government has suspended oil exports due to a dispute with the central government in Baghdad over payments to oil companies operating in the north. The official didn't say when exactly exports were halted but said it was in the past few days.

<http://www.sfgate.com/news/world/article/Iraq-s-northern-Kurdish-region-stops-oil-exports-4144699.php>

### **Nigerian Crude Oil Production Falls to 3-Year Low at 1.88 MMB/d in December**

Nigerian crude oil streams hampered by pipeline sabotage and flooding caused average production rates to slump by about 100,000 b/d from November, to 1.88 MMB/d this month, which is the lowest level in more than 3 years, according to a recent report from the International Energy Agency.

<http://www.tankeroperator.com/news/todisplaynews.asp?NewsID=4058>

## Energy Prices

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U.S. Oil and Gas Prices December 26, 2012			
	Today	Week Ago	Year Ago
<b>CRUDE OIL</b> <b>West Texas Intermediate U.S.</b> \$/Barrel	91.06	88.86	99.83
<b>NATURAL GAS</b> <b>Henry Hub</b> \$/Million Btu	3.37	3.29	3.08

Source: Reuters

## Links

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***This Week in Petroleum*** from the U.S. Energy Information Administration (EIA)

<http://www.eia.gov/oog/info/twip/twip.asp>

Updated every Wednesday.

***Weekly Petroleum Status Report*** from EIA

[http://www.eia.gov/oil\\_gas/petroleum/data\\_publications/weekly\\_petroleum\\_status\\_report/wpsr.html](http://www.eia.gov/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/wpsr.html)

Updated after 10:30 AM and 1:00 PM Eastern Time every Wednesday.

***Natural Gas Weekly Update*** from EIA

<http://www.eia.gov/oog/info/ngw/ngupdate.asp>

Updated after 2:00 PM Eastern Time every Thursday.

### **ENERGY ASSURANCE DAILY**

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<http://www.oe.netl.doe.gov/ead.aspx>

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