

Gas groups prep fight over DOE demand for 'de facto subsidy' for coal, nuclear

by Sarah Smith and Bill Holland

Behind the scenes, gas industry lobbyists feel betrayed by the Trump administration's attempt to force the power markets to compensate nuclear and coal plants at the expense of gas. On the public stage, those same industry groups plan to get into the regulatory weeds and fight the U.S. Department of Energy on the plan to favor "reliability and resilience" over price before the Federal Energy Regulatory Commission. Already, the gas industry has joined forces with other energy industry trade groups in pushing back against the Energy Department's demand for FERC to devise within 60 days new rules to ensure reliability and resiliency in power generation are "fully valued." The groups opposed the request for an interim final rule and said a comment period of at least 90 days is needed, followed by a technical conference.

That the industry is having to fight such a battle is still shocking to many. Natural gas won its increased share of the power stack through low prices, a predictable regulatory environment to install pipelines and low costs to build new plants. The policy decree is a departure from an August DOE grid reliability study, and the fact that a market-meddling approach would come from a Republican administration caught industry observers off guard.

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Sempra looks to ease 'growing pains' on Panama Canal

by Rachel Adams-Heard

More than a year after the Panama Canal was expanded to accommodate larger ships, Sempra Energy wants to fix logistical issues at the canal that force some shipments to take longer routes, according to one executive.

"I think they're experiencing some growing pains in their logistics processes, in their scheduling processes, in securing and reserving slots, in being comfortable moving ships," Sempra LNG & Midstream President Octávio Simões said Oct. 2 on the sidelines

of Energy Dialogues' North American Gas Forum in Washington, D.C.

"The Panama Canal is a key passageway for U.S. LNG from the Gulf to the Pacific Rim, and so we are putting pressure on everybody we know to make sure these things get resolved," he said.

Cheniere Energy Inc., the first operational LNG exporter in the Lower 48, said it has not had any issues. Cheniere Chief Commercial Officer Anatol Feygin said he "vehemently"

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Regulatory review is top priority for new PHMSA official

by Sarah Smith

- ➤ Reviews of regulations for appropriateness, unintended conflicts and relevance to new technologies are "always in order"
- ➤ The federal pipeline regulator needs to work on strengthening and rebuilding relationships with state-based organizations.
- ➤ Innovation is not just looking for new tools but also looking for new ways technology may compromise safety.

Drue Pearce was appointed in early August as the U.S. Pipeline and Hazardous Materials Safety Administration's deputy administrator. Before that, Pearce worked on energy, natural resources and manufacturing issues as director of government affairs for Holland & Hart in Alaska and Washington, D.C. Earlier in her career, she was the federal coordinator for Alaska's natural gas transportation projects and served as senior adviser to the U.S. Secretary of the Interior.

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Pearce talked with S&P Global Market Intelligence Sept. 27 about her role at PHMSA. The following is an edited transcript of that interview.

S&P Global Market Intelligence: PHMSA is currently taking on a regulatory review and trying to figure out what does and does not suit your needs. What are the opportunities and challenges that you see in that effort?

Drue Pearce: Well, the [regulation] books are ... thick, so it's a challenge just to go through everything that is already there. But I've learned, as a legislator, that you can easily do [things that are] unintentional [that] cause ... confusion or end up with things that conflict [or] that cause problems for people who are trying to follow the law, follow the regs.

A review of what you've already got on the books and whether it's up to date ... is, frankly, always in order. I'm not at all uncomfortable with the specter of doing that, looking at whether or not we can incent even better behavior that we want and the safety culture that we want, [and] trying to help bring that safety culture not just to the industry that we regulate but also to the general public.

I'm very supportive of being the least prescriptive possible, because government doesn't come up with all the best answers. We have to be flexible enough to be able to accept new technologies and new ways of doing things that are safer. Regulations are bulky and take a long time, just by their nature, and statutory changes are even more difficult to change. So you want that flexibility. You want the constant review.

Most state pipeline safety regulators, except Alaska and Hawaii, have a formal partnership with PHMSA for enforcing federal regulations and overseeing infrastructure. What are the major considerations for you when it comes to PHMSA's relationship with the states?

The states are so important to us because a high proportion of the inspections that are done are done by the states. They are our ... boots on the ground. [PHMSA] can't operate successfully without them; we're too small. That said, there are challenges both at the state level and the federal level with funding, and we collectively have to figure out how to make sure to do things as efficiently and effectively as possible.

While I haven't been here long enough yet to hear individual state concerns, we know there inevitably are concerns, and so we want to listen. One of my jobs is just to listen to our partners — listen to the industry and listen to the stakeholders — and try to ensure we're understanding the concerns they all have. But the states are such an important partner to us. They stand out. Of course, that's a state legislator talking.

When I was on the liquids [pipeline] advisory committee for PHMSA back in the day, [the National Association of Regulatory Utility Commissioners] and the [Interstate Oil and Gas Compact Commission] had joint meetings on an ongoing basis. I want to make sure that ... we do reach out as an agency and rebuild those relationships [and] that entities like the state partners have that same opportunity.

In the short time you have been in your position, the U.S. has been impacted by hurricanes Harvey, Irma and Maria. How have those events shaped your introduction to your new work?

It's been an exciting and interesting seven weeks. Who knew we were going to start 33 days now of [the U.S. Department of

Transportation's] Crisis Management Center ... being responsible for ... whatever we could do to respond to the hurricanes? It's given me an opportunity to learn many things about both programs, but especially the hazmat side, which I'm honestly less familiar with. It's given me an opportunity to learn how the partnerships work and how quickly we can respond. I'm very proud of the fact that we can do waivers and we can do some of these things very fast. It's been an exciting, challenging time. Real on-the-job training.

Unfortunately, because of the hurricanes, I didn't get to begin my visits to the regional offices as quickly as I would like. Also, perhaps unfortunately, I've heard more of the folks on the phone and seen more of them in HQ than we necessarily would have expected otherwise. My to-do list just got longer.

What are your priorities going to be in your new role at PHMSA?

Safety: safety of our people, safety of Americans, safety of our transportation system.

And then innovation. What's next? What's next in terms of how to make things safe, but also what's the next device that humans are going to devise that can cause safety questions? Who expected lithium batteries to turn into a safety question? Trying to look ahead at what's coming, that is very important.

And then of course, the need ... for a transportation system. We don't get through our everyday lives without ... hazardous materials, so we have to be able to get them safely from point A to point B.

Do you foresee needing to get that safety message out to the public as part of your work?

It's everybody's role. That is the first thing [Transportation Secretary Elaine Chow] mentions when she gives any speech to anybody, including us. It's more than just a safety moment. She lives it, and she wants all of us to live it. That just runs through everything we do. I think that the sincerity of that message is what will, frankly, get out to people.

Read this article on SNL web.

States look for ways to prevent cheating on pipeline contractor tests

by Sarah Smith

State pipeline safety managers are increasingly focused on trying to prevent the workers who build and maintain natural gas utility pipelines from cheating on their qualification exams.

With multiple instances of pipeline contractors cheating on qualification tests discovered in the past year, regulators are scrutinizing utilities' safeguards that are supposed to prevent underhanded conduct, said Jason Montoya, chief of the New Mexico Public Regulation Commission's Pipeline Safety Bureau.

"Operators may have a more difficult time proving to us regulatory bodies: 'This is how the tests are proctored, this is how we have quality control and assurance that cheating was not done," Montoya said in an interview at the National Association of Pipeline Safety Representatives', or NAPSR, annual meeting in Columbus, Ohio.

"Prove to me, Mr. Operator, how you control your tests," Montoya said. "If you have had the same answers for the last five years and the same questions in the same order, there's a test out there that has them."

State utility commissions do not typically have regulatory authority over contractors that work for utilities. Rather, utilities are responsible for ensuring the people who work on their pipeline systems are qualified to do so, and the commissions evaluate the utilities' efficacy.

Qualification testing applies to so-called covered tasks, which can include welding, pipe burying, leak surveying, corrosion monitoring and dozens of other common contractor job duties. How to reliably test workers on these tasks remains a subject of debate.

"In this day and age, with these things [smart phones], you can take pictures of [test] screens," said Peter Chace, the NAPSR chair and the Public Utilities Commission of Ohio's safety program manager. "Personally, I wish operators would rely less on written tests for qualification."

New York found in late 2016 that two contract companies were cheating on written exams. In 2017, Virginia regulators have been investigating similar cheating by contractors working for some of the largest gas utilities in the state. A contractor trainer in Virginia made hard copies of what were supposed to be confidential tests and gave prospective test takers access to the materials, the state's pipeline safety program manager said at the NAPSR meeting.

Chace sees oral exams as one way of addressing some of the flaws in written tests. Oral tests not only are difficult to copy, but they also add an element of accountability to the qualification process. The test giver, rather than an inanimate document, can be held accountable for giving an unqualified person a passing score.

For Montoya, oral exams run the risk of allowing too much discretion on the part of the test administrators, who may have a "good old boy" mentality of helping workers based on relationships and not on merit. Montoya said he would want all oral exams recorded on video to allow inspectors to check participants' conduct.

Chace said he hopes NAPSR can work with federal pipeline safety regulators to strengthen the oversight of contractor qualifications, but he acknowledged that the regulatory community has not reached a consensus on what would be most effective.

"Just talking to us, you can tell it's a complicated issue," Chace said. "Our sense is that something is wrong. How to fix it? We're not sure yet."

Read this article on SNL web.

Ohio's Utica permitting shows drillers counting on Rover Pipeline to open soon

by Bill Holland

Ohio's Utica shale permitting data for September show the coming impact of Energy Transfer Partners LP's Rover Pipeline LLC.

Three producers in Belmont County, each a shipper on the 3.25 Bcf/d pipeline, received more than half of the 48 permits issued for the shale statewide in September. Overall permitting activity rebounded from the 27 Utica Shale permits issued in September of

The permitting data also showed the continued rise in activity by closely-held Ascent Resources, now the state's second largest gas producer behind Gulfport Energy Corp., according to the most recent production data reported to the state's Department of Natural Resources.

Ascent received 16 permits for wells in three counties, a four-fold increase from the four it was issued in September of 2016 and an increase over the 13 it received in August. In Belmont, the dry gas portion of the Utica, Gulfport received 10 Utica permits, Ascent got eight and Rice Energy Inc. received seven.

Shale gas drillers also kept up the consistent push for more wells in the Utica's liquids-rich window to the west and north of Belmont County as Harrison, Noble, Jefferson and Guernsey counties rounded out the most active list. Ascent is active in the liquids window as well, pulling four permits each in Guernsey and Jefferson counties.

Two other formally active Utica counties saw permitting slow to a crawl in September. Only one permit was issued in Monroe County, also part of the dry gas window to the south of Belmont and at Ohio's end of Rover, compared to 11 in September of 2016 and five in August 2017.

Carroll County, once the epicenter of the Utica's operations, also had only one permit approved. That permit headed to the Utica Shale's pioneer driller, Chesapeake Energy Corp. Chesapeake received five permits in neighboring Harrison County, to the south of Carroll, in the middle of the liquids window.

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DAILY GAS REPORT

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Selling US oil and gas assets may be tough task for BHP

by Mark Passwaters

When BHP Billiton Group announced in August that it would look to sell off its U.S. oil and gas unconventional acreage, it said it would be patient. Now the Australian giant might not have a choice in the matter, as industry observers believe its options are limited.

At the height of the unconventional boom, BHP was a major player, gobbling up more than 800,000 acres in multiple plays at a cost of \$22 billion and building a massive skyscraper in the Galleria section of Houston. After seeing oil prices collapse and their initial plans for their assets fail to come to fruition, the company now wants out.

"The shale acquisitions were poorly timed," CEO Andrew Mackenzie said bluntly. "We paid too much, and the rapid pace of early development was not optimal. When we entered the industry, our objective was to leverage our systems and scale and become an industry leader in shale, and then replicate the opportunity around the world. However, following a global endowment study about two years ago, it became apparent to us that the opportunities to replicate U.S. shale oil elsewhere did not exist."

A ready buyer for the BHP assets may not exist either. Kris Nicol, the head of Americas corporate research for Wood Mackenzie, said Oct. 2 that trying to sell to a single buyer the assets in the gas-heavy Haynesville and Fayetteville shales with the more liquids-rich Eagle Ford Shale and Permian Basin may be impossible.

"There are more difficult assets to sell, like the Fayetteville," Nicol said. "You're probably going to have to discount some assets to get someone to take them."

Nicol said BHP may look to sell off the assets individually, but the problem of finding a buyer for the Haynesville and Fayetteville holdings remains. "Much of the attraction will be in the Permian and the Eagle Ford," he said. "The gas assets probably wouldn't draw that much attention. It'll be interesting to see who the buyers are: whether the majors have an interest in growing their tight oil portfolio or whether [national oil companies] will return to North America."

Williams Capital Group Principal Gabriele Sorbara said Anadarko Petroleum Corp. would be a logical candidate to buy BHP's assets in the Permian's Delaware Basin, except that the company's plans to buy back \$2.5 billion worth of stock by the end of 2018 might preclude such a purchase. If Anadarko is out and other large independents do not step forward, BHP could find even their top U.S. asset hard to divest.

"I don't think the smaller pure-play Permian companies will try to make a go for these assets given the current state of the sector (i.e. capital markets, stock valuations and balance sheets)," Sorbara said in an email.

Nicol said the company has other options beyond an outright sale, but the odds of success are low.

"One of the other options are to take an IPO and make a different company," Nicol said. "Then you've got to plan on when to launch an IPO, preferably in a higher-priced environment. In a lower-priced environment, that can be challenge. An asset swap may be a less likely route, and there will probably fewer partners that could match up."

COMPANIES REFERENCED IN THIS ARTICLE:

Anadarko Petroleum Corp. APC
BHP Billiton Group BHP

Read this article on SNL web.



'Rip it up' deregulation could burn sector, analyst says

by Maya Weber

Setting up the possibility that the U.S. political pendulum could swing from one extreme to another, a Washington policy analyst Monday urged the natural gas sector to turn attention to writing thoughtful regulations it can live with in the future.

"When society starts burning its carbon witches, it won't matter so much who is a good witch," said Kevin Book, managing director of ClearView Energy Partners.

His remarks at the North American Gas Forum in Washington came as a Shell executive there also disclosed that the oil and gas industry is getting closer to arriving at voluntary standards for reducing methane emissions from the sector.

Speaking on a panel at the forum Monday, Book said there is little doubt about the economic case for hydrocarbons in industrialized societies but the deregulatory future depends on choices the administration makes now, even as the Trump administration held a forum Monday detailing its deregulatory push.

"You can go to an extreme, to 'rip it up deregulation,' where rules on the books today, many of which actually stimulate natural gas demand, are eliminated and replaced by nothing," he said. "Or, the administration can go a different route, [of] 'write it again' deregulation, in which the rules are written in a way the industry can abide by them, live with them and plan around them."

There may be 'no good witches'

While the second path is "extremely difficult because it requires compromise," he cautioned that "not doing it leaves the possibility [that] the next administration, the next pendulum swing, can go back the other way even more fiercely and at that point there may be no good witches."

"I would stress that right now is not a time to be deregulating as quickly as one can, but as thoughtfully as one might, and to be writing thoughtful regulations ... to set a trajectory for the future."

Book's remarks came as multiple speakers at the conference described ways they see natural gas fitting into a diverse resource mix as part of a lower-carbon future. For most companies, it makes sense to plan for a carbon-regulated future, he said.

Greg Guidry, Royal Dutch Shell plc executive vice president of unconventionals, also described a "moment of truth" for natural gas to be seen as part of a solution. To achieve that, he sees a need to encourage governments to adopt smart policies that result in reduced CO2 emissions and cleaner air, along with the need for the industry to continue to cut costs across the gas value chain and get a handle on the industry's environmental footprint, including methane emissions, and to "relentlessly" open new markets for gas.

In one notable step toward that goal, Guidry, who also chairs the American Petroleum Institute's upstream committee, said the organization is getting "very, very close" to membership sign off on a voluntary methane reduction program that could go into effect in January.

The effort would tackle the three biggest sources of fugitive emissions in the upstream sector, based on independent studies by the Environmental Defense Fund, University of Texas and others: high-bleed pneumatic controllers, liquid unloading, and leak detection and repair, he said. The standards would include commitments to a time frame for inspection and repair of leaks and to best practices around liquids unloading in shale production to reduce venting during that process.

Bid to show 'self-control' over next few years

Details are going out to the membership, but an informal poll showed unanimous support, Guidry said.

"The idea is that we demonstrate self-control and self-improvement over the next few years," he said. "If we do not demonstrate stewardship during that period of time, I dare say we probably are not going to like the subsequent time period."

Guidry said in an interview that the voluntary emissions standards would be open to non-API members, allowing it to extend to older, legacy equipment in the hands of hundreds of companies that are not part of the group. There has been a major shift in support for voluntary standards by smaller players that were previously reluctant, he said."We know if we tackle the most substantial emissions sources, we are going to see a very material reduction," he said, noting that his company's leakage rate is down to 0.25%, compared with an industry average of 0.7% to 0.8%.

The effort comes as the U.S. Environmental Protection Agency under the Trump administration has sought to pull back Obamaadministration regulations on methane emissions from new and modified sources in the oil and gas industry. The EPA's attempted stay of the rules was blocked in court, and the agency has said it intends to come back with revised regulations.

With that in flux, Guidry said the voluntary program, which would also affect existing facilities, could complement a revised regulation on new sources, pursued by the administration.

"If we don't demonstrate stewardship, then we deserve what comes next."

COMPANY REFERENCED IN THIS ARTICLE:

Royal Dutch Shell plc

RDSA

Read this article on SNL web.

Industry heavyweights ask FERC to move on PennEast Pipeline

by Ximena Mosqueda-Fernandez

Two American Petroleum Institute affiliates asked the Federal Energy Regulatory Commission to expedite approval of the 1.1-Bcf/d PennEast Pipeline Company LLC natural gas transportation project between Pennsylvania and New Jersey.

Letters filed on Oct. 2 by the New Jersey Petroleum Council and the Associated Petroleum Industries of Pennsylvania voiced support for the proposed 36-inch-diameter, 120-mile pipeline from Luzerne County, Pa., to Mercer County, N.J. The industry advocates said the project would expand market access for customers who want access to Appalachian shale gas supplies, and it would bolster the economy through new jobs, wages and tax revenue.

"We respectfully request FERC to act now, and ensure this project can move forward, to realize the economic and environmental benefits PennEast will bring to working families and businesses in our region," New Jersey Petroleum Executive Director Jim Benton said in his letter.

"After months of delay and with a reinstated quorum, we urge swift action by the commission to consider and approve this important project," said Stephanie Catarino Wissman, executive director for the Associated Petroleum Industries of Pennsylvania.

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The pipeline project has received its share of criticism from environmental groups and landowners. In her own letter, a New Jersey resident asked FERC to consider that the purported need and economic benefits are exaggerated.

"An expedited review of the legal public record of this proposed project is ill-advised when so many landowners and so much taxpayer supported public land hangs in the balance of condemnation," Lorraine Crown said. "A robust examination of the record as required by [the National Environmental Policy Act] should be the only con-

FERC staff issued a positive final environmental impact statement on April 7 for the entire pipeline project. The Pennsylvania Department of Environmental Protection granted a water permit in February. And in September, a final local permit was issued for the project's compressor station in a township in Carbon County, Pa.

The project is a joint venture of Enbridge Inc.'s Spectra Energy Partners LP, Southern Co. Inc's Southern Gas Co., New Jersey Resources Corp.'s NJR Pipeline Co., South Jersey Industries Inc.'s SJI Midstream and UGI Corp.'s UGI Energy Services. (FERC docket CP15-

COMPANIES REFERENCED IN THIS ARTICLE:

Enbridge Inc.	ENE
New Jersey Resources Corp.	NJR
PennEast Pipeline Company LLC	
South Jersey Industries Inc.	SJI
Southern Co. Inc	
Southern Gas Co.	
Spectra Energy Partners LP	SEP
UGI Corp.	UG
UGI Energy Services	

BIndustry Document: Letter from Jim Benton

Pennsylvania

Read this article on SNL web.

Magellan Midstream Partners completes \$500M senior notes offering

by Miguel Angel Cordon

Magellan Midstream Partners LP completed its offering of \$500 million of its 4.20% senior notes due 2047.

Interest on the notes are payable on April 3 and Oct. 3 of each year starting April 3, 2018. The notes will mature on Oct. 3, 2047, according to a Form 8-K filed Oct. 3.

The partnership may redeem some or all the notes prior to April 3, 2047, at a redemption price that includes a make-whole premium. Magellan Midstream Partners may also redeem the notes on or after April 3, 2047, at 100% of the price of the principal amount of the notes to be redeemed.

The partnership expects to use the net proceeds from the offering to repay borrowings outstanding under its commercial paper pro-

Market Intelligence

gram, with any remaining amount to be used for general partnership purposes.

COMPANY REFERENCED IN THIS ARTICLE:

Magellan Midstream Partners LP

MMP

■8-K: Magellan Midstream Partners LP (MMP)

Read this article on SNL web.

Chevron board member resigns

by Miguel Angel Cordon

Jon Huntsman Jr. resigned from Chevron Corp.'s board, effective Sept. 28.

His resignation follows the confirmation of his nomination by the United States Senate Foreign Relations Committee as the United States Ambassador to Russia, according to an Oct. 3 SEC filing.

COMPANY REFERENCED IN THIS ARTICLE:

Chevron Corp.

■8-K: Chevron Corp.

Read this article on SNL web.

Sempra continued

disagreed with Simões' characterization of Panama Canal operations. According to Feygin, 40% of volumes from Cheniere's Sabine Pass LNG export terminal in Louisiana have passed through the canal.

"We are a very satisfied and successful user," Feygin said.

When the expanded Panama Canal opened in June 2016, the U.S. LNG export industry sounded a sigh of relief. Shorter routes meant reduced shipping costs and less LNG evaporating in a process known as "boil-off." Citi Research estimated at the time that exporting LNG cargoes through the Panama Canal could save "up to \$.70/MMBtu on a roundtrip Gulf-Japan voyage."

But Simões said scheduling difficulties and other challenges are disrupting that vision. A one-day delay for a ship waiting to go through the Panama Canal can cost the owner about \$45,000, he said. Thirty-four percent of ships have experienced a one-day delay, and about 10% have been set back three days, according to Simões. Some tankers are forced to travel around South America, adding days to their trip and causing more of the cargo to boil off, he said.

"This is something that needs to be addressed ... or the U.S. will not be able to reach the largest growing market, which is Asia and the Pacific Rim, through the Panama Canal," Simões said.

Sempra is developing the Cameron LNG export terminal under construction in Louisiana as part of a joint venture with Engie, Mitsui & Co. Ltd. and Japan LNG Investments LLC, which are also the project's customers.

The Cameron LNG partners are in contact with the Panama Canal Authority, and Simões said others in the U.S. LNG export industry are working with the Trump administration on ways to improve canal operations.



"It is a multipronged effort," Simões said. "And it's not just us. Everybody in the LNG business is pursuing making sure the Panama Canal functions in the way it was designed to function."

COMPANIES REFERENCED IN THIS ARTICLE:

Cheniere Energy Inc. LNG

Engie

Japan LNG Investments LLC

Mitsui & Co. Ltd. 80310
Sempra Energy SRE

Sempra LNG & Midstream

Read this article on SNL web.

'De facto subsidy' continued

"I'm not quite sure what happened between August and last Friday, but clearly something did, and we're very troubled by the proposed notice that came out," Dena Wiggins, the Natural Gas Supply Association's president and CEO, said Oct. 2 at the North American Gas Forum in Washington, D.C.

Like others who spoke on and off the record to S&P Global Market Intelligence after the announcement, Susan Ginsberg, the Independent Petroleum Association's vice president of oil and gas regulatory affairs, said she was surprised that a Republican administration "would believe that mandated generation requirements are preferable to letting the markets work, particularly in light of the grid study."

"One would think a Republican administration would understand that natural gas is reliable, with lower prices, and question why you would spring this on [FERC]," Ginsberg said in an Oct. 2 interview.

The proposal "fractures Republican energy allegiances," analyst company FBR & Co. said in a recent note. FBR said the proposal could create economic and ideological backlash, with Energy Secretary Rick Perry and the Trump administration splintering off from traditional Republican support for competitive markets.

"A de facto subsidy for coal and nuclear will inspire pushback from the oil and gas industry, in addition to renewable power and environmentalists," the note said. "Raising the price of electricity to allow these sources to compete with lower cost resources will attract the attention of energy consuming industries such as industrial manufacturing."

Getting engaged

FERC opened the public comment period for the proposed rule-making Oct. 2, which outlines a tight window for work. Initial comments are due Oct. 23, and reply comments need to be submitted by Nov. 7, FERC said.

Marty Durbin, chief strategy officer at the American Petroleum Institute, said extending that timeline is the first plan of attack for the gas industry. There is no reason for a quick rulemaking to fix "an emergency that doesn't exist," Durbin said.

API and others in the gas industry will also be working to build relationships with the new mix of FERC commissioners.

"There's always room for improvement on how various attributes [of fuels] get valued," Durbin said. "The major difference [with the DOE] is that we think the market is the best choice to drive fuel decisions."

API is lining up allies to fight for a market-based approach to reliability, Durbin said. Looking to involve manufacturers and other sectors that benefit from lower power prices and electricity reliability. API is pushing for FERC to spend more time evaluating grid issues.

Heights Securities took FERC's public comment structure as a sign that it may try to stick to the DOE's prescribed 60-day review period. Heights Securities analysts said FERC's plan to take public comment may also indicate that the commission is not trying to adopt the DOE's policy suggestions to the letter but, rather, is working on expediting existing market reform plans.

Midstream impact

Ginsberg, Wiggins and the Natural Gas Supply Association's Patricia Jagtiani all remarked on the DOE grid reliability study's conclusion that gas has not had a destabilizing effect on the grid, making the agency's latest policy move particularly unexpected.

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Wednesday, October 4, 2017

Jagtiani, NGSA's executive vice president, agreed that the Energy Department proposal effectively subsidizes nuclear and coal and could have a "domino effect" that impacts pipeline builders' ability to get more gas infrastructure in the ground. "For infrastructure, you do need the right price signals," she said in an Oct. 2 interview. "The market is always going to do a better job of coming up with the right mix rather than some type of second-guessing."

Wiggins compared the DOE notice to other industry-altering FERC orders, including order 436 from the mid-1980s, which encourage pipeline operators to offer service to both producers and end users, and order 636 from the early 1990s, which required operators to separate gas sales prices from transportation prices.

"This DOE proposal is one of the most significant energy proposals related to our industry in decades," Wiggins said. "Unquestionably, it would have significant ramifications for the functioning of competitive wholesale energy markets." (FERC docket RM18-1)

Industry Document: Notice Inviting Comments

Read this article on SNL web.



Market Story

November natural gas futures reverse early gains to settle in the red

by Jodi Shafto

Following sharp losses in the week's opening session, NYMEX November natural gas futures were near unchanged Tuesday, Oct. 3, caught amid a lack of fresh fundamentals to support sharp moves higher or lower. Efforts to move the contract higher early generated a session high at \$2.935/MMBtu, but losses ensued as the contract slipped to a \$2.880/MMBtu low and a settlement 2.1 cents lower on the day at \$2.895/MMBtu.

Lingering heat in the eastern U.S. expected through mid-October is providing an undercurrent of support for the market as demand for cooling well into the fall season could hamper storage building in the last weeks of the titular injection season.

As Oct. 31 marks the end of the titular injection season, the market was looking for a ramp up in the pace of storage injections amid cooler fall weather. Stubborn summer-like conditions in the eastern U.S. however, have limited, and are expected to continue to limit, storage builds threatening the end-of-season working gas supply level.

The latest weather outlooks from the National Weather Service show above-average temperatures gripping the eastern quarter of the country as well as California and portions of surrounding states in the West. Below-average temperatures grip the remaining portions of the country.

Longer range, the eight- to 14-day period shows the above-average temperatures shrinking slightly in the east but expanding to include a portion of the north-central U.S. and edging back from northern California while expanding to include a portion of the west central U.S.

Warming in the week to Sept. 22 stoked cooling demand and limited the weekly natural gas storage build to just 58 Bcf.

Similarly, heat in major cooling markets during the week to Sept. 29 is expected to have capped the weekly storage injection due out at 10:30 a.m. ET on Thursday, Oct. 5, to the low 50s Bcf, according to an early survey of market participants.

The working gas supply currently sits at 3,466 Bcf, or 127 Bcf below the year-ago level and 41 Bcf above the five-year average storage level of 3,425 Bcf.

Net storage injections from the traditional start of the refill season on March 31 through the latest inventory report week are 14% lower than the five-year average, according to the EIA. A continuation of this slower-than-normal pace of storage rebuilding through the balance of the refill season would bring end-of-season inventories to 3,826 Bcf, while injections at par with the five-year average would bring total storage to 3,883 Bcf at the close of the season, the EIA said.

At day-ahead markets, the price of natural gas moved for Wednesday delivery at key delivery locations varied with weather and load projections.

Transco Zone 6 NY traded about 60 cents higher to an index near \$2.45. Constraints along the pipeline combined with demand driven by warm weather helped drive the gains. Conversely, Tetco-M3 traded about 30 cents lower to an index below \$1.00.

At the benchmark Henry Hub, deals were nearly 10 cents lower on average to an index below \$2.75, Waha trades were about 15 cents lower to an index near \$2.20 and Chicago traded nearly 10 cents lower to an index near \$2.55. In the West, deals at the SoCal Border were about 15 cents lower to an index below \$2.45 while PG&E Gate traded about 5 cents higher to an index near \$3.05.

Market prices and included industry data are current as of the time of publication and are subject to change. For more detailed market data, including power, natural gas index prices, as well as forwards and futures, visit our Commodities Pages.

Wednesday, October 4, 2017

GAS INDEX (Day ahead prices for Delivery on Oct 04)

	Volume	Change				
Tunding	Wgtd.	From Oct 03, 17		Trade (\$/mmBtu)		Trading
Trading Hub	Average (\$/mmBtu)	(\$/mmBtu)	Median	Low	High	Volume (mmBtu)
Gulf Coast	(4/IIIIIDta)	(\$7IIIIIDta)	Median	2011	9	(IIIII)
Agua Dulce	2.500	-0.030	_	_	_	_
ANR Patterson LA	2.652	-0.013	2.645	2.590	2.680	113,000
Carthage	2.670	-0.050	2.670	2.670	2.670	7,300
Col Gulf Mainline	2.613	-0.034	2.628	2.563	2.650	119,700
Col Gulf Onshore	2.715	0.043	2.715	2.715	2.715	10,000
FGT Z 1	2.750	-0.090	2.750	2.750	2.750	5,600
FGT Z 2	2.770	-0.010	2.750	2.750	2.730	5,000
FGT Z 3	2.789	0.007	2.789	2.788	2.790	10,000
Henry Hub	2.727	-0.094	2.733	2.715	2.770	82,400
Houston Ship Channel	2.880	0.040	2.733	2.713	2.770	02,400
Katy	2.899	0.086	2.900	2.840	2.960	138,100
NGPL Gulf Line	2.490	-0.130	2.490	2.490	2.490	7,500
NGPL South TX	2.803	0.128	2.760	2.760	2.850	16,400
Pine Prairie	2.673	-0.028	2.675	2.670	2.680	55,000
Sonat	2.704	0.005	2.710	2.680	2.735	70,700
TETCO ELA	2.730	0.035	2.720	2.700	2.760	35,500
TETCO ETX	2.670	-0.051	2.675	2.660	2.735	41,000
TETCO LTX	2.620	0.010	2.620	2.620	2.620	1,600
TETCO M1 24 III	2.700	-0.030	2.020	2.020	2.020	1,000
TETCO MT 30 III	2.800	0.048	2.800	2.800	2.810	70,000
TETCO 31X	2.780	0.048	2.780	2.780	2.780	5,200
Texas Gas LA	2.710	0.030	2.760	2.700	2.760	3,200
Texas Gas Z 1	2.650	0.040	-	-	-	-
TGP Z 0	2.712	0.040	2.710	2.670	2.720	10,100
TGP Z 1	2.657	-0.043	2.650	2.630	2.760	154,100
Transco Z 1	2.810	0.075	2.030	2.030	2.700	134,100
Transco Z 2	2.760	0.050	-	_	_	
Transco Z 3	2.723	-0.009	2.720	2.705	2.740	97,900
Transco Z 4	2.735	0.001	2.740	2.710	2.768	57,900
Transco Z 5	2.825	-0.015	2.825	2.825	2.825	8,200
Trunkline ELA	2.600	-0.092	2.600	2.600	2.600	2,000
Trunkline WLA	2.700	-0.030	2.000	2.000	2.000	2,000
Trunkline Z 1A	2.638	-0.019	2.638	2.635	2.640	20,000
	2.038	-0.019	2.036	2.033	2.040	20,000
Mid-continent						
Alliance	2.583	-0.052	2.568	2.550	2.655	98,000
ANR ML7	2.590	-0.030	<u>-</u>	-	-	-
ANR-SW	2.348	-0.043	2.350	2.340	2.350	30,300
Centerpoint East	2.527	0.011	2.560	2.470	2.650	22,300
Centerpoint No-So	2.500	-0.090	-	-	-	-
Centerpoint West	2.510	-0.040	-	-	-	-
Chicago	2.557	-0.074	2.565	2.500	2.625	420,500
Cons Energy Citygate	2.635	-0.055	2.635	2.610	2.660	132,200
Delivery So Star	2.535	0.167	2.470	2.340	2.600	40,000
Emerson	1.713	0.008	1.720	1.480	1.770	90,037
Enogex E Zone Pool	2.600	0.260	-	-	-	-
Enogex W Zone Pool	2.550	0.330	2.550	2.550	2.550	3,000
Michcon Citygate	2.633	-0.070	2.630	2.610	2.665	321,900
NGPL Amarillo	2.475	-0.016	2.480	2.450	2.500	31,000
NGPL Forgan OK	2.433	-0.046	2.435	2.430	2.435	87,293
NGPL TX-OK	2.670	0.020	2.670	2.670	2.670	40,000
NNG Demarc	2.520	0.005	2.520	2.475	2.525	38,000
NNG Ventura	2.537	0.007	2.540	2.488	2.630	54,538
ONG at Tulsa	2.258	-0.024	2.280	2.190	2.330	81,300
PEPL	2.315	-0.096	2.310	2.310	2.320	14,800
Rex East	2.360	-0.066	2.320	2.300	2.560	193,100
St. Clair	2.641	-0.047	2.649	2.610	2.680	98,000

GAS INDEX (Day ahead prices for Delivery on Oct 04) continued

	Volume	Change _					
Trading	Wgtd. Average	From Oct 03, 17		Trade (\$/mmBtu)		Trading Volume	
Hub	(\$/mmBtu)	(\$/mmBtu)	Median	Low	High	(mmBtu)	
Northeast							
Algon Gates	2.638	0.481	2.625	2.500	2.800	39,348	
Dawn Ontario	2.650	-0.051	2.660	2.620	2.700	240,400	
Dominion N	0.493	-0.057	0.493	0.493	0.493	17,900	
Dominion S	0.518	-0.199	0.503	0.320	0.670	125,400	
Iroquois Waddington	2.707	-0.073	2.710	2.700	2.720	15,000	
Iroquois Z 2	2.770	-0.060	<u>-</u>	-	-		
Lebanon	2.547	-0.093	2.510	2.500	2.635	117,100	
Leidy	0.546	-0.084	0.560	0.470	0.750	56,965	
Millennium Pipeline	0.550	-0.030	-	-	-	30,303	
Niagara	2.660	-0.060	_	_	_		
Parkway Ontario	2.658	-0.081	2.658	2.658	2.658	4,900	
TCO Pool	2.328	-0.043	2.310	2.303	2.440	29,000	
TETCO M2	0.478	-0.239	0.480	0.410	0.620	144,000	
TETCO M2	0.478	-0.426	0.950	0.750	1.023	223,434	
TGP Dracut	2.700	0.350	0.930	0.730	1.023	223,434	
TGP Z 4 200L	1.628	0.030	1.650	1.570	1.710	83,227	
TGP Z 4 Marcellus	0.650	0.100	1.030	1.570	1.710	03,227	
			1 040	1 630		24.040	
TGP Z 5	1.824	0.211	1.940	1.630	2.400	34,849	
TGP Z 5 200L	2.300	0.339	2.300	2.300	2.300	20,000	
TGP Z 6	2.650	0.350	2.650	2.650	2.650	2,500	
Transco Z 6 non-NY	2.302	0.282	2.350	2.100	2.470	55,649	
Transco Z 6 NY	2.462	0.612	2.465	2.440	2.470	22,000	
West							
AECO Storage Hub	1.048	-0.202	1.025	0.900	1.330	399,265	
Cheyenne Hub	2.345	-0.060	2.345	2.345	2.345	4,300	
CIG Rocky Mountains	2.528	-0.077	2.500	2.330	2.620	119,900	
El Paso Bondad	2.210	-0.005	2.210	2.210	2.210	5,000	
El Paso Permian	2.082	-0.110	2.020	2.010	2.250	129,500	
El Paso S Mainline	2.453	-0.227	2.455	2.450	2.460	15,000	
El Paso San Juan	2.210	0.042	2.210	2.200	2.220	27,023	
El Paso Waha Pool	2.242	0.055	2.230	2.190	2.280	60,769	
Empress	1.857	-0.109	1.840	1.475	2.000	177,339	
Kern River	2.360	-0.059	2.360	2.350	2.375	114,600	
Kern River Station	2.483	-0.067	2.480	2.480	2.490	20,000	
Kingsgate	2.170	0.020	-	-	-	,,	
NoCal Border Malin	2.391	-0.068	2.375	2.370	2.420	42,500	
NW Dom SJ Basin	2.300	-0.050	2.373	2.57 0	-	12,300	
NW Opal WY	2.356	-0.077	2.350	2.350	2.380	13,100	
NW S of Green River	2.463	-0.035	2.500	2.300	2.520	53,800	
NW Stanfield OR	2.320	-0.040	2.500	2.500	2.520	33,000	
NW Sumas	2.325	-0.054	2.325	2.318	2.335	63,400	
PG&E Gate	3.076	0.035	3.080	3.040			
PG&E South			3.000	3.040	3.250	78,900	
	2.590	0.235	-	-	-	•	
Questar	2.320	-0.080	2 450	2 420	- 2	120 200	
SoCal Border	2.443	-0.164	2.450	2.430	2.570	128,200	
SoCal Citygate	3.265	-0.031	3.270	3.200	3.300	33,400	
TransW E of Thoreau	2.182	0.046	2.180	2.180	2.185	17,600	
Waha Hub	2.143	-0.159	2.190	2.000	2.250	80,200	
West Coast Sta 2	0.851	0.222	0.850	0.785	0.910	48,963	
White River Hub	2.313	-0.062	2.300	2.300	2.320	27,400	

For today's NYMEX Gas Futures Chart, visit http://www.snl.com/interactivex/NYMEXGasFutures.aspx

SNL Gas Spark Spread

Day ahead Prices for Delivery Oct 03, 17												
·	•	Gas Avg.	Power Avg.	Spar	k Spread	ds at Vario	us Heat R	ates (\$)	Implied			
Gas Location	Power Location	(\$/mmBtu)	(\$/MWH)	7,000	8,000	10,000	12,000	14,000	Heat Rate			
Henry Hub	Entergy	2.82	39.25	19.50	16.68	11.04	5.40	-0.24	13,913.51			
TCO Pool	Indiana	2.37	40.25	23.65	21.28	16.54	11.80	7.06	16,975.96			
NW Sumas	Mid-C	2.38	23.75	7.10	4.72	-0.04	-4.80	-9.56	9,983.19			
NNG Demarc	Minnesota	2.52	33.50	15.90	13.38	8.35	3.32	-1.71	13,320.08			
Chicago	N. Illinois (CE)	2.63	39.50	21.08	18.45	13.19	7.93	2.67	15,013.30			

Gas Location	Power Location	(\$/mmbtu)	(⊅/IVIVV □)	7,000	8,000	10,000	12,000	14,000	neat Kate
Henry Hub	Entergy	2.82	39.25	19.50	16.68	11.04	5.40	-0.24	13,913.51
TCO Pool	Indiana	2.37	40.25	23.65	21.28	16.54	11.80	7.06	16,975.96
NW Sumas	Mid-C	2.38	23.75	7.10	4.72	-0.04	-4.80	-9.56	9,983.19
NNG Demarc	Minnesota	2.52	33.50	15.90	13.38	8.35	3.32	-1.71	13,320.08
Chicago	N. Illinois (CE)	2.63	39.50	21.08	18.45	13.19	7.93	2.67	15,013.30
Algon Gates	Nepool-Mass	2.16	24.50	9.40	7.24	2.93	-1.38	-5.70	11,358.37
PG&E Gate	NP-15	3.04	34.50	13.21	10.17	4.09	-1.99	-8.07	11,344.95
Niagara	NY Zone A	2.72	22.25	3.21	0.49	-4.95	-10.39	-15.83	8,180.15
Iroquois Z 2	NY Zone G	2.83	23.75	3.94	1.11	-4.55	-10.21	-15.87	8,392.23
Transco Z 6 NY	NY Zone J	1.85	29.00	16.05	14.20	10.50	6.80	3.10	15,675.68
Dawn Ontario	Ontario	2.70	15.50	-3.41	-6.11	-11.51	-16.91	-22.31	5,738.62
El Paso San Juan	Palo Verde	2.17	28.00	12.82	10.66	6.32	1.98	-2.35	12,915.13
TETCO M3	PJM West	1.31	32.00	22.84	21.54	18.92	16.30	13.69	24,464.83
SoCal Border	SP-15	2.61	33.00	14.75	12.14	6.93	1.72	-3.50	12,658.23

Dominion Energy Index

		Forecast or Actual	Above/Bel	ow Normal			Forecast or Actual	Above/Bel	ow Normal
Day	Date	Index	Δ	△%	Day	Date	Index	Δ	△%
UNITED STA	TES				NEW ENGLA	ND			
Monday	Oct 02, 17	21.0	-2.4	-10.1	Monday	Oct 02, 17	6.6	-5.2	-44.5
Tuesday	Oct 03, 17	24.7	1.9	8.5	Tuesday	Oct 03, 17	6.3	-5.4	-46.5
Wednesday	Oct 04, 17	25.6	3.6	16.6	Wednesday	Oct 04, 17	19.7	9.7	97.2
Thursday	Oct 05, 17	27.3	6.1	28.6	Thursday	Oct 05, 17	27.1	17.8	189.8
Friday	Oct 06, 17	26.9	6.3	30.8	Friday	Oct 06, 17	18.7	10.1	117.3
Saturday	Oct 07, 17	27.0	7.1	35.9	Saturday	Oct 07, 17	12.2	4.8	63.9
Sunday	Oct 08, 17	27.6	8.4	43.6	Sunday	Oct 08, 17	18.4	11.4	162.6
Monday	Oct 09, 17	25.1	6.5	35.3	Monday	Oct 09, 17	18.3	11.7	176.5
GREAT LAKE	:s				PACIFIC				
Monday	Oct 02, 17	17.5	5.3	43.9	Monday	Oct 02, 17	16.1	-3.9	-19.4
Tuesday	Oct 03, 17	26.8	15.5	137.4	Tuesday	Oct 03, 17	16.8	-2.9	-14.7
Wednesday	Oct 04, 17	22.2	12.4	127.8	Wednesday	Oct 04, 17	20.0	0.5	2.8
Thursday	Oct 05, 17	20.1	11.5	133.9	Thursday	Oct 05, 17	22.8	4.0	21.3
Friday	Oct 06, 17	13.7	6.1	80.0	Friday	Oct 06, 17	25.8	7.7	42.4
Saturday	Oct 07, 17	15.7	9.3	145.4	Saturday	Oct 07, 17	22.3	4.6	26.1
Sunday	Oct 08, 17	23.8	18.2	324.9	Sunday	Oct 08, 17	21.2	4.2	25.0
Monday	Oct 09, 17	18.1	13.9	330.6	Monday	Oct 09, 17	20.3	3.8	22.8
GREAT PLAII					ROCKY MOU				
Monday	Oct 02, 17	21.8	6.1	39.2	Monday	Oct 02, 17	20.6	8.9	75.4
Tuesday	Oct 02, 17	21.1	6.6	45.3	Tuesday	Oct 02, 17	22.6	12.2	118.2
Wednesday	Oct 04, 17	12.1	-1.5	-10.7	Wednesday	Oct 04, 17	8.3	-0.7	-8.0
Thursday	Oct 05, 17	13.3	0.3	2.4	Thursday	Oct 05, 17	5.5	-2.3	-29.0
Friday	Oct 06, 17	14.3	1.5	11.9	Friday	Oct 06, 17	2.9	-3.2	-52.3
Saturday	Oct 07, 17	18.4	5.6	43.9	Saturday	Oct 07, 17	7.0	1.1	19.6
Sunday	Oct 08, 17	21.2	8.3	65.1	Sunday	Oct 08, 17	2.9	-1.3	-30.4
Monday	Oct 09, 17	15.8	3.5	28.4	Monday	Oct 09, 17	17.7	14.0	381.5
LOWER MISS					SOUTH ATLA				
Monday	Oct 02, 17	22.8	-11.2	-32.9	Monday	Oct 02, 17	24.7	-9.7	-28.2
Tuesday	Oct 03, 17	35.0	1.5	4.5	Tuesday	Oct 03, 17	31.4	-2.6	-7.5
Wednesday	Oct 04, 17	38.8	6.0	18.3	Wednesday	Oct 04, 17	33.8	0.4	1.1
Thursday	Oct 05, 17	38.7	6.6	20.4	Thursday	Oct 05, 17	35.0	2.2	6.7
Friday	Oct 06, 17	42.5	11.2	35.6	Friday	Oct 06, 17	36.5	4.2	13.2
Saturday	Oct 07, 17	38.3	7.8	25.5	Saturday	Oct 07, 17	36.4	4.7	15.0
Sunday	Oct 08, 17	34.8	5.0	16.7	Sunday	Oct 08, 17	30.1	-1.1	-3.5
Monday	Oct 09, 17	33.9	4.8	16.7	Monday	Oct 09, 17	27.2	-3.4	-11.1
MID-ATLAN	TIC				SOUTHWEST	Т			
Monday	Oct 02, 17	15.6	-2.8	-15.2	Monday	Oct 02, 17	34.2	-3.0	-8.1
Tuesday	Oct 03, 17	18.8	1.2	6.8	Tuesday	Oct 03, 17	31.4	-5.5	-14.8
Wednesday	Oct 04, 17	25.2	8.3	49.0	Wednesday	Oct 04, 17	31.5	-4.9	-13.5
Thursday	Oct 05, 17	29.0	13.2	84.0	Thursday	Oct 05, 17	34.8	-1.3	-3.7
Friday	Oct 06, 17	24.1	8.8	58.1	Friday	Oct 06, 17	41.6	5.8	16.3
Saturday	Oct 07, 17	24.6	10.0	68.4	Saturday	Oct 07, 17	43.0	8.1	23.3
Sunday	Oct 08, 17	26.6	12.6	90.1	Sunday	Oct 08, 17	42.3	7.9	22.8
Monday	Oct 09, 17	22.7	9.6	72.6	Monday	Oct 09, 17	39.5	5.7	16.7
•	•				•	•			

The Dominion Energy Index, maintained by The Dominion Energy Services Corp., measures actual and forecast demand for heating and cooling energy. It is designed to be more precise than the current heating degree days and cooling degree days indexes. The first reading in each regional list is the actual energy demand measured the day the forecast is made. The forecast energy demand for the following week for a given region follows the actual reading in the table. "Normals" for each region for each day have been calculated using 30-year weather averages.

EIA Gas Storage Report

Week Ending	East	% Chg Week	% Chg 5-yr avg	Week Ending	Pacific	% Chg Week	% Chg 5-yr avg	Week Ending	Nonsalt	% Chg Week	% Chg 5-yr avg
09/22/2017	848	1.8	1.3	09/22/2017	307	2.3	-9.4	09/22/2017	825	0.5	0.4
09/15/2017	833	3.0	2.5	09/15/2017	300	1.4	-10.7	09/15/2017	821	1.7	1.6
09/08/2017	809	3.6	2.0	09/08/2017	296	0.0	-11.6	09/08/2017	807	0.9	1.5
09/01/2017	781	4.3	0.8	09/01/2017	296	-1.7	-11.1	09/01/2017	800	0.4	1.8
	Midwest				South Central	Total					
09/22/2017	964	2.8	0.6	09/22/2017	1,130	0.4	3.7	09/22/2017	3,466	1.7	1.2
09/15/2017	938	3.5	1.3	09/15/2017	1,125	3.0	5.5	09/15/2017	3,408	2.9	2.0
09/08/2017	906	3.9	1.1	09/08/2017	1,092	2.4	4.1	09/08/2017	3,311	2.8	1.3
09/01/2017	872	3.8	0.8	09/01/2017	1,066	0.6	2.5	09/01/2017	3,220	2.1	0.5
	Mountain				Salt						
09/22/2017	217	2.4	7.4	09/22/2017	305	0.3	14.2				
09/15/2017	212	1.9	6.5	09/15/2017	304	6.7	17.4				
09/08/2017	208	1.5	6.7	09/08/2017	285	7.1	12.2				
09/01/2017	205	0.0	7.3	09/01/2017	266	1.5	5.1				

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Stock Highlights

Tuesday

Рa	s t	W	e	e	k
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				Total					Total
Company	Ticker	Close	Volume	Return %	Company	Ticker	Close	Volume	Return %
RANKED BY TOTAL R	ETURN GA	IN			RANKED BY TOTAL RE	TURN GA	IN		
Broadwind Energy	BWEN	3.91	325,303	15.3	Broadwind Energy	BWEN	3.91	563,007	23.3
Vivint Solar	VSLR	3.65	493,293	5.8	American Supercond	AMSC	4.69	485,153	16.4
EQT GP Holdings	EQGP	30.35	145,898	4.4	AE Industries	AEIS	82.75	2,571,561	14.2
RANKED BY TOTAL R	ETURN LOS	SS			RANKED BY TOTAL RE	TURN LO	SS		
Spark Energy	SPKE	14.50	107,470	-2.4	SCANA Corp	SCG	48.55	17,944,648	-12.6
Calumet Specialty	CLMT	8.45	434,669	-2.3	Spark Energy	SPKE	14.50	597,179	-9.4
Amtech Systems	ASYS	12.37	202,161	-2.1	Noble Midstream	NBLX	51.50	590,940	-5.8
				Volume as					Volume as

			,	/olume as				•	Volume as
		Price		% of Avg			Price		% of Avg
Company	Ticker	% Chng	Volume	(1 Year)	Company	Ticker	% Chng	Volume	(1 Year)
VOLUME HIGHLIGHTS					VOLUME HIGHLIGHT	S			
Energy Transfer	ETP	-0.5	15,749,870	368.1	SCANA Corp	SCG	-12.6	17,944,648	335.7
Engy Trnsfr Eqty	ETE	1.4	16,046,276	284.3	EnterpriseProducts	EPD	-1.2	56,457,700	245.5
Vistra Energy Corp	VST	0.0	3,312,959	269.9	Amtech Systems	ASYS	6.8	1,053,040	233.3

Note: Institutions ranked in the above tables must be traded on a major exchange, have a closing price greater than \$3, and daily volume greater than 1,000 shares.

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