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## **Energy and Climate Report**

### **Afternoon Briefing - Your Preview of Today's News**

The following news provides a snapshot of what Bloomberg BNA is working on today. Read the full version of all the stories in the final issue, published each night.

#### **U.S. East Coast Drivers to Feel Harvey Fury at Gasoline Pump**

*Posted August 31, 2017, 02:15 P.M. ET*

By *Laura Blewitt*

Motorists from Maine to Florida will soon feel the wrath of Hurricane Harvey without seeing a single raindrop.

Fuel prices at the pump are likely to climb after Colonial Pipeline Co.—the largest U.S. gasoline conduit—was forced to shut parts of its main diesel line late Aug. 30 and planned to halt a portion of its gasoline line Aug. 31 because about half of Gulf Coast refining capacity was offline. The company anticipates resuming some service late Sept. 3. Valero Energy Corp. and Royal Dutch Shell Plc, both major Gulf Coast refiners, told wholesale customers Aug. 30 they don't have enough gasoline and diesel to sell retail suppliers.

"It's one thing to not have refiners," Dan McTeague, an analyst at [GasBuddy.com](http://GasBuddy.com), a company which tracks retail prices and availability, said by phone. "It's quite another thing to not have pipelines."

Hurricane Harvey has potentially cut U.S. fuel-making capacity to the lowest level since 2008 after its initial strike on the Texas coast late last week. As Tropical Storm Harvey hit southeast Louisiana on Aug. 30, it brought torrential rains that shut the biggest U.S. refinery, owned by Motiva Enterprises LLC in Port Arthur, Texas, and one nearby held by Total SA. They join more than 12 other plants with almost a quarter of U.S. refining capacity.

As refineries along the Gulf Coast turned off the lights, Colonial, which carries fuel from Gulf Coast refineries to the East Coast, indicated that portions of its two main Lines 1 and 2 west of Lake Charles, Louisiana, would be offline and operating at reduced rates east of Lake Charles. Many smaller lines branching off from its main artery are also likely to shut.

#### **Pace of Supply**

"The issue is the pace of supply that we're getting from the origins," Buster Brown, Colonial's director of scheduling, said in a telephone interview. "It's not as much running out of supply as the timing—the speed at which supply gets to market."

Once shipments from the Houston area resume, Colonial will be able to ship fuels east, bypassing

shuttered terminals in the Port Arthur, Texas, area, Brown said, noting that “Houston supply and Port Arthur supply are independent, so to speak.”

Harvey also submerged pump stations and terminals along the Gulf Coast with its days-long deluge, and operators such as Valero and Shell had no choice but to stop sending fuels.

Valero stopped supplying gasoline stations across the Northeast at stores that don’t carry its logo, while Shell reduced supplies to some company-branded stations in the lower Atlantic, according to people familiar with the operations of both companies who asked not to be identified. Motiva Enterprises holds exclusive rights to distribute Shell fuels to the majority of the southeast, said Natalie Gunnell, a spokeswoman for Shell’s U.S. products unit.

BP Plc was said to be moving a tanker authorized to carry fuels between U.S. ports to Florida from New York Harbor, according to a person familiar with the cargo.

Spokespeople from Valero and BP didn’t return requests for comment.

#### **Fuel Waivers**

The Environmental Protection Agency, in an effort to stay ahead of potential shortages, has been issuing waivers exempting more and more southeastern states from requirements that they use fuel that meets clean-air quality standards.

Gasoline futures for September delivery at New York Harbor rose for an eighth session Aug. 31, the longest rally since 2013, and climbed above \$2 a gallon.

As shortages ripple across the East Coast, the most likely suppliers left standing are refiners from Louisiana and Europe, according to Zachary Rogers, a refining and oil products analyst at Wood Mackenzie. The ongoing gasoline supply issues could reduce East Coast inventories to 3- to 5-year lows, he said by phone from Houston.

At least 20 tankers were booked to load European fuels for the U.S. since Harvey made landfall, a rate nearly double the average for August, shipping data compiled by Bloomberg show. Shipbrokers said cargo flows to New York are expected to be the highest since November, when Colonial Pipeline exploded and cut off supplies.

“Because of the shortage, you will likely see a price increase in the East Coast, which would incentivize the other refiners to shift gasoline yields,” Rogers said.

While suppliers of gasoline stations from Georgia northward may have reason to be concerned, the Sunshine State has one key advantage: It’s not winter yet.

“In Florida, we’re not in the main season, so demand is not as high as it would be normally from November to May,” said Ned Boman, executive director of the Florida Petroleum Marketers and Convenience Store Association. “We should be OK.”

--With assistance from Bert Gilbert.

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**New England, Canada Strive for Deeper Greenhouse Gas Cuts**

*Posted August 31, 2017, 02:56 P.M. ET*

*By Adrienne Appel*

New England and eastern Canadian provinces will lean more heavily on renewable energy, electricity conservation, and zero-emissions vehicles as they aim for deeper greenhouse gas reductions.

The governors and premiers set a goal to reduce harmful carbon emissions 35 percent to 45 percent below 1990 levels by 2030 in a plan they released Aug. 31.

The region easily met the previous carbon-reduction goals in 2010 and 2015, the leaders of the six New England states and five Canadian provinces said during their annual meeting on Prince Edward Island, Canada.

In order to reach the 2030 target, however, the region has to be more aggressive in reducing greenhouse gas emissions, they said.

### **Harvey's Floods Could Delay 10 Percent of U.S. Fracking: Analyst**

*Posted August 31, 2017, 12:31 P.M. ET*

*By David Wethe*

As much as 10 percent of U.S. fracking work could be delayed after Hurricane Harvey ripped through southeast Texas, home to one of the nation's busiest oilfields, according to Raymond James & Associates financial advisory.

More than half the rigs running in the Eagle Ford Shale are estimated to have suspended drilling because of the storm, Marshall Adkins, an analyst at Raymond James, wrote in an Aug. 31 note to clients. The muddy conditions left in Harvey's wake will add stress to the fracking services sector that has consistently lagged the faster drilling crews.

Given its location in far southeastern Texas, the Eagle Ford was the only major American shale formation in the cross hairs of Harvey when it slammed ashore as a Category 4 hurricane last week. Major explorers including EOG Resources Inc. and Marathon Oil Corp. halted drilling and evacuated crews in anticipation of the storm, crimping as much as 57 percent of daily production, according to the Texas Railroad Commission.

"Given that much of oil and gas activity occurs in areas only accessible via dirt roads, the heavy rainfall usually makes the movement of trucks and supplies much more difficult," Adkins wrote. "The trucking and rail of sand, chemicals, and personnel to the well site will all take more time given the likely nasty condition of many Eagle Ford access roads."

The Eagle Ford was the only shale basin of the big four to drop activity in recent days, as some in the industry start to look at shale as a more expensive option compared to other places.

The temporary drop in the rig count by as much as 45 rigs due to flooding could be a catalyst for higher oil prices, Adkins wrote.

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## **Harvey's Roar Rumbles Half a World Away as Propane in Asia Jumps**

*Posted August 31, 2017, 7:39 A.M. ET*

*By Ann Koh and Laura Blewitt*

Asian buyers of liquefied petroleum gas are already paying for disruptions half a world away in Texas as record rainfall halted shipments of propane and butane from ports that handle more than 90 percent of U.S. exports to the region.

Marine export terminals operated by Enterprise Products Partners LP, Targa Resources Inc. and Phillips 66, all suppliers of the fuel, are shut because of closures at the Houston Ship Channel, Port of Beaumont, and Port of Freeport, according to Aug. 29 statements from the companies. Mont Belvieu, Texas, facilities belonging to Enterprise and Targa also have halted some fractionation operations, in which raw liquids are turned into products like propane and butane. There are no estimates yet for when the ports will reopen.

The U.S. Gulf Coast, home to the largest LPG storage caverns in the world, is a key global supplier, so events there can ricochet in markets around the world. As Hurricane Harvey made landfall near Corpus Christi, Texas, late last week, propane prices in Northeast Asia climbed. And as it approached the Louisiana coast before making a second strike Aug. 30 as a tropical storm, Middle Eastern producers said they're raising prices. Asian buyers, which import the fuel for heating and petrochemical production, were caught in the middle.

"Affected buyers will seek cargoes from elsewhere," said Ong Han Wee, a consultant with FGE in Singapore. "The prices jumped last Friday in Asia, just before or when the hurricane made landfall. The Middle East contract prices are also higher now, most likely because of sentiment from Harvey."

Middle Eastern producers Saudi Arabian Oil Co. and Kuwait Petroleum Corp. announced that they would increase September contract prices for propane and butane by \$40 to \$60 a metric ton amid bullish sentiment, traders said. The region's countries are the most likely alternative suppliers because they are nearest to Asia, Ong said.

While international LPG prices have soared since Harvey's landfall, propane traded at the Mont Belvieu Enterprise terminal hasn't kept pace, rising just 2 percent since Aug. 24, according to DTN Energy data. The lack of dramatic price action stateside will expand arbitrage opportunities to Asia once the exporters can finally use the Gulf Coast ports, said Peter Fasullo, co-founder at LPG consultancy En\*Vantage Inc.

The U.S. is expected to export 28 million tons of propane and butane this year, half of which will go to Asian buyers in Japan, South Korea, and China, according to FGE.

But the U.S. hasn't sent a single LPG tanker from the Gulf Coast since Aug. 25, according to Bloomberg market specialist Bert Gilbert. The Ports of Houston and Freeport said they're still uncertain when they'll be able to reopen to vessel traffic.

### **Historic Rains**

And supply concerns extend beyond the shutdown of the ports.

Cedar Bayou, a body of water just outside of the fractionation and storage hub in Mont Belvieu, recorded 51.88 inches (132 centimeters) of rain this week, setting a new record for the continental U.S., according to the [National Weather Service](#).

That much water could signal weeks of trouble for the storage facilities there, Fasullo said. Underground storage of LPG uses brine ponds to pump highly salinated fluids into caverns. If heavy rains dilute the salty ponds, contamination, and containment issues that make it hard to get the fuel out of storage may occur.

Enterprise's "storage assets have remained operational," said Rick Rainey, a company spokesman in Houston. "We continue to manage our brine supplies."

But Targa's capacity to receive raw products was "negatively impacted" by flooding, according to a company [statement](#).

"I don't think there's going to be any relief for many days, and if those many days turn into weeks, it could be a one- to three-week period" before normal exports resume, Fasullo said by telephone from Houston. "Propane prices could go off to the races because I think you're going to get strong storage draws when we will be able to get those export terminals up."

—With assistance from Tsuyoshi Inajima and Dan Murtaugh.

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## **Japan Environment Ministry Asks for \$2.9B to Boost Clean Energy**

*Posted August 31, 2017, 9:16 A.M. ET*

By [Chisaki Watanabe](#)

Japan's Ministry of Economy, Trade and Industry is seeking to allocate 323 billion yen (\$2.9 billion) to expand the use of low-carbon energy sources for the year starting April 1, an increase of nearly 7 percent from the previous year.

The plan includes support for research and development for more efficient solar panels such as perovskite cells and cheaper floating offshore wind, according to a ministry document released on Aug. 31. The allocation will also be used to increase installations of hydrogen fuel cells and hydrogen stations for vehicles.

The ministry is increasing support for next-generation vehicles and self-driving technology by 31 percent to 45 billion yen, including 4.8 billion yen for the development of next-generation batteries, including solid-state lithium-ion batteries.

The ministry is also planning to set aside 78 billion yen to promote energy savings in factories, office buildings and homes with more energy-efficient light bulbs and insulating materials. That's up from 72 billion yen a year ago.

—With assistance from Tsuyoshi Inajima.

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## **Germany to Cut 2018 Onshore Wind Aid After Additions Exceed Cap**

*Posted August 31, 2017, 11:53 A.M. ET*

*By Brian Parkin*

Germany will cut subsidies paid to onshore wind farm owners from January after additions surpassed an industry cap, the Bnetza power regulator said.

A record 5.03 gigawatts of new onshore wind power was added in Germany during the past 12 months, exceeding the gigawatt 3.5-gigawatt limit the government established to support sustainable growth, the Bonn-based regulator said Aug. 31 in an email.

Guaranteed subsidies for operational onshore wind plants will be cut 2.4 percent from Jan. 1, with payments starting at 7.49 euro cents (9 cents) a kilowatt-hour for new plants and 4.17 cents a kilowatt-hour for older plants, Bnetza said.

Should new wind or utility-scale solar additions fall below targets, subsidies would rise, according to the rules.

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## **Brazil Plans to Offer Up to 9 Gigawatts in Energy Auctions**

*Posted August 31, 2017, 8:49 A.M. ET*

*By Vanessa Dezem*

Brazil is planning to award contracts for as much as 9 gigawatts of new generating capacity in a pair of power auctions scheduled for December, according to a person with knowledge of the process. The bulk is expected to go to wind farms.

The first event will feature contracts for 1.4 gigawatts to 2 gigawatts of capacity, and the second event will be bigger, with developers bidding for 5 gigawatts to 7 gigawatts, according to the person, who asked not to be identified because the information isn't public.

The scale of the two auctions will be welcome news to renewable energy developers and suppliers. Last December, the government canceled what would have been the year's only auction solely for wind and solar energy, and hasn't held any since. Companies seeking to build power plants have been hobbled by the lack of details regarding future demand, while turbine companies faced the prospect of halting production lines after their current crop of orders dries up.

The auctions this December will offer contracts to sell power from new plants that go into operation in 2021 and 2023. The first will be open only to renewable energy projects, and the other will accept bids from both clean and conventional sources. Power distributors in Brazil are expected to provide more details soon about the amount of capacity they expect to need, according to the person.

The decision to cancel last year's auction resulted from a growing electricity surplus as Brazil grappled with the worst recession in a century. With the economy now starting to improve, the government expects energy demand to increase next year, driving demand for power plants,

according to Paulo Pedrosa, executive secretary for the Ministry of Mines and Energy.

Two new auctions are also scheduled for 2018, with one penciled in for the start of the year, according to Pedrosa.

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## **Australia's Digital Currency Opens Avenues for Renewables Trading**

*Posted August 31, 2017, 03:11 P.M. ET*

By Murray Griffin

An Australian company developed a digital currency designed for peer-to-peer trading among businesses and homeowners looking to sell surplus renewable energy.

Power Ledger's decentralized trading platform relies on its own version of bitcoin blockchain technology to instantaneously track transactions, making it possible for them to trade clean energy without the need for accountants, lawyers, or banks.

The blockchain encrypts, replicates, and shares multiple transaction records across a network of participants.

Power Ledger said a key benefit of its platform is that participating small and midsize businesses and homes with rooftop solar photovoltaic systems in Australia will no longer have to sell excess power back to electricity retailers at the low prices they offer.

The penetration rate for rooftop PV systems in Australia is now among the world's highest, according to the Australian Energy Regulator. While state governments are phasing out premium feed-in tariffs, the loss of these incentives is being largely offset by declining installation costs for solar systems, the regulator said.

Those using the peer-to-peer platform instead can sell their excess power to businesses or households prepared to buy it possibly at a higher price. The buyers also benefit because they still pay less than they would if they were purchasing from an electricity retailer. A \$25,000 cap discourages large businesses and utilities from controlling the market.

### **Expanding Market**

It's a large potential market, given Australia has more than 1.7 million small-scale solar PV systems on the rooftops of small businesses and homes, and there is a fast-growing number of slightly larger systems installed on commercial and industrial buildings, according to the federal Clean Energy Regulator.

The Power Ledger platform can accommodate various forms of peer-to-peer renewable energy trading, company co-founder and chairwoman Jemma Green told Bloomberg BNA by phone.

In addition to allowing trading among apartment block occupants or industrial park tenants that all use power behind the same main meter, developers of projects such as community solar farms could use it to secure funding, she said Aug. 28.

Developers “could sell shares in their solar farm via the platform,” with the shareholders then receiving some of the income from the project. Power Ledger would in turn charge the developer a fee based on “a percentage of the capex [capital expenditure] of the project,” she said.

For households, the digital currency enables owners to sell their excess energy, much in the same way Uber and AirBnb lets people make money from their cars and spare guestrooms.

### **Larger Networks**

If partnerships are forged with electricity distribution businesses, then trading also could occur across larger electricity networks, according to Green.

The company already is testing its trading platform at a new housing development in the Western Australian city of Perth. Green said residents were paying at least 20 percent less for power than if they were buying it from the grid.

Power Ledger is currently piloting the platform in conjunction with New Zealand’s largest electricity distributor, Vector Ltd. “Vector is looking at the potential for blockchain technology in peer-to-peer energy trading, and has been working since the start of the year with PowerLedger on a trial,” said a Vector spokesman, adding that it’s too early to comment on the trial.

It’s also in discussions with Western Power, the distribution business owned by the Western Australian state government, regarding a trial that would involve some of the 11,000 homes—as well as TasNetworks, the electricity distribution network owned by the Tasmanian state government—Power Ledger managing director David Martin told Bloomberg BNA by phone Aug. 28.

In addition, discussions are underway with a large distribution business in the U.S. and another in Japan, although Green said neither could be named at this stage for reasons of commercial confidentiality.

The company started selling 100 million tokens that give those holding them rights to use its trading platform Aug. 27 and by Aug. 30 more than 90 percent had been sold at a fixed price of 8.8 cents.

### **Disruption?**

Power Ledger has created 1 billion tokens and a follow offering will take place in September at an uncapped price.

Meanwhile, the federal government’s Australian Renewable Energy Agency (ARENA) has separately been looking into using blockchain to enable peer-to-peer trading in renewable energy among businesses and households.

In May this year it contributed A\$120,000 (\$95,000) to an A\$293,000 desktop trial by AGL Energy, one of Australia’s largest electricity businesses.

“Australia has experienced a rooftop solar boom in the past decade and we are expecting a residential battery boom to follow in the coming years,” ARENA chief executive Ivor Frischknecht said. “Ultimately, these investigations are about getting the most value out of solar and battery systems through a more flexible and modern marketplace.”

A report on the findings of the ARENA-funded study is expected to be released soon.

## **China's Ex-Im Bank Backs Azerbaijan Wind With \$460 Million Loan**

*Posted August 31, 2017, 9:05 A.M. ET*

*By Zulfugar Agayev*

The Export-Import Bank of China will finance a 500 million-euro (\$460 million) wind farm in the Caspian Sea off the coast of Azerbaijan as the third-biggest crude oil producer in the former Soviet Union taps clean energy to supply its domestic energy needs.

The Azeri government is working with the state-owned China Power Engineering Consulting Group Co., or CPECGC, which will build 40 to 60 wind turbines between the Caspian Sea islands of Pirallahi and Cilov, according to Camil Malikov, deputy head of the State Agency for Alternative and Renewable Energy Sources.

CPECGC agreed to finance the feasibility study of the project, which may be approved by the government in late January or early February, he said.

"The Export-Import Bank of China together with other Chinese state lenders will provide 90 percent to 95 percent of the funding," Malikov said in an interview in Baku, noting project costs will be about 450 million euros to 500 million euros in total. "The remaining part will be covered by the Azeri government."

### **'City of Winds'**

CPECGC will conduct engineering, procurement and construction of the project together with domestic companies should the government approve the feasibility plan. The 200-megawatt project would provide enough power for 500,000 homes, he said.

"We'll operate the wind park and repay the debt within 12 to 15 years," Malikov said.

Azerbaijan seeks to substitute more clean energy for fossil fuel, which contributed 34 percent of gross domestic product and 43 percent of state budget revenues last year, according to Sberbank CIB. Oil production fell 8.9 percent in the first seven months of 2017 from the same period a year ago, and marketable natural gas output dropped 1.3 percent, according to a State Statistics Committee report on Aug. 15.

Azerbaijan's oil production is likely to drop another 20 percent from the current levels by 2025, according to the Organization of Petroleum Exporting Countries.

Wind farms are attractive to investors because of the strength of breezes in Baku and the Absheron Peninsula, Malikov said. Wind blows more than 270 days in Baku, which means "city of winds" in Persian, according to estimates from the Geography Institute of Azerbaijan's Academy of Sciences.

### **Hybrid Stations**

The government also is working with Germany's KfW development bank to build two hybrid power stations in the Qaradag and Xizi districts west and northwest of the capital, Malikov said.

German experts are drawing up a feasibility plan for the projects, which will generate a combined 140 megawatts of wind and solar energy. That will include 120 megawatts of wind and 40 megawatts of solar energy. Those projects may cost about 200 million euros, Malikov said, adding that state guarantees would be required to secure financing from the German lender.

Azerbaijan currently generates 1,500 megawatts—or 10 percent of its annual electricity production, from clean sources—Malikov said. That includes 1,100 megawatts to 1,200 megawatts from hydroelectric dams, 60 megawatts from wind and 50 megawatts from solar farms.

The plan is to increase electricity production from renewable sources by 420 megawatts by 2020.

“By 2025, we’ll be generating 20 percent of our electricity from clean sources,” Malikov said.

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