

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

Infrastructure Security and Energy Restoration

ENERGY ASSURANCE DAILY

Wednesday Evening, March 02, 2016

Electricity

High Winds Knock Out Power to 102,000 Customers in Oregon, Washington March 1

Strong winds, with gusts of 60 mph, knocked out power to 102,000 customers in Oregon and Washington on Tuesday afternoon. As of 3:30 p.m. EST Wednesday, 8,302 customers remained without power. The affected utilities reported crews made substantial progress overnight restoring power. Puget Sound Energy (PSE), the hardest hit utility with 60,000 customer outages, reported damage to two transmission lines and two substations. PSE said most customers in Kitsap County should have power restored today though some customers in remote areas or areas with significant damage will not have power until 8:00 a.m. PST on Thursday.

| Oregon, Washington Customer Power Outages March 1–2, 2016 | | | | | |
|--|-------|----------|-----------------|--|--|
| Electric Utility | State | Affected | Latest Reported | | |
| Pacific Power | OR | 11,000 | 0 | | |
| Puget Sound Energy | WA | 60,000 | 8,188 | | |
| Snohomish PUD | WA | 15,000 | 100 | | |
| Cowlitz PUD | WA | 10,000 | 3 | | |
| Seattle City Light | WA | 6,000 | 11 | | |
| TOTAL* | | 102,000 | 8,302 | | |

*Total outages represent only electric utilities listed in this table. Sources: https://www.pacificpower.net/ed/po/ooi.html

https://pse.com/accountsandservices/ServiceAlert/Pages/Outage-Map.aspx

https://twitter.com/SnoPUD

https://twitter.com/CowlitzPUD

http://www.seattle.gov/light/sysstat/

http://www.kezi.com/news/regional/Nearly 11000 Without Power in Linn County.html

http://www.seattletimes.com/seattle-news/weather/over-50000-customers-without-power-in-western-washington/

Storms, High Winds Knock Out Power to Over 34,000 Customers in Ohio, Pennsylvania, West Virginia, Virginia March 1

Storms producing high winds knocked out power to 34,785 customers in Ohio, Pennsylvania, West Virginia, and Virginia on Tuesday night. Wind gusts reached up to 40 mph. As of 3:30 p.m. EST Wednesday, 3,320 customer remained without power. Appalachian Power, which reported 14,000 customer outages in West Virginia and Virginia, said downed power lines and trees contributed to the loss of power.

| Ohio, Pennsylvania, West Virginia, Virginia Customer Power Outages | | | | | | |
|--|-------|----------|-----------------|--|--|--|
| March 1–2, 2016 | | | | | | |
| Electric Utility | State | Affected | Latest Reported | | | |
| Duke | OH | 7,000 | 145 | | | |
| Dayton Power & Light | OH | 1,012 | 2 | | | |
| First Energy | PA | 6,000 | 530 | | | |
| PECO | PA | 3,088 | 545 | | | |
| PPL | PA | 2,257 | 1,051 | | | |
| Appalachian Power | WV/VA | 14,000 | 652 | | | |
| First Energy | WV | 1,428 | 395 | | | |
| TOTAL* | | 34,785 | 3,320 | | | |

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

http://outagemap.duke-energy.com/ohky/default.html

https://omap.prod.pplweb.com/omap

http://outages.firstenergycorp.com/pa.html

https://www.peco.com/_layouts/peco/outagemap.aspx

https://twitter.com/AppalachianPowe

https://www.appalachianpower.com/outages/outageMap.aspx

http://outages.firstenergycorp.com/mdwv.html

http://wvpublic.org/post/thousands-remain-without-power-west-virginia

http://www.heraldcourier.com/news/thousands-remain-without-power-in-west-virginia/article_e2805454-9dbb-5c18-b1c8-19be490868c5.html

http://www.cincinnati.com/story/news/2016/03/01/almost-7k-without-power-around-greater-cincy/81187836/ http://www.whio.com/news/news/local/wind-gusts-causing-power-outages-all-over-region/nqbnf/ http://www.wowktv.com/story/31362563/thousands-without-power-after-night-of-strong-winds

http://triblive.com/news/adminpage/10067536-74/block-road-power

NV Energy Reports Substation Accident Knocks Out Power to 13,000 Customers in Nevada March 1

NV Energy reported 13,000 customers in Nevada had power knocked out at 8 p.m. PST Tuesday due to an accident at a substation. The utility said power was restored by 10 p.m. PST. <u>https://twitter.com/NVEnergy</u> <u>https://www.nvenergy.com/outage/</u> <u>http://www.lasvegasnow.com/news/thousands-without-power-in-southeast-valley</u>

FPL's 1,155 MW Seabrook Nuclear Unit 1 in New Hampshire Shut on March 2

The unit shut from full power due to a turbine trip. <u>http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2016/</u> <u>http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2016/20160302en.html</u>

Update: Blythe Energy's 493 MW Gas-fired Unit in California Returns to Service by March 1

The unit returned from an unplanned curtailment of 253 MW that began on February 29. <u>http://content.caiso.com/unitstatus/data/unitstatus201603011515.html</u>

Update: San Diego Gas & Electric's 575 MW Palomar Gas-fired Unit in California Returns to Service by March 1

The unit returned from an unplanned curtailment of 300 MW. http://content.caiso.com/unitstatus/data/unitstatus201603011515.html

SCE's 820 MW Big Creek Hydro Unit in California Reduced by March 1

The unit entered an unplanned curtailment of 427 MW. http://content.caiso.com/unitstatus/data/unitstatus201603011515.html

Campo Verde's 139 MW Solar Unit in California Shut by March 1

The unit entered an unplanned outage. http://content.caiso.com/unitstatus/data/unitstatus201603011515.html

RRI Energy's 741 MW Ormond Beach Gas-fired Unit 1 in California Shut by March 1

The unit entered an unplanned outage. http://content.caiso.com/unitstatus/data/unitstatus201603011515.html

Engineers Urge NRC Regulators to Fix Design Problem in Nuclear Power Stations

Seven engineers in late February petitioned the Nuclear Regulatory Commission (NRC) to order immediate enforcement actions due to a design flaw in nearly all U.S. nuclear plants that could endanger emergency core cooling systems. The group has urged the regulator to order power station operators to either fix the problem or face mandatory shutdowns. The engineers are concerned that a design flaw in nearly all U.S. nuclear facilities leaves them vulnerable to so-called open phase events in which an unbalanced voltage, such as an electrical short, could cause motors to burn out and reduce the ability of a reactor's emergency cooling system to function. If the motors are burned out, backup electricity systems would be of little help, the petition said. The petition, filed under a standard NRC process, urges the agency to respond by March 21.

http://finance.yahoo.com/news/u-nrc-engineers-urge-fix-230745348.html

Petroleum

Valero Delays Restart of HCU at its 335,000 b/d Port Arthur, Texas

The restart of the larger of two hydrocracking units (HCU) at Valero Energy Corp's Port Arthur, Texas, refinery was halted on Tuesday, and no date has been set for resuming the return to production, Gulf Coast market sources said on Wednesday. The 57,000 b/d hydrocracker that processes vacuum gas oil into diesel and other fuels was shut on February 18 for unplanned repairs.

Reuters, 11:52 March 2, 2016

Shell Reports Process Unit Upset at Its Deer Park, Texas Facility; Sources Report Leak in Line March 1

Royal Dutch Shell said its Deer Park, Texas facility experienced an upset in a process unit. There was also a leak in a line at the refinery on Tuesday, sources said. No injuries were reported due to the leak. Shell operates a 316,600 b/d refinery and a chemical plant at its Deer Park, Texas facility. The company did not say whether the incidents occurred at the refinery or chemical plant

Reuters, 4:28 March 1, 2016 Reuters, 5:48 March 1, 2016

Phillips 66 Reports Emissions at Its 247,000 b/d Sweeny, Texas Refinery March 1

Phillips 66 reported emissions from a catalytic reformer and sulfur dioxide emissions from a coker flare, according to a filing with the Texas Commission on Environmental Quality. Reuters, 13:07 March 2, 2016

Husky Energy Begins Steam Operations at Its 10,000 b/d Edam East Heavy Oil Project in Saskatchewan March 1

Husky Energy commenced steam operations at its Edam East heavy oil thermal project in Saskatchewan. The project is expected to produce first oil early in the second quarter. Edam East is the first of three new thermal projects the company expects to begin operating this year. In addition, the 10,000 b/d Vawn development and the 4,500 b/d Edam West project are set to begin production in the third quarter of 2016, the company said. http://www.huskyenergy.com/news/release_asp?release_id=2035721

Natural Gas

DEP Orders Antero's Natural Gas Well Site in West Virginia Shut Following Fire February 25

West Virginia Department of Environmental Protection (DEP) officials announced February 25 that four Antero Resources natural gas wells in Doddridge County will remain idle during an investigation into a fire at the company's R.J. Smith Pad near West Union that was reportedly caused by a failure in a piece of processing equipment. The company is investigating and will make necessary repairs.

http://www.theet.com/news/local/doddridge-gas-well-site-ordered-shut-downfollowing-fire/article_99ec5ace-b42b-5c30-89b6-b0dd85d1375c.html

Enbridge Reports AGI Compressor Shut at Its 150 MMcf/d Tilden Gas Plant in Texas March 1

Enbridge reported an upset occurred due to a pipeline rupture upstream from the plant. This caused the acid gas injector (AGI) compressors to shut and the plant to flare acid gas. All gas was routed to the flare to curtail emissions and processing and flow rates were adjusted to minimize the flare duration. http://www2.tceq.texas.gov/oce/eer/index.cfm?fuseaction=main.getDetails&target=228534

Update: Tallgrass Energy's 1.8 Bcf/d REX Pipeline Sees Ohio Mainline Back March 3

Tallgrass Energy's Rockies Express Pipeline (REX) expects its mainline in Monroe County, Ohio, to return to service on Thursday following an interruption that reduced natural gas volumes by about 1.0 to 1.1 Bcf/d and caused it to declare a force majeure on Tuesday. REX said in a notice to customers it believes a flange connection for a side valve failed at the Ohio River System interconnection, causing the interruption. The company said there was a risk that weather in the area may hinder repair efforts but was still projecting the line would return to service on Thursday. On Monday, there was 27 MMcf of gas flowing through the Monroe County site, according to the REX website. On Tuesday, there was no gas flowing through the Monroe County site, according to the REX website. The 1,698-mile REX pipeline stretches from northwestern Colorado and Wyoming to eastern Ohio with a capacity of 1.8 billion cubic feet per day.

Reuters, 13:47, March 2, 2016

Other News

Two Ethanol Tankers Derail, Begin Leaking in Freight Train Derailment in New York March 1

Crews were working to remove some of the 16 cars on an eastbound Norfolk Southern freight train that derailed in far southwestern New York Tuesday evening and forced the evacuation of several homes because of leaks in two ethanol tankers. A rail company spokesman and police dispatchers said the derailment occurred around 9:30 p.m. EST Tuesday in the town of Ripley, about 60 miles southwest of Buffalo. Officials said there were no injuries and no fires, but two of the three cars containing hazardous materials leaked. Rail officials said Wednesday morning one of the leaking ethanol tankers had been contained while the leak in the other is being collected in buckets. A derailed tanker containing propane is intact. Officials said between 25 to 30 people were evacuated from their homes. Other residents near the site were urged to remain inside their homes.

Reuters, 8:17 March 2, 2016

http://abcnews.go.com/US/wireStory/latest-ethanol-tankers-derailed-cars-ny-37334672

International News

Uganda, Tanzania Plan 696-Mile Oil Pipeline from Ugandan Oilfields to Tanzanian Coast

Ugandan President Yoweri Museveni and his Tanzanian counterpart John Magufuli announced March 2 that the two countries are planning to build a 696-mile oil pipeline between Tanga, Tanzania, and Uganda. Uganda, which has yet to start oil production, raised the possibility of a Tanzanian pipeline route last year. This move could strike a blow to a proposed Kenyan pipeline, which was announced last August. France's Total, one of the oil firms developing Uganda's fields, had raised security concerns about the Kenyan route. A Kenyan pipeline could run near Somalia, from where militants have launched attacks on Kenya. Reuters, 2:29 March 2, 2016

Energy Prices

| U.S. Oil and Gas Prices March 2, 2016 | | | | | |
|--|-------|----------|----------|--|--|
| | Today | Week Ago | Year Ago | | |
| CRUDE OIL West Texas Intermediate U.S. \$/Barrel | 34.52 | 30.15 | 49.54 | | |
| NATURAL GAS Henry Hub \$/Million Btu | 1.57 | 1.83 | 2.75 | | |

Source: Reuters

Links

This Week in Petroleum from the U.S. Energy Information Administration (EIA) <u>http://www.eia.gov/oog/info/twip/twip.asp</u>

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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