



ENERGY ASSURANCE DAILY

Thursday Evening, September 01, 2016

Major Developments

Update: Tropical Storm Hermine Strengthen to Category 1 Hurricane, Landfall Expected September 1; FPL Predicts 100,000 Customer Outages, Staging Crews in Florida; Duke Staging Additional Crews in eastern Carolinas; Chevron to Shut Its Panama City, Florida Refined Products Terminal Overnight

As of 5:00 p.m. EDT, Hurricane Hermine (Category 1) was located about 85 miles south of Apalachicola, moving northeast towards the Florida Gulf Coast near 14mph. On the latest forecast track, the center of Hermine will make landfall along the Florida coast tonight or early Friday morning, with hurricane conditions expected along the coast later this evening. Based on the forecast track from the National Hurricane Center as of 11:00 a.m. EDT, Florida Power & Light (FPL) estimates approximately 100,000 customer outages in its service territories with complete restoration within 24 hours. The utility also said it has staged dozens of repair trucks at the Flagler County Airport, located between Jacksonville and Daytona Beach. Meanwhile, Duke Energy said it will begin moving additional crews and equipment on Friday to the eastern parts North and South Carolina, where highest winds and greatest rainfall are expected. In addition, Chevron said it was shutting its Panama City, Florida refined products terminal as a precaution. The company said it plans to reopen the terminal on Friday.

<http://www.nhc.noaa.gov/text/refresh/MIATCPAT4+shtml/012044.shtml?>

<https://twitter.com/insideFPL/status/771364744901124096>

<https://twitter.com/clairemetzwesh/status/771385905374461952>

Offshore Oil & Gas Producers Continue Restoring Operations as Gulf of Mexico Threat from Hurricane Hermine Lessens; Nearly 243,000 b/d of Crude Oil and 307 MMcf/d of Gas Production Remain Shut-In September 1 – BSEE

The Bureau of Safety and Environmental Enforcement (BSEE) on Thursday said that 10 platforms were still evacuated, and estimated that approximately 242,836 b/d of crude oil production, and 307 MMcf/d of natural gas production in the U.S. Gulf of Mexico remained been shut-in due to Hurricane Hermine. The volume of oil shut-in is down from up from 312,280 b/d on Tuesday, while the volume of gas shut-in is down from 360 MMcf/d on Tuesday. Thursday's shut in figures represent 15.18 percent of total oil output and 10.59 percent of natural gas production in the U.S. Gulf of Mexico, and is reflective of eight companies' reports as of 12:30 p.m. EDT today. According to the U.S. Energy Information Administration (EIA), the U.S. Gulf of Mexico accounts for about 20 percent of U.S. oil production and around 5 percent of natural gas output. The following bullets list updates to Gulf of Mexico operations, broken out by operator:

- **Anadarko Petroleum Corp.** on Thursday said it was returning non-essential personnel to its Marco Polo, Constitution and Heidelberg facilities. Non-essential staff will return to Anadarko's Independence facility on Friday, a company representative said.
- **Hess** on Thursday said it was preparing to return personnel to its Gulf of Mexico facilities.
- **Destin Pipeline Co.** cancelled plan on Thursday to re-man its Main Pass 260 platform (MP260) this afternoon due to weather conditions. The company was planning to resume onshore transportation service from offshore receipt points on Friday.
- **BP** on Wednesday, August 31 said production resumed at its Atlantis platform (200,000 b/d oil, 180 MMcf/d gas) after it was shut on Monday. Production remained shut-in at its Thunder Horse (250,000 b/d oil, 200 MMcf/d gas) and the Na Kika (130,000 b/d oil, 500 MMcf/d gas) platforms. BP's other offshore production platform in the deepwater Gulf, Mad Dog, has remained in production. BP said it will continue to monitor offshore conditions to determine when conditions are safe to redeploy non-essential personnel and resume normal operations.
- **Shell** on Wednesday, August 31 said it was returning personnel to its offshore assets in the Gulf of Mexico as forecasts show the storms moving away from its operations. Shell said the storm did not affect

production at any of its assets and it was in the process of resuming drilling operations that were suspended as a precautionary measure. The Coulomb subsea field, which was shut on Monday, will remain shut until the associated non-operated production hub, downstream oil and gas gathering systems, and receipt points resume operations. Shell said it would no longer issue updates for Tropical Storm Hermine.

<https://www.bsee.gov/newsroom/latest-news/statements-and-releases/press-releases/bsee-tropical-storm-hermine-activity>

<https://bp.trellisenergy.com/ptms/public/infopost/viewNotices.do?noticeCategoryId=308201&tspId=1&proxyTspId=1&menuId=menu-info-posting-notices-critical>

<http://www.shell.us/media/us-storm-center/shell-us-storm-updates/2016-storm-updates/storm-center-update-3-tropical-depression.html>

http://www.bp.com/en_us/bp-us/media-room/storm-center.html

Update: Hurricane Madeline Downgraded to Tropical Storm, Knocks Out Power to 5,500 HELCO Customers in Hawaii August 31; Hurricane Lester Expected to Begin Impacting Hawaii September 3

Hawaii Electric Light (HELCO) estimated that about 5,500 customers lost power on Wednesday as Hurricane Madeline passed by the southeastern coast of Hawaii (the Big Island) and downgraded to a Tropical Storm. The utility said nearly all power was restored by 8:00 p.m. HST Wednesday (2:00 a.m. EDT Thursday). As of 5:00 p.m. EDT, Hurricane Lester (Category 2) was about 680 east of Hilo, moving west near 13 mph. The Central Pacific Hurricane Center said hurricane conditions are possible over Hawaii and Maui counties as early as Saturday.

<http://www.prh.noaa.gov/cphc/tcpages/archive/?prod=TCPCP1.EP132016.033.201609012046>

<https://www.hawaiielectriclight.com/hawaii-electric-light-power-restoration-update>

Electricity

BC Hydro Reports 16,000 Customers Briefly without Power in British Columbia August 31; Cause Under Investigation

BC Hydro reported 16,000 customers lost power for approximately three hours due to a circuit transmission failure on Wednesday afternoon. Crews performed some switching in the Fort St. John substation to restore power, according to a BC Hydro spokesperson. The outage affected customers who receive power from the substation, which includes most of Fort St. John including outlying areas such as Taylor, Baldonnel, and Charlie Lake.

<https://www.bchydro.com/power-outages/app/outage-map.html#locate>

<https://twitter.com/bchydro>

<http://www.dawsoncreekmirror.ca/regional-news/prrd/16-000-without-power-in-fort-st-john-area-1.2334876#sthash.jDnV18Du.dpuf>

TVA's 1,150 MW Watts Bar Nuclear Unit 2 in Tennessee Shut after Transformer Fire August 30

Tennessee Valley Authority (TVA) said a transformer fire in an on-site switch yard led to the shutdown of unit 2 at its Watts Bar nuclear power plant in Tennessee. The fire was fully extinguished and the incident on Tuesday did not result in any injuries or pose any danger to the public, according to a TVA spokesman. The spokesman added that all plant systems were in a safe and stable condition. Unit 1 was unaffected and remains online.

Reuters, 13:17 September 1, 2016

PSE&G's 1,096 MW Salem Nuclear Unit 1 in New Jersey Reduced to 58 Percent by September 1

On the morning of August 31 the unit was operating at full power.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2016/>

PSE&G's 1,092 MW Salem Nuclear Unit 2 in New Jersey Shut August 31

The unit shut from full power on Wednesday due to low reactor coolant flow.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2016/>

<http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2016/20160901en.html>

Update: FPL's 839 MW Saint Lucie Nuclear Unit 1 in Florida at Full Power by September 1

On the morning of August 31 the unit was operating at 86 percent after restarting on August 28. The unit was shut on August 21 after it experienced a reactor trip and a loss of offsite power due to an inadvertent generator relay actuation.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2016/>

<http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2016/20160823en.html>

Update: DTE's 1,089 MW Fermi Nuclear Unit 2 in Michigan Ramps Up to 84 Percent by September 1

On the morning of August 31 the unit was operating at 66 percent, ramped up from 52 percent on August 29.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2016/>

Update: AES's 506 MW Redondo Gas-fired Unit 7 in California Returns to Service by August 31

The unit returned from an unplanned outage that began on August 30.

<http://content.caiso.com/unitstatus/data/unitstatus201608311515.html>

ERCOT Expects Adequate Generation for Upcoming Fall, Winter

ERCOT, which operates the electric grid serving 90 percent of Texas, expects to have enough generation available to meet the region's electricity demands this fall and winter. ERCOT on Thursday released its final Seasonal Assessment of Resource Adequacy (SARA) for fall (October-November) and the preliminary outlook for winter (December-February). The SARA report looks at the potential variables that may affect the availability of installed resources to meet the peak electric demand on the ERCOT system during each season. The fall SARA report includes more than 82,000 MW of total generation capacity and a peak demand forecast of about 54,400 MW. The preliminary SARA report for winter also reflects sufficient generation through high demand periods. The forecasted peak demand is just under 59,000 MW, exceeding the current all-time winter demand record of 57,265 MW set on February 10, 2011. The final winter SARA report will be released in November.

<http://www.ercot.com/news/releases/show/104831>

PGE Plans Biomass Day at Its 550 MW Boardman Coal-Fired Power Plant in Oregon

Portland General Electric (PGE) announced that later this year, it will use nothing but woody debris to power its Boardman coal-fired station for one full day as the utility continues to test alternative fuels at the facility. A successful test burn was conducted last year at Boardman using a 10-to-1 mix of coal and biomass. This will be the first time the plant is fed exclusively biomass for 24 straight hours, which will go a long way toward determining whether the plan is feasible long-term. Rather than install expensive new emission controls, PGE has decided to either convert the station to cleaner burning biomass, or shut it down entirely by 2020. At its peak generating capacity, the Boardman plant uses about 300 tons of coal every hour. Since torrefied biomass behaves similarly to coal, that means it will take 8,000 tons to keep the facility running for a full day. The majority of biomass for the PGE project will come off national forests. PGE has partnered with Oregon Torrefaction to supply small-diameter and beetle-killed trees to create the final product. Oregon Torrefaction is in the process of installing a large torrefier at a chipping yard in the Port of Morrow, and from there the material will be trucked eight miles to the Boardman Coal Plant. It will take approximately 800 truckloads to deliver all 8,000 tons of biomass and the company hopes to begin torrefaction in the next few days. PGE's state environmental policy manager said a number of factors will come into play before they decide whether biomass in Boardman makes sense for ratepayers. Cost and supply of the fuel is all part of the equation, as well as what it would take to retrofit the plant's emission controls for a new power source. If the full day test burn is successful, the next step will be to see if biomass can be used to power the plant for multiple days in a row.

<http://www.washingtontimes.com/news/2016/sep/1/biomass-day-planned-at-boardman-coal-plant/>

Mon Power Completes Substation, Powerlines Project to Help Support Shale Gas Industry in West Virginia September 1

Mon Power, a subsidiary of FirstEnergy Corp, on Thursday announced it completed a new substation and associated power lines that will provide electric service to a new Marcellus shale gas water treatment facility under construction in Doddridge County, West Virginia. The project was completed in early August and will provide electric service to a new fracking water treatment plant being built near Greenwood. The treatment plant is expected to use more than 16 MW of electricity once fully operational. The plant is designed to remove salt brine and other materials from wastewater produced by the hydraulic fracturing process used to release shale gas. The treated water then can be reused at gas wellheads. The new substation connects to an existing 138 kV transmission line. The new substation equipment includes a large transformer that lowers the power from 138 kV to 34.5 kV, circuit breakers, and a control building. The substation supplies electricity to the water treatment plant through two new, three-mile, 34.5 kV power lines attached to 70 wooden poles.

https://www.firstenergycorp.com/newsroom/news_releases/mon-power-completes-project-to-help-support-shale-gas-industry-i.html

Talen Energy Withdraws NRC License Application for Its Proposed Bell Bend Nuclear Power Plant in Pennsylvania August 31

Talen Energy on Wednesday announced it sent a written request to the Nuclear Regulatory Commission (NRC) withdrawing its license application for the proposed Bell Bend nuclear power plant project in Luzerne County, Pennsylvania, which was originally filed in October 2008 for a site adjacent to Talen Energy's existing Susquehanna power plant. Licensing and permitting activities related to Bell Bend had previously been suspended, although the license application remained on file with the NRC. The formal withdrawal of the license application at the NRC ends the Bell Bend project.

<http://talenergy.investorroom.com/news-releases?item=122>

Petroleum

CVR Reports Excess Opacity from FCCU Regenerator at Its 70,000 b/d Wynnewood, Oklahoma Refinery August 24

CVR Energy reported excess opacity at the fluid catalytic cracking unit (FCCU) regenerator and excess hydrogen sulfide emissions from the north flare at its Wynnewood, Oklahoma refinery on August 24, according to a filing with the Oklahoma Department of Environmental Quality.

Reuters 13:51, August 31, 2016

LyondellBasell Restarting Its 263,776 b/d Houston, Texas Refinery after Power Outage August 31 – Sources

LyondellBasell Industries began restarting its Houston, Texas refinery on Thursday afternoon following an early morning power outage, said Gulf Coast market sources. The refinery, which the Dutch chemicals groups has said it may sell, could return by early next week to the reduced production level at which it was operating prior to the outage at 1:28 a.m. EDT on Thursday, the sources said. A Lyondell spokesman declined on Thursday to discuss the refinery's production level or the status of individual units. The refinery's production was reduced due to ongoing repairs from an Aug. 18 power outage at the gasoline-producing fluidic catalytic cracking unit and a pipeline replacement project at the smaller of two coking units, the sources said. This is third power outage to affect the refinery's production since August 9.

Reuters, 15:13 September 1, 2016

Shell Says No Impact to Operations after Leak at Its 316,600 b/d Deer Park, Texas Refinery August 31

Royal Dutch Shell said there was no impact to operations after a leak at its Deer Park, Texas refinery on Wednesday.

Reuters, 17:37 August 31, 2016

Citgo Reports Flange Leak at its 157,500 b/d Corpus Christi, Texas Refinery August 31

Citgo reported the East Plant of its Corpus Christi refinery experienced a flange leak at the Merox unit, resulting in a release of materials. The flange was isolated for repair and the release was stopped.

Reuters, 13:12 September 1, 2016

Tesoro Performs Unplanned Unit Shutdown at Its 166,000 b/d Martinez, California Refinery August 31

Tesoro Corp performed an unplanned shutdown of a unit that resulted in flaring at its Martinez, California refinery. Tesoro said it does not expect this issue will have any impact on its ability to fulfill customer product supply commitments.

Reuters, 20:12 August 31, 2016

BP to Build Tier 3 Hydrotreater at Its 413,500 b/d Whiting Indiana Refinery

BP Plc's Whiting, Indiana refinery received corporate approval to build a new hydrotreater to meet Tier 3 gasoline standards that will be required by the U.S. Environmental Protection Agency, according to a local media report.

Once it is constructed, the hydrotreater will enable the refinery to reduce sulfur content and other pollutants in gasoline, the Whiting refinery manager said on Wednesday. Construction is scheduled to begin in 2017.

Reuters, 17:02 August 31, 2016

U.S. Crude Oil Inventories Rise 2.3 Million Barrels August 26 – EIA

Crude inventories rose 2.3 million barrels during the week ending August 26, compared with expectations for an increase of 921,000 barrels, the U.S. Energy Information Administration (EIA) said on Wednesday. Crude stocks at the Cushing, Oklahoma, delivery hub for U.S. crude futures fell 1.1 million barrels, EIA said.

http://www.downstreamtoday.com/news/article.aspx?a_id=53347

Natural Gas

Enbridge Reports Upset Due to Power Outage at Its 150 MMcf/d Tilden Gas Plant in Texas August 31

Enbridge reported the plant went offline due to a power outage. All gas was routed to the flare to curtail emissions and flow and process were adjusted to minimize downtime. Power was restored and the system was brought back online.

<http://www2.tceq.texas.gov/oce/ee/index.cfm?fuseaction=main.getDetails&target=242649>

Other News

Enterprise Begins Service at New Ethane Export Terminal on Houston Ship Channel September 1

Enterprise Products Partners on Thursday announced that the first cargo of ethane to be exported from Enterprise's Morgan's Point, Texas terminal has been loaded. The M/V JS INEOS Intrepid, loaded with approximately 265,000 barrels of ethane, set sail from the facility Thursday morning en route to the INEOS facility at Rafnes in Norway.

The Morgan's Point ethane export facility, which is the largest of its kind in the world, has a design loading capacity of 10,000 barrels per hour. Supply for the new ethane export terminal is sourced from Enterprise's natural gas liquids fractionation and storage complex in Mont Belvieu, Texas and transported through a new 18-mile, 24-inch diameter pipeline that was completed in February of 2016. In addition, the Mont Belvieu complex is connected to ethane production from the Marcellus and Utica Shale regions through the ATEX pipeline.

<http://www.enterpriseproducts.com/investors/news-releases?c=80547&p=RssLanding&cat=news&id=2199033>

Iraq, Kurdistan Resume Joint Export of Kirkuk Oil – Trading Sources; Exports from Southern Iraqi Ports Rose to 3.2 Million b/d in August – Oil Ministry

Iraqi state oil firm Somo and Iraq's semi-autonomous region of Kurdistan have begun jointly exporting crude from the giant Kirkuk oil field again after cutting a new preliminary deal on revenue-sharing, trading sources said on Thursday. The Kirkuk flows, usually amounting to 150,000 b/d, have been suspended since March amid a dispute over revenue-sharing between the central government in Baghdad and Erbil. Before March, the Kirkuk flows were unilaterally handled by Kurdistan while Somo has not seen a cargo being exported on its behalf from the Turkish port of Ceyhan since the middle of 2015. Iraq's oil exports from southern ports rose to more than 3.230 million b/d in August, from 3.202 million b/d in July, as crude production increased, the oil ministry and sources at state-run South Oil Co said on Thursday. The West Qurna 1 field, developed by ExxonMobil, and South Oil's Luhais and Artawi fields contributed most to the increase, according to sources at South Oil.

Reuters, 4:45 September 1, 2016

Reuters, 9:22 September 1, 2016

PDVSA Restarting Its 310,000 b/d Cardon Refinery in Venezuela after Power Failure September 1

Venezuelan state oil company PDVSA said it began restarting its Cardon refinery after an electrical outage on Thursday, while an internal company document seen by Reuters reported the adjacent 645,000 b/d Amuay refinery was working at only about a third of capacity. PDVSA said that the process of normalization of operations at Cardon was under way, and an official said it would take four to five days for the complex to be running normally. The Cardon refinery experienced an electrical fault early Thursday morning, PDVSA said.

Reuters, 13:43 September 1, 2016

Energy Prices

U.S. Oil and Gas Prices			
September 1, 2016			
	Today	Week Ago	Year Ago
CRUDE OIL			
West Texas Intermediate U.S.	43.12	46.92	45.33
\$/Barrel			
NATURAL GAS			
Henry Hub	2.94	2.77	2.68
\$/Million Btu			

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

Energy Assurance Daily provides a summary of public information concerning current energy issues. Published Monday through Friday to inform stakeholders of developments affecting energy systems, flows, and markets, it provides highlights of energy issues rather than a comprehensive coverage. *Energy Assurance Daily* is updated online Monday through Friday after 5:00 p.m. ET. For more information, visit the Infrastructure Security and Energy Restoration (ISER) website at:

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

Please direct comments and questions to: ead@oe.netl.doe.gov