



## U.S. natural gas sinks 5% on warm Midwest temperatures



Investing.com - U.S. natural gas futures plunged on Tuesday, adding to losses from the prior session as warmer-than-normal weather in key gas-consuming regions in the U.S. dampened demand expectations for the heating fuel. Natural gas for December delivery on the New York Mercantile Exchange fell by as much as 5% to a session low of \$2.867 per million British thermal units. It was last at \$2.892 by 10:40AM ET (14:40GMT), down 13.4 cents, or 4.4%. A day earlier, they lost 7.9 cents, or 2.54%.

Total natural gas in storage currently stands at 3.909 trillion cubic feet, according to the U.S. Energy Information Administration, 1.3% higher than levels at this time a year ago and 4.7% above the five-year average for this time of year.

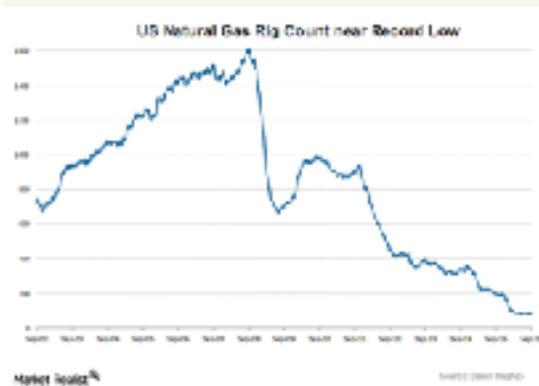
Natural gas futures have been under heavy selling pressure in recent days as warmer-than-average weather in key gas-consuming regions in the U.S. ignited speculation that a mild winter will curtail demand for the heating fuel and leave a glut of it in storage, weighing on prices next year. Gas futures often reach a seasonal low in October, when mild weather reduces demand, before recovering in the winter, when heating-fuel use peaks.

<http://www.investing.com/news/commodities-news/u.s.-natural-gas-sinks-5-on-warm-midwest-temperatures-436534>  
(Investing.com) 11/1/16

## US Natural Gas Rig Count Rose Again: What Does It Mean for Prices?

On October 28, 2016, Baker Hughes (BHI) will release its weekly US natural gas rig count. On October 21, 2016, Baker Hughes (BHI) reported that the US natural gas rig count rose by three to 108 rigs between October 14 and October 21, 2016. The rig count rose 2.9% week-over-week, but fell 44.0% year-over-year.

US natural gas prices have risen 7.9% year-to-date. For more on natural gas prices, read part one and part two of this series. Higher natural gas prices have a positive impact on drilling activity. However, a rise in drilling could mean more production, which could eventually pressure prices lower.



US natural gas rig count peaked at 1,606 rigs on September 12, 2008. On the other hand, it hit a low of 81 rigs in the week ended August 26, 2016. The gas rig count has fallen 93.2% from its peak level.

The EIA (U.S. Energy Information Administration) estimates that US natural gas production will fall in the seven major shale regions by 178 million cubic feet per day to 45,958 million cubic feet per day in November 2016 compared to the previous month. Production is expected to fall mainly in the Eagle Ford and Niobrara shale regions during the same period.

<http://marketrealist.com/2016/10/us-natural-gas-rig-count-rose/>

By Gordon Kristopher (Market Realist) 10/28/16

### U.S. Gain Opens New CNG Fueling Station in Pennsylvania

U.S. Gain, the compressed natural gas (CNG) division of U.S. Venture Inc., has announced the opening of a new CNG station built in partnership with “O” Ring CNG Fuel Systems LP, a full-service global CNG fuel solutions company based in western Pennsylvania.



U.S. Gain says the station, located at 119 Doc Smith Dr., Somerset, Pa., will be branded as “O” Ring CNG/GAIN Clean Fuel and added to GAIN Clean Fuel’s nationwide infrastructure of CNG stations.

“CNG is becoming a much more widely used alternative to diesel for fleets,” says “O” Ring CEO Robert Beatty. “It’s a cleaner-burning alternative to diesel and domestically produced. Fleets are also attracted to the stability of natural gas pricing as compared to diesel, making it an economically feasible alternative.”

As reported, the station will provide fleets and the general public with access to CNG and establishes another strategically located GAIN Clean Fuel CNG fueling site.

“This is the sixth site we’ve developed with “O” Ring, and we’re excited about continuing our collaboration on this site,” says Bill Renz, general manager for U.S. Gain. “This location builds upon the strong GAIN Clean Fuel network in the Northeast United States and will provide additional CNG access for both regional and national carriers.”

<http://ngtnews.com/u-s-gain-opens-new-cng-fueling-station-in-pennsylvania/>

Posted by Lauren Tyler (NGT News) 10/25/16

### Altech-Eco Chooses Cobham Type 4 CNG Cylinders

Cobham, which designs and produces high-performance composite pressure vessels and hybrid integrated structures for alternative energy and other applications, has announced that Altech-Eco Corp., one of the premier manufacturers of fuel conversion systems for light-duty vehicles, has chosen Cobham as a Type 4 compressed natural gas (CNG) cylinder preferred supplier.



“With Cobham coming on the market and offering CNG cylinders with no minimum amounts, quick turnaround times and competitive prices, they are helping the natural gas vehicle industry grow and allowing us to be more flexible in meeting the needs of our customers,” says Miles George, vice president of Altech-Eco.

<http://ngtnews.com/altech-eco-chooses-cobham-type-4-cng-cylinders/>

Posted by Lauren Tyler (NGT News) 10/26/16



## Siemens Celebrates Commissioning of Panda Liberty Power Project in Pennsylvania



Source: <http://www.elp.com/articles/2016/10/panda-power-siemens-to-build-marcellus-shale-gas-power-plant.html>

Siemens and Panda Power Funds today celebrated the commissioning of the Panda Liberty Power Project in Bradford County, Pennsylvania – an 829 megawatt (MW) natural gas-fueled power plant featuring Siemens advanced H-class gas turbines. Harnessing Marcellus Shale gas, “Liberty” is the first of two new Panda Power Funds generating stations to be commissioned in Pennsylvania this fall, with the Patriot Power Project in Clinton Township set to be dedicated in November. Combined, the two projects will be able to supply power for about two million households in large regional power markets, including Pennsylvania.

“Designed to harness gas from the Marcellus Shale, this state of the art power plant represents the next chapter in Pennsylvania’s energy renaissance,” said Todd Carter, Chief Executive Officer of Panda Power Funds. “Working with Siemens over the last several years has proven they ‘walk the talk’ with their customer service and technological innovation, helping to bring online a world-class power asset in the Keystone State. We are very pleased to reach another important milestone in our collaboration with Siemens.”

The H-class technology in a single-shaft configuration, used in the “Liberty” and “Patriot” power stations, means that both the gas turbine and steam turbine are arranged on one shaft and drive the same generator. This design offers economic advantages as a result of low investment costs, excellent efficiency and a high degree of flexibility during operation.

The “Liberty” power project is one of seven for Siemens and Panda Power Funds in the United States, totaling over 5,800 MW. In addition to selecting Siemens to supply three Flex-Plants in Texas, Panda Power Funds chose Siemens to deliver three CCPPs in Pennsylvania – including “Liberty” and “Patriot” – and one CCPP in Virginia.

<http://www.newson6.com/story/33497733/siemens-celebrates-commissioning-of-panda-liberty-power-project-in-pennsylvania>  
(BUSINESS WIRE) (News on 6) 10/27/16

## L.A. Metro Receives \$10.5M Federal Grant for 30 “Near-Zero” Emission CNG Buses

A new \$10.5-million U.S. Department of Transportation grant will fund the purchase of 30 next-generation, near zero-emission compressed natural gas buses to run in the South Bay and Gateway Cities region, the Los Angeles County Metropolitan Transportation Authority (Metro) announced recently.

Combined with Metro’s \$10.5-million match, a total of \$21 million will be invested to replace aging diesel buses that now operate on seven Metro contracted bus lines: the 125, 128, 130, 205, 232, 607 and 626. Grant funding will also pay for refueling facilities, as well as an innovative workplace development program to give workers new training opportunities to operate and maintain these and other buses around the county.

[http://www.masstransitmag.com/press\\_release/12273300/metro-receives-105-million-federal-grant-for-30-near-zero-emission-compressed-natural-gas-buses-for-south-bay-gateway-cities-bus-lines](http://www.masstransitmag.com/press_release/12273300/metro-receives-105-million-federal-grant-for-30-near-zero-emission-compressed-natural-gas-buses-for-south-bay-gateway-cities-bus-lines)

(Los Angeles County Metropolitan Transportation Authority -Metro) (Mass Transit) 10/26/16

### **PA: Westmoreland County Bus Fleet Set for Fuel Conversion**

Westmoreland County Transit Authority will begin converting its bus fleet next year to compressed natural gas as part of a statewide project. Authority board members this week unanimously approved a contract with PennDOT to allow for the installation of natural gas pumps by summer at the agency's Hempfield maintenance facility.

"The conversion should keep our fuel costs stable, and it is cleaner burning than diesel," authority Executive Director Alan Blahovec said.

PennDOT last year launched an \$84.5 million project with Salt Lake City, Utah-based Trillium CNG to convert 29 public transportation centers throughout Pennsylvania to natural gas fueling centers over the next five years.

The company is expected to take about eight months to install equipment at the authority's maintenance garage.

It will take about a decade to convert the authority's entire fleet, transit officials said.

The authority has 41 buses, and 23 vehicles are slated to be replaced within the next year. Blahovec said the authority will buy buses that use compressed natural gas, or CNG.

<http://www.masstransitmag.com/news/12272136/westmoreland-county-bus-fleet-set-for-fuel-conversion>

Rich Cholodofsky (Mass Transit) (McClatchy) 10/24/16

### **NGVAmerica Presents 2016 NGV Achievement Award to FedEx Freight for Natural Gas Fleet**

Washington, D.C. — NGVAmerica presented the NGV Achievement Award to FedEx Freight today for their new natural gas fleet program. The award was presented to FedEx Freight's President & CEO, Mike Ducker, by NGVAmerica President Matthew Godlewski as part of a ribbon cutting ceremony for the company's new compressed natural gas (CNG) station in Oklahoma City built by Clean Energy Fuels Corp. to support more than 100 FedEx Freight CNG-powered trucks.

<http://www.ngvamerica.org/media-center/ngvamerica-presents-2016-ngv-achievement-award-fedex-freight-natural-gas-fleet/>

(NGV America) 10/11/16

### **Amtran to Purchase Six New CNG Buses for \$3 Million**

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The American Transportation Corp. (Amtran) says it has ordered six new compressed natural gas (CNG) buses, to be delivered in May 2018. The Amtran board of directors voted to purchase the natural gas buses on Oct. 19 for a total cost of almost \$3 million, via funding from PennDOT and the Federal Transit Administration.

Congressman Bill Shuster, chairman of the House Transportation and Infrastructure Committee, expressed his support for the purchase: "This is a great opportunity for Amtran to move toward CNG-fueled buses. I was happy to support their federal grant application to help purchase new buses as part of this statewide CNG project. Amtran will finally be able to retire buses in their fleet that are more than 40 years old." In March, PennDOT Secretary Leslie S. Richards announced that the Trillium CNG team was selected for the department's statewide CNG Public-Private Partnership (P3) project.

Through the \$84.5 million project, Trillium will design, build, finance, operate and maintain CNG fueling stations at 29 public transit agency sites (including Amtran) through a 20-year P3 agreement. Stations will be constructed over the next five years, and the firm will also make CNG-related upgrades to existing transit maintenance facilities.

As reported, there will be a fueling station and upgrades to Amtran's maintenance building in Altoona to accommodate the CNG buses. The project in Altoona is scheduled to be completed by summer 2017. Further, Amtran says the six CNG buses will be delivered in spring 2018 from American bus manufacturer Gillig's all-new plant in northern California.

PennDOT expects this project could save transit agencies more than \$10 million annually statewide and pay for itself in 10 years, with the estimated \$100 million in savings.

<http://ngtnews.com/amtran-to-purchase-six-new-cng-buses-for-3-million/>

Posted by Lauren Tyler (NGT News) 10/24/16

### **Kenworth adds Cummins Westport ISL-G natural gas engine as option for T680, T880**



Kenworth has announced that it will offer the Cummins Westport ISL G Near Zero NOx emissions natural gas engine for the Kenworth T680 and T880. Emissions from the ISL-G Near Zero natural gas engine are 90% lower than the current NOx limit of 0.2 gram per brake horsepower-hour, and meet the 2017 EPA greenhouse gas emission reduction requirements. The new engine achieves this reduction through the introduction of advanced engine calibration, a unique maintenance-free, three-way catalyst after-treatment system, and a closed crankcase ventilation system, the company said.

“The Kenworth T680 and T880 equipped with the ISL-G Near Zero emissions engine is well suited for regional haul, vocational and refuse fleets focused the reduced environmental impact of natural gas use and reducing their operating costs,” said Jason Skoog, Kenworth’s assistant general manager for sales and marketing.

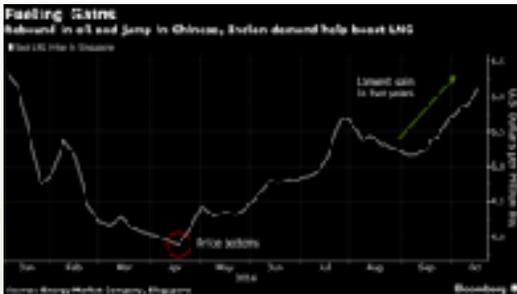
The 8.9-liter Cummins Westport ISL G Near Zero comes with ratings up to 320 HP and 1,000 lb./ft. of torque. The engine can operate on 100% natural gas, which can be carried on the vehicle in either compressed natural gas (CNG) or liquefied natural gas (LNG) form. The ISL-G Near Zero is also compatible with renewable natural gas (RNG) which allows for even further reductions in GHG emissions, according to the company.

The new engine will become available in the Kenworth T680 and T880 in early 2017.

<http://www.fleetequipmentmag.com/kenworth-adds-cummins-westport-isl-g-natural-gas-engine-option-t680-t880/>  
by Fleet Equipment Staff (Fleet Equipment) 10/24/16

### Shell Among New LNG Sellers for Asia Hub Contender Singapore

Singapore, which is vying to become a regional center for the trading of liquefied natural gas in Asia, picked Royal Dutch Shell Plc and Pavilion Gas Pte Ltd. as its next suppliers of the fuel. The companies will have exclusive rights to sell 1 million metric tons of LNG annually for up to 3 years, with imports beginning in 2017, the city-state’s Energy Market Authority said in a statement. The country will also consider spot purchases of the supercooled fuel and piped natural gas on a case-by-case basis, S. Iswaran, the Minister of Industry, said at the Singapore International Energy Week conference on Monday.



Singapore wants to use its geography and stature as Asia’s oil-trading center to also be a leader in LNG in a region that accounted for more than 70 percent of global demand in 2015. The nation has built a receiving terminal while the state-owned investment company set up Pavilion Energy Pte in 2013 to trade the fuel. It’s drawn firms from Glencore Plc and GAIL India Ltd. to open trading desks in the country, and Singapore Exchange Ltd. has started futures and swaps linked to an index of spot LNG prices.

Shell and Pavilion were chosen because they “offered flexible and competitive pricing not just indexed to oil but to different options on the table,” Iswaran said. “One of the considerations in looking at the next tranche was the offering of flexibility in terms of price indexation. And indeed they have put forward some flexible options, and end-users have responded to these offers.”

The exclusive licenses will expire either after three years or if the companies import more than 1 million tons in a year, according to a statement from the Energy Market Authority. Beyond that the companies will still be able to import LNG into Singapore but will not be guaranteed exclusivity, Darius Lim, a Pavilion spokesman, said by e-mail.

<http://www.bloomberg.com/news/articles/2016-10-24/shell-among-new-lng-sellers-for-asia-gas-hub-contender-singapore>  
By Ann Koh, Serene Cheong, & Dan Murtaugh (Bloomberg) 10/24/16

### France's Engie sees greatest LNG growth as shipping fuel

Demand for liquefied natural gas (LNG) as a shipping fuel could soar over the next 10-15 years if authorities this week agree a global cap on sulphur dioxide emissions, a senior executive of French energy firm Engie (ENGIE.PA) said. If the cap is approved, LNG demand for the ship fuel sector could climb to 30 million tonnes a year (mtpa) by 2025-30, said Denis Bonhomme, Engie's senior vice president of business development in Asia, up from marginal volumes today. That would be around 6 percent of expected 2025 total global consumption.

Suffering from large oversupply following new production and export capacity, especially in Australia and the United States, the LNG industry is looking to create new demand in order to find a home for the surplus gas. Using LNG as shipping fuel, known as bunkering, would be more effective in reducing oversupply than investing in small-scale LNG power projects, given the high fixed costs of such facilities, Bonhomme told Reuters during the Singapore International Energy Week.

So far, shipping fuel is dominated by diesel and bunker fuels, which are cheaper than LNG. That could change if the International Maritime Organization (IMO) supports a switch toward less polluting sources. The IMO will meet in London this week to decide whether to impose a global cap on sulphur dioxide emissions from 2020 or 2025.

There are currently around 790 LNG-fuelled ships operating and on order, ship brokers have said. That compares with nearly 97,000 merchant and passenger ships in service or on order.

<http://uk.reuters.com/article/uk-lng-engie-idUKKCN12Q05H>

Reporting by Mark Tay; Additional reporting by Keith Wallis; Editing by Richard Pullin  
(Business News) 10/26/16

### Samsung Delivers World's Largest Ethane Carriers



India's Reliance Industries celebrated the delivery of the world's largest ethane carriers on Wednesday, the 87,000 cubic meter-capacity *Ethane Crystal* and *Ethane Emerald*.

Until recently, the world's largest ethane carriers were in the range 22,000 cubic meters. Lloyd's Register played a leading role in designing ships in Reliance's much larger vessel category, which its creators have named the Very Large Ethane Carrier (VLEC). The Samsung-built carriers use GTT containment membranes. MOL will operate the vessels on behalf of Reliance.

The *Crystal* and *Emerald* will carry liquefied ethane from Enterprise Product Partners' terminal on the Houston Ship Channel to Dahej, India, where the gas will supply three Reliance petrochemical plants. Reliance plans to build four more of the vessels with Samsung.

<http://www.maritime-executive.com/article/samsung-delivers-worlds-largest-ethane-carriers>

(The Maritime Executive) 10/28/16

### Marcellus Operators Save Money With Online Water Management

There are few good options for water sourcing and disposal for upstream energy producers in Pennsylvania. The practical solution that has evolved in the region is operator-to-operator trades of produced fluid and freshwater. Most operators have participated in at least one or two inter-operator trades. However, the lack of efficient organizational and communication tools has constrained the practice.

“Recycling production fluids between operators reduces both freshwater withdrawals and injection into disposal sites,” said Matthew Alaniz, water team lead for Shell Appalachia. “Sourcewater connects us within the oil and gas community, making it easier for us to engage in operator-to-operator trades.”

In the Marcellus region local communities are highly sensitive to the impacts of truck traffic, and the region has few local options for underground injection-controlled disposal. In response, service providers offer third-party water management. They gather production water and treat it to clean brine standards, which they try to mark up and sell back to operators for new fracturing operations, acting in effect as water brokers and distributors. The slowdown in completions has devastated this business, often forcing these facilities to truck brine long distances at a loss or shut down entirely.

Recent market conditions pushed operators to break from that status quo, looking for new ways to reduce cost and increase operational efficiency. Marcellus operators are engaging more frequently in direct operator-to-operator trades. These trades enable the produced fluid or excess freshwater from one producer to be used in the completion of another. By organizing themselves into sub-regional water-sharing groups on Sourcewater, a free online marketplace for water sourcing, recycling, hauling and disposal, operators can identify and execute these opportunities directly, resulting in:

- Increased efficiency in water management;
- Improved community relations from fewer truck miles on the roads; and
- Better margins through reduced operating and completion costs.

<http://www.epmag.com/marcellus-operators-save-money-online-water-management-1402776>

Marcus Gay (Novus Technical Services LLC) (E&P) 10/26/16

### **Falcon Pipeline to Send Ethane to Royal Dutch Shell Through Ohio Valley**

CADIZ — Ethane processed at MarkWest Energy facilities in the region will flow to the Royal Dutch Shell petrochemical complex that will be built near Monaca, Pa. via the planned Falcon Pipeline.

Plans provided by the Netherlands-based oil giant’s subsidiary, Shell Pipeline Co., indicate the new infrastructure would carry approximately 107,000 barrels of ethane per day from the MarkWest plants in Cadiz and Houston, Pa. to fuel the ethane cracker, with pipeline construction set to begin in 2018. “The new pipeline will enhance ethane supply while building new and reliable infrastructure in a strategic growth market,” Shell Pipeline Executive Vice President John Hollowell said. MarkWest now blends much of its ethane into the commercial methane stream for marketing as natural gas, while the firm sends the rest of its ethane out of the region via the ATEX Express pipeline or the Mariner East 1 pipeline.

According to the Falcon project’s map, the pipeline will run north from the Cadiz MarkWest plant to a point near Scio. The conduit will then pivot eastward to run through the northern portion of Jefferson County. It will then run under the Ohio River into Hancock County, where it will continue into Pennsylvania toward Monaca.

After nearly five years of speculation and anticipation, Shell officials in June confirmed they would build the giant ethane cracker along the Ohio River, approximately 30 miles northwest of Pittsburgh. Organizers believe the endeavor will generate up to 6,000 construction jobs during the building phase, along with another 600 permanent jobs once the petrochemical plant is active.

This massive project will transform ethane derived from the Marcellus and Utica shales into ethylene and polyethylene, the basic components of the plastics industry. Officials said approximately 70 percent of North America’s ethane market lies within 700 miles of Pittsburgh.

<http://www.theintelligencer.net/news/top-headlines/2016/10/falcon-pipeline-to-send-ethane-to-royal-dutch-shell-through-ohio-valley/>

Casey Junkins, Business/Energy Writer (The Intelligencer) 10/22/16

### **Niles Could Get A \$1 Billion Natural Gas Plant**

An Illinois company is planning a \$1 billion natural gas plant in the city of Niles. Indeck Energy Services says Niles will give it a good access point to the transmission grid and the Midwest distribution network. Niles City Administrator Rick Huff tells us this project would mean millions for the community.

“The investment of a \$900 million to \$1 billion new business in our town and the jobs it would create, especially over the construction phase in the first three years and then the continual operation of the plant would be significant to the city of Niles,” Huff said.

The 1,000 megawatt plant could mean 21 full-time permanent jobs.

<http://www.wsjm.com/2016/10/23/niles-could-get-a-1-billion-natural-gas-plant/>

(WSJM) 10/23/16

### **Marcellus, Utica production will not grow unchecked: researcher**

Natural gas production in the Marcellus and Utica Shale plays will continue to grow, but growth may be less than some projections, Kallanish Energy learns. That assessment came from Tom Choi, director of the California-based Berkeley Research Group, who was addressing an audience of more than 100 Tuesday in Pittsburgh at S&P Global/Platts ninth annual Appalachian Oil & Gas Conference.

Some industry watchers have predicted Marcellus-Utica production could hit 40 billion cubic feet per day (40 Bcf/d) in the next decade, but Choi said he's unsure that will happen. The Marcellus and Utica together now produce about 20 Bcf/d of natural gas. Choi said he anticipates "moderate growth" in the Marcellus and Utica shales, but that the 40 billion estimate may be too rosy. He expects production from the Marcellus and Utica to grow at "a moderate pace."

<http://www.kallanishenergy.com/2016/10/26/marcellus-utica-natural-gas-production-will-grow-not-unchecked-researcher-says/>  
(Kallanish Energy) 10/26/16

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### **About the SGICC**

**The Ben Franklin Shale Gas Innovation and Commercialization Center ([www.sgicc.org](http://www.sgicc.org)) is designed to harness innovation and new technologies to maximize the economic return to Pennsylvania's citizens from the Marcellus and Utica shale formations. The Center's goal is to increase sustainable employment and wealth creation in Pennsylvania that has the potential to outlast the initial exploration, production and transportation of natural gas from the formations. The Center will also identify, support and commercialize technologies and early-stage businesses that enhance responsible stewardship of the environment while properly utilizing this transformative energy asset.**

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