



ENERGY ASSURANCE DAILY

Monday Evening, November 23, 2015

Electricity

Winter Storm Knocks Out Power to Over 169,000 Customers in Upper Midwest November 21

A winter storm system that swept across the upper Midwest on Saturday knocked out power to 169,772 customers in Illinois, Indiana, Michigan, and Wisconsin. The majority of power was restored by Sunday. As of 3:30 p.m. EST Monday, 13,399 customers remained without power. DTE, the hardest hit utility with 50,000 customer outages in Michigan, said all available crews were working 16-hour shifts around the clock to restore power.

| Upper Midwest Customer Power Outages | | | |
|---|--------------|----------------|------------------------|
| November 21–23, 2015 | | | |
| Electric Utility | State | Peak | Latest Reported |
| Ameren | IL | 47,000 | 775 |
| ComEd | IL | 61,000 | 651 |
| Eastern Illini Electric Cooperation | IL | 700 | 2 |
| AEP Indiana Michigan Power | IN | 2,772 | 478 |
| DTE | MI | 50,000 | 11,490 |
| Midwest Energy Cooperative | MI | 1,100 | 0 |
| We Energies | MI/WI | 7,200 | 3 |
| TOTAL* | | 169,772 | 13,399 |

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

Sources:

- <https://twitter.com/AmerenIllinois>
- <http://apps.ameren.com/outage/outagemap.aspx?state=IL>
- <https://www.comed.com/layouts/comedsp/OutageMap.aspx>
- <https://www.facebook.com/EasternIllini/>
- <https://www.indianamichiganpower.com/outages/outageMap.aspx>
- <http://www.dteenergy.com/map/outage.html>
- <https://ebill.teammidwest.com/woViewer/mapviewer.html?config=Outage+Web+Map>
- <https://www.facebook.com/WeEnergies>
- <http://www.we-energies.com/outagemapext/default.html>
- http://www.southbendtribune.com/news/weather/saturday-s-snow-causes-slick-roads-some-power-outages/article_d70fe2a2-907b-11e5-979a-8f83b237b7e6.html
- <http://www.freep.com/story/news/local/michigan/detroit/2015/11/22/40000-without-power-snowstorm-metro-detroit/76212438/>
- <http://detroit.cbslocal.com/2015/11/21/dte-more-than-50000-without-power-following-winter-storm/>

Update: Over 32,000 Avista Customers Remain Without Power in Washington, Idaho November 23 after Major Windstorm Hit November 17

Avista Energy on Sunday afternoon said power has been restored to the majority of the 180,000 customers who were without power at the height of Tuesday’s windstorm in Washington and Idaho. Restoring the remaining customers will be extremely challenging because of the nature of time-consuming and labor-intensive repairs that are necessary in the field, the utility said. As of 3:30 p.m. EST Monday, 32,343 customers remained without power. Avista said it will be late Wednesday evening before power can be restored to the majority of customers.

<http://outagemap.myavista.com/external/default.html>

Update: Talen's 1,105 MW Susquehanna Nuclear Unit 1 in Pennsylvania at Full Power by November 23

On the morning of November 22 the unit was operating at 87 percent after restarting on November 19. The unit shut automatically on November 12 during routine and required equipment testing.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2015/>

<http://talenergy.investorroom.com/2015-11-20-Susquehanna-Unit-1-Reconnected-to-Power-Grid>

Update: TVA's 1,155 MW Browns Ferry Nuclear Unit 1 in Alabama Restarts, Ramps Up to 75 Percent by November 21

The unit shut from full power on November 16.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2015/>

Duke Energy's 1,129 MW Catawba Nuclear Unit 1 in South Carolina Shut by November 21

On the morning of November 20 the unit was operating at 95 percent.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2015/>

Update: Entergy's 1,207 MW Grand Gulf Nuclear Unit 1 in Mississippi Ramps Up to 98 Percent by November 21

On the morning of November 20 the unit was operating at 81 percent, reduced from full power on November 19.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2015/>

Abengoa's 275 MW Mojave Solar Unit in California Returns to Service by November 22

The unit returned from an unplanned curtailment of 100 MW that began on November 20.

<http://content.caiso.com/unitstatus/data/unitstatus201511221515.html>

SCE's 820 MW Big Creek Hydro Unit in California Reduced by November 21

The unit entered an unplanned curtailment of 767 MW.

<http://content.caiso.com/unitstatus/data/unitstatus201511211515.html>

City of Vernon's 134 MW Malburg Gas-fired Unit in California Shut by November 20

The unit entered an unplanned outage.

<http://content.caiso.com/unitstatus/data/unitstatus201511201515.html>

NextEra's 139 MW Patterson Wind Unit 2 in California Shut by November 20

The unit entered an unplanned outage.

<http://content.caiso.com/unitstatus/data/unitstatus201511201515.html>

Utilities See Potential in Drones to Inspect Power Lines, Towers

Utilities see potential in the use of remote-controlled drones to do the often-dangerous work of inspecting power lines and transmission towers but strict Federal Aviation Administration (FAA) regulations have so far slowed adoption of the technology. Seven utilities have been granted FAA approval for testing drone technology in 2015. Consumers Energy in Michigan conducted a series of tests over the summer using its own eight-rotor drone and unmanned aerial vehicles operated by outside vendors to inspect wind turbines, utility poles, and transformers. Other industries, including oil and gas drillers, pipeline operators, construction companies, and agriculture are also investigating the use of drones to make inspection and mapping tasks faster, more accurate, safer, and less costly. Reuters, 11:01 November 22, 2015

EDF's 300 MW Wind Farm Nears Completion in Roosevelt County, New Mexico

EDF Renewable Energy's wind farm in Roosevelt County was nearing completion with about half of the 125 turbines on the Roosevelt Wind Project producing electricity. All turbines will be commercially operational by the end of 2015. The second half of the project, called the Milo Wind Project, consists of about 25 wind turbines expected to be operating by the end of January 2016. About 250 MW of power would be produced on the Roosevelt side to be sold to Xcel Energy. The Milo project's 50 MW of produced power will be put up for sale in the Southwest Power Pool open market. Reuters, 4:31 November 21, 2015

Preconstruction Testing Begins at Iberdrola Renewables' Proposed Wind Farm in Vermont

The U.S. Forest Service said preconstruction testing at the site of Iberdrola Renewables' proposed Deerfield wind farm in the southern Vermont towns of Readsboro and Searsburg was underway. The work testing the prospective wind turbine locations, along with areas where the access road connecting the turbines may go, will take place over the next two to three weeks. The work that involves limited tree clearing by hand and boring to collect core samples has been approved by the U.S. Forest Service, the Vermont Public Service Board, and the U.S. Fish and Wildlife Service. Iberdrola Renewables is planning to build 15 wind turbines—eight in Searsburg and seven in Readsboro. Construction of the Deerfield wind project could begin next year.

Reuters, 9:01 November 21, 2015

Petroleum

ExxonMobil Reports Equipment Failure at Its 238,600 b/d Joliet, Illinois Refinery November 23

Exxon Mobil Corp reported an equipment failure at its Joliet, Illinois refinery, according to a filing with the Illinois Emergency Management Agency.

Reuters, 4:22 November 23, 2015

Shell Reports Emissions at Its Deer Park, Texas Facility November 21

Royal Dutch Shell Plc reported emissions from a selective hydrocracker unit at its Deer Park, Texas facility on Saturday, according to a filing with the Texas Commission on Environmental Quality. The company operates a 316,600 b/d refinery at its Deer Park facility.

Reuters, 11:47 November 22, 2015

Flint Hills Reports Hydrocracker Upset at Its 290,000 b/d Corpus Christi, Texas Refinery November 22

Flint Hills Resources reported an upset in the hydrocracker unit on November 22 at its Corpus Christi, Texas refinery, according to a filing with the Texas Commission on Environmental Quality.

Reuters, 9:55 November 22, 2015

Total Reports Equipment Malfunction at Its 225,500 b/d Port Arthur, Texas Refinery November 21

Total SA reported an equipment malfunction within Unit 831 that led to flaring at its Port Arthur, Texas refinery on Saturday, according to a filing with the Texas Commission on Environmental Quality. The event was short-lived and no operating issues occurred, according to the filing.

Reuters, 9:09 November 22, 2015

Phillips 66 Reports Waste Water Treatment Unit Malfunction at Its 247,000 b/d Sweeny, Texas Refinery November 23

Phillips 66 reported the waste water treatment unit malfunctioned at its Sweeny, Texas refinery.

Reuters, 9:39 November 23, 2015

Phillips 66 Reports FCCU Flaring at Its 146,000 b/d Borger, Texas Refinery November 21

Phillips 66 reported flaring from the fluid catalytic cracking unit (FCCU) at its Borger, Texas refinery on Saturday, according to a filing with the Texas Commission on Environmental Quality. The equipment was restarted to stop the event, according to the filing.

Reuters, 9:01 November 22, 2015

Chevron Reports Repairs on Piping Component at Its 245,271 b/d Richmond, California Refinery November 23

Chevron Corp reported the failure of a piping component at its Richmond, California, refinery resulted in the release of a liquid mixture of ammonia and hydrogen sulfide to a concrete surface. Chevron estimated the amount released was less than one barrel and repairs were in progress.

Reuters, 4:41 November 23, 2015

Alberta to Introduce Economy-Wide Carbon Tax in 2017

The government of Alberta said on Sunday it will implement an economy-wide tax on carbon emissions in 2017, addressing long-standing criticism it is not doing enough to combat climate change. The provincial government estimated the plan, including a pledge to phase out pollution from coal-fired electricity generation by 2030 and a limit on emissions from the province's oil sands industry, would generate \$2.25 billion in annual revenue. Alberta has the world's third largest crude reserves, but its oil sands industry is also Canada's fastest growing source of greenhouse gas emissions. The government said each oil sands operator would still be allowed to increase their annual carbon pollution from an average of 70 million tons per year to a maximum of 100 million tons under proposed legislation.

<http://alberta.ca/release.cfm?xID=38885E74F7B63-A62D-D1D2-E7BCF6A98D616C09>

Reuters, 3:00 November 22, 2015

Shell Fined \$77,000 for Workplace Violations following Toxic Release at Its 145,000 b/d Anacortes, Washington Refinery

Shell Oil Products is facing \$77,000 in fines from Washington State's Department of Labor & Industries (L&I) for workplace health violations after an investigation into an uncontrolled toxic release last February. L&I began the investigation at Shell's Puget Sound refinery in Anacortes after learning of an incident during which the refinery's main flare released contaminants into the environment. The release prompted numerous odor complaints from the community nearby. The investigation found that the company had skipped critical decontamination steps while shutting down the main flare for routine maintenance. Failing to implement safe work practices caused an uncontrolled release that exposed workers to toxic substances including mercaptans, hydrogen sulfide, hydrocarbons, and pyrophoric iron. Shell Oil Products was cited for one willful violation and fined the maximum of \$70,000 for knowingly and intentionally not following safe work practices for the control of hazards when shutting down the flare. The company was also cited for one serious violation with a penalty of \$7,000 for giving workers the incorrect procedure for shutting down the flare.

<http://lni.wa.gov/News/2015/pr151120a.asp>

U.S. Oil Drillers Cut Rigs for 11th Week in Last 12 – Baker Hughes

U.S. energy firms last week cut the number of oil rigs for an 11th week in the last 12, data from Baker Hughes showed on Friday. Drillers removed 10 oil rigs in the week ended November 20, the biggest weekly decline since late October, bringing the total rig count down to 564, Baker Hughes said. That is about a third of the 1,574 oil rigs operating in same week a year ago.

Reuters, 1:25 November 20, 2015

Natural Gas

Regency Reports AGC Shut at Its 290 MMcf/d Waha Gas Plant in Texas November 22

Regency reported the acid gas injector (AGI) compressor shut on high scrubber levels. The scrubbers were manually drained and the scrubber dump system was checked. Cold weather may have affected the scrubber control system.

<http://www2.tceq.texas.gov/oc/eer/index.cfm?fuseaction=main.getDetails&target=223302>

Southern Union Reports Compressor Shut at Its 140 MMcf/d Keystone Gas Plant in Texas November 20

Southern Union reported inlet low pressure gas was sent to the flare due to several compressors being down for malfunctions. Producers were asked to back out inlet gas until the compressors can be repaired. Inlet gas was minimized to reduce flaring until the compressors can be put back online.

<http://www2.tceq.texas.gov/oc/eer/index.cfm?fuseaction=main.getDetails&target=223297>

Kinder Morgan Files Application for Natural Gas Pipeline in New Hampshire, Massachusetts

A subsidiary of energy company Kinder Morgan Inc. filed an application with federal regulators to build a natural gas pipeline through southern New Hampshire and western Massachusetts. The pipeline would run 70 miles through New Hampshire. The company says it hopes to start construction in January of 2017 and put the pipeline into service in November 2018. Three public information sessions on the project are planned for the first week of December. The filing on Friday follows a study released earlier in the week commissioned by the Massachusetts attorney general that concluded the New England region does not need additional natural gas pipelines to maintain a reliable flow of energy for the next 15 years. Kinder Morgan called that study seriously flawed.

Reuters, 2:46 November 21, 2015

Update: Con Edison Directed to Respond to DPS Report Alleging Violation of State Safety Regulations in Connection with 2014 East Harlem, New York Natural Gas Explosion

The New York State Public Service Commission on Friday directed Consolidated Edison Company of New York (Con Ed) to respond to a Department of Public Service staff report that it violated State safety regulations leading up to and following the natural gas explosion that occurred on March 12, 2014 in East Harlem, New York. Eight people died and more than 50 people were injured in the explosion. The Department's investigation also identifies a contributing factor of the East Harlem incident was undermining of the utility's natural gas pipes that were near municipal sewer facilities, which had gone unrepaired for several years. According to the staff report, groundwater washed soil from underneath the gas pipe, which suffered from an incomplete plastic fusion at a critical joint. Staff concluded that the physical stress created by eroding soil under the pipe and extra road asphalt on top of it eventually forced apart the inadequate plastic fusion, which caused the gas leak that led to the explosion. The 20-month long, Department-led investigation determined that Con Edison failed to adhere to nearly a dozen State gas safety requirements, and it found that several of these failures contributed to the explosion.

[http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/4505F7C3966E44A085257F020062E854/\\$File/pr15083.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/4505F7C3966E44A085257F020062E854/$File/pr15083.pdf?OpenElement)

National Energy Board Issues Inspection Officer Order to NOVA Gas Transmission Ltd. November 20

The National Energy Board (NEB) issued an Inspection Officer Order to NOVA Gas Transmission Ltd. (NGTL). The Order requires the immediate cessation of all further horizontal and directional drilling activity under the Athabasca River at the company's McDermott Extension natural gas pipeline project, which is located 47 miles north of Fort McMurray, Alberta. The NEB Order follows four separate incidents during which drilling resulted in the unintended release of drilling fluid into the Athabasca River. One slope failure was also recorded. The NEB responded immediately and continues to investigate the incidents; including an evaluation of the drilling mud composition and volumes released. The NEB confirms that NGTL is currently in non-compliance with NEB regulations for its failure to adhere to the NEB-approved Environmental Protection Plan. The Onshore Pipeline Regulations requires the company to "develop, implement and maintain an environmental protection program that anticipates, prevents, manages and mitigates conditions that could adversely affect the environment."

<http://news.gc.ca/web/article-en.do?mthd=tp&crtr.page=1&nid=1021739&crtr.tp1D=1>

Other News

World's First Biofuel Facility to Operate Entirely on Renewable Heat, Power to Go Online in California

Biodico today announced its Biodico Westside Facility, the world's first biofuel production facility that operates entirely on renewable heat and power generated on-site, will go online the first week of December. The facility produces up to 20 million gallons of biodiesel per year, employing multi-feedstock functionality, as well as incorporating advanced sensors for real-time and remote monitoring leading to complete system automation. Reuters, 9:31 November 23, 2015

International News

Crimea without Power from Ukraine after Electricity Pylons Blow Up

Around 1.6 million people in Crimea were left without electricity supplies from Ukraine on Sunday after pylons carrying power lines to the Russia-annexed peninsula were blown up overnight. It was not immediately clear who had damaged the pylons, but a Russian senator described the move as an "act of terrorism" and implied that Ukrainian nationalists were to blame. Russia's Energy Ministry said emergency electricity supplies had been turned on for critical needs in Crimea and that mobile gas turbine generators were being used. Ukraine's Energy Minister said four power lines had been damaged and that two districts of Ukraine's Kherson region were also left without power. State-run energy firm Ukrenergoholdings said it hoped to finish repairs on all the damaged lines within four days.

www.reuters.com/article/2015/11/22/us-ukraine-crisis-crimea-electricity-idUSKCN0TB04920151122#rVvaZUvBg6SCF9OL.99

Energy Prices

| U.S. Oil and Gas Prices | | | |
|--|-------|----------|----------|
| November 23, 2015 | | | |
| | Today | Week Ago | Year Ago |
| CRUDE OIL West Texas Intermediate U.S. \$/Barrel | 39.22 | 41.63 | 76.33 |
| NATURAL GAS Henry Hub \$/Million Btu | 2.16 | 2.01 | 4.41 |

Source: Reuters

Links

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

Updated after 10:30 AM & 1:00 PM ET every Wednesday.

Natural Gas Weekly Update from EIA

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

Updated after 2:00 PM ET every Thursday.

ENERGY ASSURANCE DAILY

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

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