



Natural gas futures slump to 2-week low as spring looms

Investing.com - Natural gas futures fell to a two-week low on Wednesday, amid concerns that the arrival of spring will bring warmer temperatures throughout the U.S. and cut into demand for heating. On the New York Mercantile Exchange, natural gas futures for delivery in April fell to a session low of \$4.448 per million British thermal units, the weakest since February 27. Natural gas last traded at \$4.517 per million British thermal units during U.S. morning hours, down 1.9%, or 8.8 cents.

The April contract lost 0.99%, or 4.6 cents, on Tuesday to settle at \$4.605 per million British thermal units. Futures were likely to find support at \$4.447 per million British thermal units, the low from February 27 and resistance at \$4.683, the high from March 11.

Natural gas prices came under pressure after updated weather-forecasting models called for above-normal temperatures across many densely populated areas in the U.S. in the next three to five days. Spring and fall see the weakest demand for natural gas in the U.S, as the absence of extreme temperatures curbs demand for heating and air conditioning.

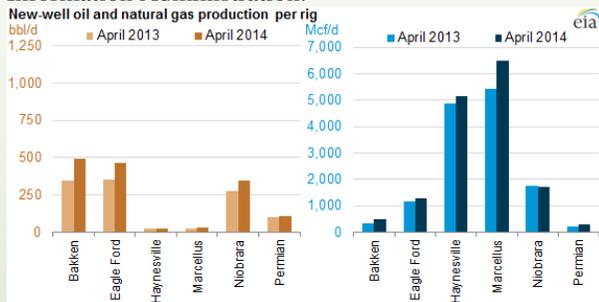
The heating season from November through March is the peak demand period for U.S. gas consumption. Approximately 52% of U.S. households use natural gas for heating, according to the Energy Department. Total U.S. natural gas storage stood at 1.196 trillion cubic feet as of last week, the lowest for this time of year since 2004, following a withdrawal of 152 billion cubic feet.

Natural gas rallied to a more than five-year high of \$6.493 per million British thermal units on February 20 as frigid winter temperatures in the U.S. led households to burn a higher than normal amount of the fuel in furnaces to heat their homes. Approximately 52% of U.S. households use natural gas for heating, according to the Energy Department.

<http://www.investing.com/news/commodities-news/natural-gas-futures-slump-to-2-week-low-as-spring-looms-271792>
(Investing.com) 3/12/14

Marcellus to continue strong output in March, April

The Marcellus Shale play should lead the industry in gas production throughout March and April, according to the U.S. Energy Information Administration.



Production of oil and gas per rig

The Marcellus is projected to produce 14,470 million cubic feet per day throughout March, which will grow to 14,758 million cubic feet per day in April, the EIA forecasted in its Drilling Productivity Report released Monday.

The numbers for the Marcellus output far exceed the volume of natural gas produced by any other play, according to the report. The next highest producers are the Eagle Ford and Haynesville plays, which reside mostly in Texas and in parts of Louisiana. Both plays are expected to produce between 6,000 and 7,000 thousand cubic feet per day in both March and April.

With new wells, the Marcellus also led the pack, with new-well gas production per rig projected at 6,402 thousand cubic feet per day in March and 6,476 thousand cubic feet per day in April. The EIA predicted that the Haynesville play, with numbers closest to the Marcellus', would output at most 5,167 thousand cubic feet per day.

Increased drilling efficiency is a large driver behind the numbers, the EIA said. A well completed by a rig in the Marcellus Shale play by April 2014 can expect to produce 6 million more cubic feet of natural gas per day, compared with a similar well produced by the same rig in the formation in 2007.

<http://www.bizjournals.com/pittsburgh/news/2014/03/11/marcellus-to-continue-strong-output-in-march-april.html>

Stephanie Novak (Pittsburgh Business Times) 3/12/14

Heavy-Duty OEM Offering CNG Option for Lineup of Mixer Trucks



Terex Corp., one of the world's largest manufacturers of equipment for various construction industries, has debuted a Terex FD5000 "Great Lakes" front-discharge mixer truck powered by compressed natural gas (CNG).

This is the first model that the company has rolled out with a CNG option, but the company notes that all of its front-discharge mixer trucks - from three to seven axles - are now available with CNG. Natural gas systems can also be ordered with Terex glider trucks.

At the heart of this heavy-duty portfolio is the 11.9-liter Cummins Westport ISX12 G natural gas engine, available in 350-, 385- and 400-hp configurations (1,450-, 1350- and 1450-ft-lb torque, respectively). On-board CNG storage is handled via one 26" x 80" Type-4 CNG cylinder mounted to each side of the rear frame, providing 75 DGE in total capacity. All CNG tank safety shut-off valves, fill ports and service items are at ground level, and the weight distribution (between the axles) of CNG and diesel-fueled mixer trucks are "virtually identical," the company says.

http://www.ngtnews.com/e107_plugins/content/content.php?content.9549#.UyBeXc6Kzig

(NGT News) 3/10/14

Report: Oil and Natural Gas Production in Ohio Doubled in 2013

Every year at the Ohio Oil and Gas Association's Winter Meeting, the DeBrosse Memorial Report is always one of the most popular presentations. The research gives audience members a snapshot of Ohio's oil and gas industry and the potential growth in the coming years. Presented by Peter MacKenzie, Vice President of Operations for OOGA, this year's report showed a tremendous growth in oil and gas production, with production capacity doubling in both oil and natural gas.

In 2013, Ohio permitted a total of 1,000 wells, an 11 percent increase from the year before. Of those 1,000 wells permitted, 580 were completed in 2013 – nearly 300 of which were Utica and Marcellus wells in Ohio. Carroll County led the state in completed wells with 113 wells, while Harrison County came in second with 40 wells completed. Chesapeake Energy remains the lead operator in the state, developing 159 wells in 2013.

The report also found Ohio's oil and natural gas production doubled in 2013, with an estimated 9.7 million barrels of oil and over 203 billion cubic feet of natural gas. In 2012, Ohio produced close to 4.9 million barrels of oil and 83.4 billion cubic feet of natural gas. By the end of 2014, the report estimated that Ohio will be producing over 300 billion cubic feet of natural gas per year from wells in all formations

http://www.northcentralpa.com/feeditem/2014-03-11_report-oil-and-natural-gas-production-ohio-doubled-2013

(NorthCentralPA.com) 3/11/14



Hexagon Composites experiences increased orders for TUFFSHELL(R) tanks, signals the marketplace is strong for CNG

Hexagon Composites wholly owned subsidiary Hexagon Lincoln has recently received new orders for its TUFFSHELL(R) CNG fuel cylinders to support heavy duty and transit vehicles in North America. The total value is approximately USD 15 million (around NOK 90 million) with most to be delivered in the second half of 2014. The first phase of Hexagon Lincoln's plant expansion is underway to fulfill these new orders.

It has always been the premise of Hexagon Composites that CNG (Compressed Natural Gas) is a great solution for transportation and storage of natural gas, and the marketplace continues to affirm this position. Engine technology is improving at a fast rate - giving trucks more horsepower, engine efficiency and tank packaging aerodynamics - providing better fuel efficiency and increased range before refueling. The network of CNG refueling stations is rapidly expanding in North America with new stations to accommodate fast filling of Class 8 trucks. Most importantly, CNG prices are still the lowest available at the pump.

http://www.marketwatch.com/story/hexagon-composites-experiences-increased-orders-for-tuffshellr-tanks-signals-the-marketplace-is-strong-for-cng-2014-03-10?reflink=MW_news_stmp

(MarketWatch)

3/10/14

LNG exports self-limiting

An updated report on the macroeconomic impact of liquefied natural gas (LNG) exports, conducted by NERA Economic Consulting and sponsored by Cheniere Energy, reports on the cumulative effects of LNG exports up to the maximum amounts that the market would allow under various domestic and international market scenarios.

"LNG exports provide net economic benefits in all the scenarios investigated, and the greater the level of exports, the greater the benefits," said W. David Montgomery, NERA senior vice president and project director.

The study found that the market for LNG exports is self-limiting, in that little or no natural gas will be exported if the price of natural gas in the U.S. increases much above current expectations. High levels of exports can be expected only if natural gas is plentiful and inexpensive enough to produce so prices remain below current levels, even with high levels of exports. The U.S. is projected to remain one of the lowest cost chemical producers in the world even considering the highest levels of LNG exports.

<http://www.fierceenergy.com/story/lng-exports-self-limiting/2014-03-10>

By Barbara Vergetis Lundin

(Fierce Energy) 3/10/14

ANR Pipeline joins other operators with plans to flow gas away from Marcellus, Utica

ANR Pipeline is taking bids through Friday on another binding open season to modify its Southeast Mainline System, this time specifically reversing flows on the line for up to 600,000 Dt/d of firm transportation capacity.

That binding open season was for flows going north to south on the Southeast Mainline, providing up to 646,000 Dt/d of capacity from ANR Southeast Central Zone ML3, which includes the line's path through Indiana as well as part of northwestern Ohio and northwestern Kentucky, to various points on the system.

ANR joins a swath of operators with plans, announced in recent months, to flow gas away from the prolific Marcellus and Utica regions. In late February, Natural Gas Pipeline Co. of America launched a non-binding open season to gauge interest in expanding its Gulf Coast mainline system, allowing flows on the line southward, taking gas off Rockies Express Pipeline to markets along the Texas and Louisiana Gulf Coast.

Dominion Transmission had an open season in December to deliver 500,000 Dt/d of gas produced in West Virginia to be shipped westward as early as June.

Rockies Express is looking to become bidirectional to carry gas from eastern shale plays to the Midwest also as early as June, while a Spectra Energy project could take gas from Uniontown, Pennsylvania, to Gas City, Indiana, November 1.

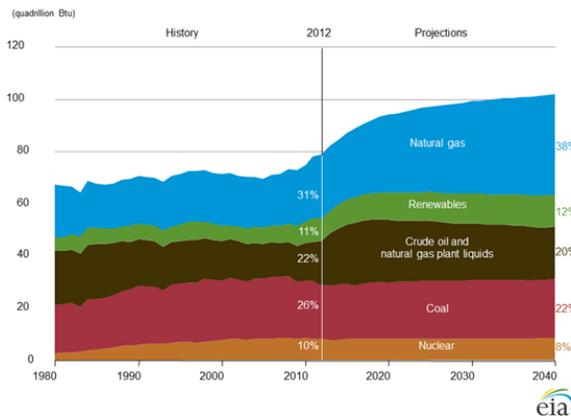
<http://www.platts.com/latest-news/natural-gas/houston/anr-pipeline-joins-other-operators-with-plans-21315118>

Houston (Platts) 3/10/14

Long Term, Is Natural Gas Better Than Oil?

The chart below from the Energy Information Administration shows current projections for U.S. energy production. Notice that crude oil production is slated to peak by around 2020 and then slowly decline. In contrast, natural gas is expected to keep climbing through 2040.

Figure 11. U.S. energy production by fuel, 1980-2040



Source: EIA

Major player in Marcellus

One of the companies sitting on some of the most prolific natural gas wells in the Marcellus shale is Cabot Oil & Gas (NYSE: COG). Cabot claims to have 17 of the top 20 producing natural gas wells in the Marcellus play. This has contributed to some of the lowest production costs in the country. Cabot claims its total costs for natural gas production were \$3.03 per thousand cubic feet equivalent, or Mcfe, in 2013, an 18% improvement over 2012.

For comparison, Range Resources, which is also active in the Marcellus, has production costs of approximately \$3.60 per Mcfe. These prolific wells did wonders for Cabot in 2013. Total production was 55% higher than 2012, cash flow was 57% higher, and net income 112% higher. This production was without the benefit of acquisitions. Topping all this off was a 42% increase in proved natural gas reserves.

With all this good news, why did the stock get whacked? First, the stock was set up for a correction after climbing 50% over the past year. Production guidance was for a 25% to 40% increase in 2014 -- not quite as strong as 2013's increase. Furthermore, Cabot is having problems getting a decent price on its natural gas despite the high demand caused by a cold winter. A lack of takeaway capacity (e.g. pipelines) is contributing to this pricing problem.

Put another way, Cabot is producing too much gas for its own good and is seeing lower prices as a result.

What about natural gas pipelines, then?

Cabot's takeaway problems will likely resolve over time, in part because Williams Companies (NYSE: WMB) signed a deal to build a new pipeline to Cabot's Marcellus assets. Williams operates two stretches of pipelines in the United States and a third pipeline in Canada. The interstate pipelines are operated by Williams Partners (NYSE: WPZ), a master limited partnership majority owned by Williams Companies. These pipelines handle natural gas and natural gas liquids.

Williams plans on spending about \$26 billion in the next five years to expand its operations in the United States, Canada, and offshore Gulf Coast. Most of the capital will be spent on the U.S. Atlantic and Gulf coasts. Three pipeline projects are slated for completion this year with others to follow through 2018. These projects are supported by 15-year contracts.

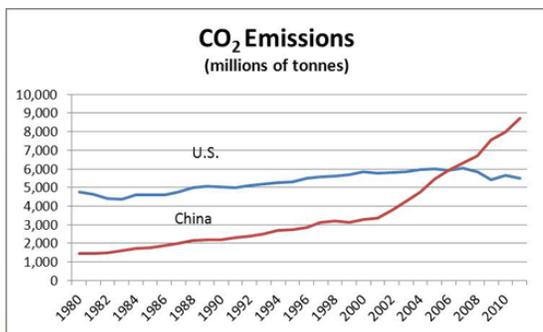
All of this bodes well for investors. Not that they have done badly in the past -- Williams Companies has steadily risen for five years, while Williams Partners had a rapid gain back in 2009-2012 but has slowly declined ever since. Williams Companies' dividend grew from a quarterly \$0.11 per share in 2009 to \$0.4025 in the most recent quarter. Williams Partners' distribution grew from \$0.635 to \$0.8925 in that same period. Williams Companies currently yields 3.9%, Williams Partners, 7.2%.

<http://www.fool.com/investing/general/2014/03/10/long-term-is-natural-gas-better-than-oil.aspx>

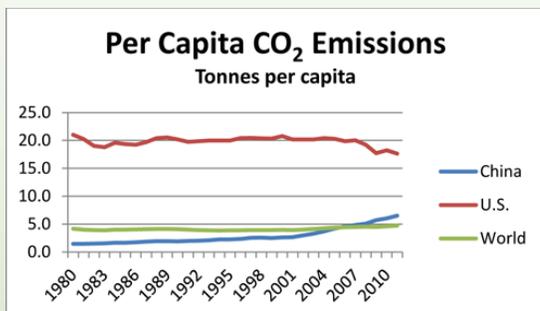
By Robert Zimmerman (Motley Fool) March 10, 2014

Could LNG be the Key to the World's CO2 Problem?

I recently reviewed the latest CO2 data published by the U.S. EIA. China was the leading producer of CO2 emissions at 8,715 million tonnes in 2011, up 9.0% over the prior year. The majority of emissions in China comes from the burning of coal for electric generation used to produce about 80% of the nation's electric power. Since 2000, CO2 emissions in China have almost tripled. The second largest CO2 emitter was the U.S. at 5,491 million tonnes, down 2.6% in 2011 and 6.3% since 2000. In the U.S., coal makes up roughly 45% of electric generation. China surpassed the U.S. in emissions in 2006. The trend is China is up and in the U.S., down.



Although China is undoubtedly the largest producer of CO2 emissions, the story changes if one looks at it on a per capita basis. In 2011, U.S. CO2 emissions were 17.6 tonnes per capita compared with 6.5 for China. World per capita emissions were even lower at 4.7 million tonnes. Put another way, if the U.S. had the same per capita emissions rate as China, its emissions would have been almost two-thirds lower in 2011; 2,028 million tonnes versus 5,491 million tonnes. This puts a higher burden on the developed countries to reduce emissions and they have responded with conservation programs and renewable energy. As with emissions, the trend for per capita emissions is down in the U.S. and upward in China.



The enigma is that billions of dollars are being spent on renewable subsidies to renewable subsidies to reduce CO2 emissions from power plants in the U.S. when the largest emitter is China. I am not suggesting that we stop subsidizing clean power in the U.S. (just the opposite), but that we are overlooking the biggest source of potential reductions. Given that CO2 emissions are a global problem, should the U.S. consider incentives for carbon reductions in China? In theory, it shouldn't matter if the reduction came from a project in the U.S. or in China. But in practice, it is improbable that the U.S. would pay a subsidy for a Chinese-based renewable project. However, there may be another viable option.

Since coal is the biggest source of the problem in China, the biggest CO2 impact could come from subsidizing alternatives to coal. This could be accomplished by providing incentives for LNG projects if the LNG was used instead of coal for generation in China or other countries. In this scenario, a large part of the investment remains at home while the CO2 reduction is made abroad.

<http://www.energybiz.com/article/14/03/could-lng-be-key-worlds-co2-problem>

Ed Rilkoff (Energy Biz) 3/10/14



3 Natural Gas Davids Challenging the Transportation Goliath

When Clean Energy Fuels (NASDAQ: CLNE) CEO Andrew Littlefair bought \$1.4 million worth of stock in his company on the open market in September, you can rest assured that he didn't anticipate the stock taking anything like the drubbing that it has over the past several months. Littlefair's response? Buy more shares.

Despite concerns that adoption isn't happening quickly, Integrys Energy Group (NYSE: TEG) subsidiary Trillium CNG is planning to open 100 public and private natural gas stations in 2014, and Chart Industries (NASDAQ: GTLS) reiterated that it has a contract to build 20 LNG stations for a major oil company this year. Between the three, more than 150 stations will be either built or opened this year.

Chart moving ahead in U.S., China

Chart's latest earnings report and conference call was a solid reminder that a lot of progress has been made in natural gas refueling, and that a lot of momentum is building up for 2014; especially the second half of the year. CEO Samuel Thomas, from the earnings call:

In the infrastructure area, 2013 included multiple awards for LNG fueling equipment in Asia, as well as the previously mentioned award from a major oil company for 20 LNG stations here in North America. In LNG end-user applications, we continue to see strong order and revenue growth, despite the recent market debate concerning LNG versus CNG for heavy-duty trucking. Our perspective is the 12 liter, 400 horsepower Cummins Westport engine will now give the industry a capable pilot fleet vehicle on a broader scale.

Thomas further reiterated that, as the primary supplier of LNG tanks to the North American truck market, 2014 would see continued adoption of LNG, and he was anticipating mid-teen to mid-20% growth in sales related to the U.S. truck market for Chart's LNG products. In addition to its deal with what could be Royal Dutch Shell and TravelAmerica to build 20 LNG stations in the U.S., Chart landed a \$50 million deal with PetroChina in the third quarter, and also announced an \$80 million expansion to its manufacturing capacity in the country that will double its manufacturing capacity in the region.

Integrys' Trillium ramping up, but slowly

Much has been made of the "CNG versus LNG" debate around trucking, but what's been ignored is that both liquid and compressed natural gas demand for trucks is growing. Integrys Group's most recent corporate presentation shows the combined CapEx for Trillium will be \$121 million over the next three years, as the company expands its base of both private and public CNG stations. Clean Energy Fuels will spend almost as much in 2014 alone, building out both LNG and CNG infrastructure. Even with Integrys Groups financial backing (Integrys will spend more than \$3 billion in total CapEx in the same period) Trillium's expansion appears to be happening at a slower rate, though part of the spend could be the nature of the stations that are being built. The company says it will build 101 public access CNG stations that class 8 trucks can access by 2016.

Lots happening at Clean Energy

The company opened two more LNG stations recently, one in Texas, and one in Georgia, in addition to at least four more contract awards to supply and service CNG fleets in California, Pennsylvania, and Nevada. Combined, these deals represent almost 6.5 million gallons of natural gas every year.

Clean Energy's gallons-delivered has grown enormously over the past several years; climbing from 101 million in 2009, to 214 million in 2013. CNG remains the lion's share of fuel volume, at 144 million gallon equivalents in 2013. However, Chart Industries and Westport Innovations both reiterated on their earnings calls that sales of LNG tanks for heavy trucks would be strong in 2014, especially in the second half of the year. We know that Chart sold 1,500 of its tanks in 2013, and Westport had a single order of 900 tanks, in addition to likely a number of smaller orders. The point? Clean Energy Fuels is rather uniquely positioned as the only supplier which offers both LNG and CNG, which could be a strong competitive advantage for mixed fleets.

<http://www.fool.com/investing/general/2014/03/09/these-3-companies-are-opening-building-150-natural.aspx>

By Jason Hall (Motley Fool) 3/9/14



Monday Update: Timing right for Sanofi natural gas service

Mid-2013 was a good time for Sanofi-Pasteur to switch to natural gas. The eve of the coldest winter in at least a decade, the 6.5-mile extension of a natural gas pipeline in Monroe County turned on, helping the vaccine maker convert from heating oil that had to be delivered by convoys of tanker trucks.

Sanofi officials are happy with the service, noting that natural gas is more reliable than heating oil.

Sanofi and local natural gas delivery company UGI Corp. had been in discussions for years. In that time, Marcellus Shale gas production ramped up, stabilizing the price of natural gas at historically low levels. Sanofi benefited from a Pennsylvania Redevelopment Assistance Capital Program, which kicked in \$5 million for the \$12.7 million project that extended a gas main that served the Tobyhanna Army Depot and the Johnson & Johnson distribution center.

Sanofi officials said that after a year of natural gas use, the savings and performance of the revamped system is as expected. In addition to saving money, natural gas is also helping the company achieve environmental goals by reducing the carbon footprint of Sanofi's Swiftwater campus.

UGI spokesman Joe Swope said the line has also made natural gas service available for several dozen properties.

<http://thetimes-tribune.com/news/monday-update-timing-right-for-sanofi-natural-gas-service-1.1647723>

By David Falchek (Staff Writer) (The Times-Tribune.com) 3/10/14

Greener than "green"

"New York has the cleanest air now of any major American city," Gotham mayor Michael Bloomberg told journalists on September 26. Thanks to both purer heating oil in local buildings and the conversion of others to natural gas fracked along the Marcellus Shale, New York's air has not been this clear in 50 years, officials say.

As the Associated Press's Deepti Hajela reported, decreases in sulfur dioxide, soot and other pollutants are preventing 2,000 emergency-room visits and 800 deaths annually.

Water is a precious resource. So, conservationists should smile at how little water fracking requires – compared to other energy sources. According to the U.S. Energy Department and the Ground Water Protection Council, it typically takes three gallons of water to produce 1 million British thermal units of energy from deep-shale natural gas/fracking. Atomic energy requires 11 gallons per million BTUs. Coal: 23 gallons. Corn ethanol? A whopping 15,800 gallons. And soy biodiesel requires nearly triple that amount: 44,500 gallons per million BTUs. That's 14,833 times the water needed for fracking.

But what about groundwater pollution? The hysteria that fracking poisons drinking water lacks one key ingredient: evidence.

As former EPA chief Lisa Jackson testified before Congress in May 2011: "I'm not aware of any proven case where the fracking process itself has affected water." Even New York State's politically frackophobic Andrew Cuomo administration concluded that "no significant adverse impact to water resources is likely to occur due to underground vertical migration of fracturing fluids through the shale formations." A December 2011 Department of Environmental Conservation draft report added that "there is no likelihood of significant adverse impacts from the underground migration of fracturing fluids."

Protecting habitat is another key eco-priority. Fracking succeeds here, too. An SAIC/RW Beck study found that natural-gas companies use 0.4 acres of land to generate a year's supply of electricity for 1,000 households. Nuclear power requires 0.7 acres. Coal consumes 0.75 acres. Wind power needs six acres. And solar cells require 8.4 acres to fuel 1,000 households annually. This is 21 times the habitat impact of natural gas.

<http://www.enterstageright.com/archive/articles/0314/0314greener.htm>

By Deroy Murdock (Enter Stage Right) 3/10/14

Policy groups push for Marcellus severance tax in tristate region



Policy groups in Pennsylvania, Ohio and West Virginia are advocating for a common approach to taxation on oil and gas drilling throughout the Marcellus and Utica shale plays.

Pennsylvania Budget and Policy Center, Policy Matters Ohio and West Virginia Center on Budget and Public Policy urged governors of each state to adopt a comparable severance tax on the volume and the value of drilling products.

West Virginia is the only of the three states with a severance tax, with a rate of 5 percent. The policy organizations recommended using this rate as a floor for the proposed severance tax across the region.

Until 2012, Pennsylvania lacked a state-level tax, and now currently imposes an impact fee for the first 15 years of the life of a well. That generates a relatively small amount of income for the state, according to Pennsylvania Budget and Policy Center.

“A comparable tax rate will allow our states to invest in a stronger economic future,” said Sharon Ward, director of the Pennsylvania Budget and Policy Center during a conference call Monday to discuss the proposed tax change. “It will create consistency for the industry, ensure that our communities are benefitting and allow our states to address the impacts of drilling.”

<http://www.bizjournals.com/pittsburgh/blog/energy/2014/03/policy-groups-push-for-marcellus-severance-tax-in.html>

Stephanie Novak

(Pittsburg Business Times)

3/11/14

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If you are not currently receiving this newsletter directly, and you would like to be added to the distribution, please send an email to mjc33@psu.edu and enter the words “subscribe SGICC” in the subject line.

About the SGICC

The Ben Franklin Shale Gas Innovation and Commercialization Center (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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