HARTENERGY

MIDSTREAM Monitor

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## In This Week's Edition



# FEATURE

## New Pa. Gas Bill Includes Funding For Ethane Cracker Construction, Development


The race to secure an ethane cracker in the Marcellus/Utica shale region of the country continues to heat up as a bill was passed on Feb. 8 in the Pennsylvania state legislature that would utilize a portion of the fees collected from each unconventional gas well in the Commonwealth to fund the development of an ethane cracker.

The bill, H.B. 1950, amends the state's oil and gas statutes to allow for the collection of fees for each unconventional well on a sliding scale based on the average annual price of natural gas. This scale varies based on the year following production, for example in the first year for average annual price no more than $2.25 per million Btu (/MMBtu), the fee shall be $40,000; priced between $2.25/MMBtu and $2.99/MMBtu, the fee shall be $45,000; prices between $3.00/MMBtu to $4.99/MMbtu, the fee shall be $50,000; prices between $5.00/MMBtu to $5.99/MMBtu, the fee shall be $55,000; and prices above $5.99/MMBtu, the fee shall be $60,000. The sliding scale rates are reduced for subsequent years, with the fees suspended for certain non-producing conditions. Over a 10-15 year period, each well could be assessed fees anywhere

*(continued on page 8)*

# NGL PRICES

## Greater Propane Volumes Having Negative Effect On Ethane Prices

Ethane prices continued their downward spiral the week of Feb. 1, falling 13% in value at Mont Belvieu and 23% at Conway. The largest reason for these price depressions remains scheduled cracker turnarounds, but it expected that these adverse effects are on a short-term basis.

"We believe seasonal cracker turnarounds and softening propane prices in the face of extreme winter demand softness have combined to increase markets, reducing the ethane premium briefly," Brad Olsen of Tudor, Pickering, Holt said.

Olsen added that the soft winter demand is oversupplying the propane market, leading to increased propane cracking and backing out marginal ethane cracking demand. "We believe ramping propane production volumes in [the] Marcellus/Utica could lead to increasing propane cracking on the Gulf Coast before U.S. propane export capacity doubles in 2013 and 2014."

In addition, the lack of pipeline infrastructure directed to the Gulf Coast from various producing regions are negatively impacting prices as new NGL pipelines aren't scheduled to come online until the second half of this year and 2013.

All of these impacts resulted in the Conway price dropping to 21¢ per gallon (/gal), its lowest price since it was 18¢/gal the week of Dec. 10, 2008. Further, the price had fallen to 17¢/gal the final day of trading for this week's issue as it struggles to compete with the excess propane volumes in the region. The Mont Belvieu price remained relatively strong at 48¢/gal despite the heavy price drop. This was the hub's lowest price since it was 48¢/gal the week of Sept. 8, 2010.

Propane prices also fell at both hubs this week as weak heating demand continued to have an adverse effect on the market. The Mont Belvieu price decreased 2% to $1.26/gal, its lowest price in a month. The Conway price fell 3% to 99¢/gal, which was also its lowest price in a month. Propane's pricing relationship to crude oil is lower than last year at about 53% to WTI and 44% to Brent, so it is possible that prices will experience a rebound if the market corrects itself.

The spread between isobutane and butane prices continued to weaken because of alkylation unit turnarounds that are limiting isobutane demand. Mont Belvieu isobutane experienced a 6% drop to $1.92/gal, its lowest price since it was $1.91/gal the week of March 9. The Conway price dipped 1% to $1.78/gal, which was the lowest price at the hub in more than year. The Jan. 12, 2011, price was $1.75/gal. However, isobutane prices should regain some strength once the alkylation unit turnarounds are completed in the next few months.

Butane prices fell 2% to $1.88/gal at Mont Belvieu and 3% to $1.56/gal, as the market for butane remains relatively stable compared to other NGLs that are facing multiple headwinds. This week's prices were the lowest at each hub in 10 weeks, but this is as much evidence of the market correcting itself after significant price increases in late 2011.

The lone NGL to experience price increases was C5+, which improved 2% at Mont Belvieu and 1% at Conway as crude oil prices were stable the first week of February. The Mont Belvieu price of $2.33/gal was the hub's highest in a month. The Conway price of $2.15/gal was the largest it has been since it was $2.22/gal the week of July 27. – Frank Nieto

**NGL PRICES**

| Mont Belvieu | Eth | Pro | Norm | Iso | Pen+ | NGL Bbl |
|---|---|---|---|---|---|---|
| Feb. 1 - 7, '12 | 48.05 | 125.90 | 187.88 | 191.46 | 233.40 | $53.19 |
| Jan. 25 - 31, '12 | 55.43 | 128.70 | 190.94 | 203.20 | 227.94 | $54.77 |
| Jan. 18 - 24, '12 | 58.36 | 128.10 | 190.32 | 192.66 | 232.95 | $55.17 |
| Jan. 11 - 17, '12 | 65.45 | 125.20 | 202.18 | 212.85 | 233.55 | $57.12 |
| January '12 | 64.67 | 129.56 | 197.46 | 212.13 | 232.57 | $57.18 |
| December '11 | 79.10 | 139.28 | 202.63 | 243.70 | 221.78 | $60.95 |
| 4th Qtr '11 | 84.49 | 144.13 | 188.16 | 227.18 | 224.44 | $61.34 |
| 3rd Qtr '11 | 76.03 | 153.87 | 188.27 | 208.52 | 237.59 | $61.59 |
| 2nd Qtr '11 | 75.14 | 149.59 | 186.75 | 202.07 | 248.23 | $61.42 |
| 1st Qtr '11 | 63.74 | 137.32 | 175.07 | 186.15 | 228.46 | $55.82 |
| Feb. 2 - 8, '11 | 53.56 | 133.42 | 166.92 | 179.04 | 219.02 | $52.53 |
| **Conway, Group 140** | **Eth** | **Pro** | **Norm** | **Iso** | **Pen+** | **NGL Bbl** |
| Feb. 1 - 7, '12 | 21.02 | 99.02 | 155.90 | 177.93 | 215.44 | $42.79 |
| Jan. 25 - 31, '12 | 27.32 | 101.88 | 159.96 | 180.20 | 212.60 | $44.24 |
| Jan. 18 - 24, '12 | 26.58 | 102.10 | 168.52 | 179.75 | 212.08 | $44.55 |
| Jan. 11 - 17, '12 | 27.98 | 96.98 | 175.83 | 183.50 | 211.90 | $44.64 |
| January '12 | 28.59 | 102.17 | 171.36 | 182.59 | 210.31 | $44.99 |
| December '11 | 29.17 | 121.10 | 174.48 | 213.18 | 198.87 | $47.54 |
| 4th Qtr '11 | 34.29 | 129.43 | 160.82 | 204.27 | 196.08 | $48.23 |
| 3rd Qtr '11 | 46.69 | 143.07 | 166.30 | 199.68 | 210.98 | $53.06 |
| 2nd Qtr '11 | 52.63 | 139.38 | 170.76 | 192.47 | 236.00 | $55.34 |
| 1st Qtr '11 | 46.30 | 128.26 | 164.69 | 186.06 | 225.91 | $51.80 |
| Feb. 2 - 8, '11 | 40.12 | 125.92 | 157.56 | 182.33 | 217.23 | $49.45 |

Data Provided by Intercontinental Exchange. Individual product prices in cents per gallon. NGL barrel in $/42 gallons | Source: Frank Nieto

# FRAC SPREAD

## Conway Ethane Margins Fall To Nominally Profitable Status

Conway ethane prices experienced a severe price drop that has finally pushed the frac spread margin into a state where it is realistically unprofitable to make at the hub. Although margins are nominally profitable once transportation and other costs are factored, this is not the case.

However, it is important to note that this doesn't mean that there is widespread ethane rejection in the Mid-Continent as prices in the hub are based on an ethane-propane mix, which could still result in some form of profitability. Consequently, widespread rejection of ethane would result in propane losses. Although ethane also had the largest decrease in margin at Mont Belvieu at 18%, it remains very profitable because of the amount of cracking capacity at the hub.

Propane had the second largest drop in margin at Conway at 3% because of the lack of heating demand. In addition, its pricing relationship with ethane at the hub likely impacted it this week. Isobutane had the second-largest drop in margin at Mont Belvieu at 6% as a drop in demand caused by scheduled turnarounds at several isobutane alkylation units in the region.

The only frac spread margins to improve this week was for C5+, which was also the lone NGL to experience a price improvement. The Conway margin increased 2% while the Mont Belvieu margin rose 3%.

Natural gas prices continued to suffer this week as the Mont Belvieu price decreased 5% to $2.56 per million Btu (/MMBtu) and the Conway price fell 2% to $2.57/MMBtu. The market returned to a bearish outlook following a short bullish feeling after Chesapeake Energy and other producers announced they were curtailing production last week.

"The forward price curve continued to adjust to news on production cuts and weather. The bearish mood that gripped the market prior to announced shut-ins is back, and helped pull the front of the curve lower. Part of this downward movement must be the market's fear that too much gas might be left in storage from winter, and that contractual requirement by storage operators may require a portion of this gas to be withdrawn," according to Barclays Capital's Gas and Power Weekly Kaleidoscope.

However, there may be signs of a turnaround as low prices are helping to work off excess volumes. "It is by no means time for producers to break out the champagne as the correction will take time, but it will correct. We believe that we are seeing a positive change in supply/demand balances approaching 3 billion cubic feet per day (normalized for weather) currently and we certainly have not yet seen the impact of slowing drilling for natural gas," according to En*Vantage's Weekly Energy Report.

The theoretical NGL barrel price fell once again at both hubs in the wake of continually depressed NGL prices. The Conway barrel was down 3% to $42.79 per barrel (/bbl) with a 4% drop in margin to $33.40/bbl. The Mont Belvieu barrel dropped 3% to $53.19/bbl with a 3% drop in margin to $43.84/bbl.

The most profitable NGL to make at both hubs was C5+ at $1.87 per gallon (/gal) at Conway and $2.05/gal at Mont Belvieu. This was followed, in order at both hubs, by isobutane at $1.52/gal at Conway and $1.66/gal at Mont Belvieu; butane at $1.29/gal at Conway and $1.61/gal at Mont Belvieu; propane at 76¢/gal at Conway and $1.03/gal at Mont Belvieu; and ethane at 4¢/gal at Conway and 31¢/gal at Mont Belvieu.

Natural gas in storage for the week of Feb. 3, the most recent data available from the Energy Information Administration, was down 78 billion cubic feet to 2.888 trillion cubic feet (Tcf) from 2.966 Tcf the previous week. This was 33% greater than both the 2.174 Tcf figure reported last year at the same time, which was also the five-year average.

The warm winter of 2012 is expected to continue, according to next week's forecast from the National Weather Service. The forecast is calling for the East Coast and much of the Southeast and northern Midwest to experience warmer than normal temperatures for mid-February. The forecast is calling for colder than normal temperatures in the Southwest and normal temperatures in the rest of the country. – Frank Nieto

**Current Frac Spread (Cents/Gal)**

| February 10, 2012 | Conway | Change from Start of Week | Mont Belvieu | Start of Week |
|---|---|---|---|---|
| Ethane | 21.02 | | 48.05 | |
| Shrink | 17.04 | | 16.97 | |
| Margin | 3.98 | -59.99% | 31.08 | -17.48% |
| Propane | 99.02 | | 125.90 | |
| Shrink | 23.54 | | 23.45 | |
| Margin | 75.48 | -3.08% | 102.45 | -1.63% |
| Normal Butane | 155.90 | | 187.88 | |
| Shrink | 26.65 | | 26.55 | |
| Margin | 129.25 | -2.67% | 161.33 | -1.11% |
| Iso-Butane | 177.93 | | 191.46 | |
| Shrink | 25.60 | | 25.50 | |
| Margin | 152.33 | -1.15% | 165.96 | -5.97% |
| Pentane+ | 215.44 | | 233.40 | |
| Shrink | 28.50 | | 28.39 | |
| Margin | 186.94 | 1.85% | 205.01 | 3.43% |
| NGL $/Bbl | 42.79 | -3.28% | 53.19 | -2.87% |
| Shrink | 9.39 | | 9.35 | |
| Margin | 33.40 | -3.66% | 43.84 | -2.52% |
| Gas ($/mmBtu) | 2.57 | -1.91% | 2.56 | -4.48% |
| Gross Bbl Margin (in cents/gal) | 76.11 | -3.75% | 101.60 | -2.71% |
| **NGL Value in $/mmBtu** | | | | |
| Ethane | 1.16 | -23.06% | 2.65 | -13.31% |
| Propane | 3.44 | -2.81% | 4.37 | -2.18% |
| Normal Butane | 1.68 | -2.54% | 2.03 | -1.60% |
| Iso-Butane | 1.11 | -1.26% | 1.19 | -5.78% |
| Pentane+ | 2.78 | 1.34% | 3.01 | 2.40% |
| Total Barrel Valuein $/mmbtu | 10.16 | -4.40% | 13.25 | -3.91% |
| Margin | 7.59 | -5.21% | 10.69 | -3.77% |

Price, Shrink of 42-gal NGL barrel based on following: Ethane, 36.5%; Propane, 31.8%; Normal Butane, 11.2%; Isobutane, 6.2%; Pentane+, 14.3%, Fuel, frac, transport costs not included. Conway gas based on NGPL Midcontinent zone, Mont Belvieu based on Houston Ship Channel.

Shrink is defined as Btus that are removed from natural gas through the gathering and processing operation. Source: Frank Nieto

# INSIDE LOOK AT PROCESSING

## Caballo Energy's Firth: Past Experience, First Acquisition Important For Start-Up

"The first acquisition is very important," Bob Firth, president of Caballo Energy LLC, told Midstream Monitor when discussing Caballo's recent acquisition of Eagle Chief Midstream LLC. This acquisition adds more than 600 miles of natural gas gathering pipelines, compression and processing assets in the liquids-rich Mississippi Lime and Cana Woodford shale plays.

In order to ensure that the company, which is backed by private equity commitments from EnCap Flatrock Midstream, made the correct deal as it started out, Caballo Energy waited nearly two years from its formation to its first acquisition.

"Starting out we thought we'd do a smaller deal, but then the market heated up. It's very important that you do the right deal to start out because if you don't it's very hard to do the second deal," he added.

Changes in the economy saw fewer deals being offered, which limited the market and saw increased focus for those deals being presented. The company looked at several other auction deals, but didn't want to overpay for assets, according to Firth. Instead, he and his management team sought out a negotiated deal or greenfield project to start out. "We waited until we got a negotiated deal that was the right one for us after looking at about a dozen deals over the past 14-16 months. Auction deals tend to take longer and start at a higher price before getting negotiated down. The longer you take on negotiations, the more exposure you have to the deal falling apart," he said.

Caballo Energy views the Mississippi Lime and the Cana Woodford plays as the most economic region for producers to drill because of its shallowness, which makes the fracs less expensive. In addition, its liquids-rich profile improves the economics of the play, according to Bill Everett, the company's vice president of business development.

These positives for producers are expected to provide Caballo Energy with multiple growth opportunities in the region. "There isn't enough pipeline capacity to serve all the new drilling. There's also a need for more processing plants in the area. We are looking to help with these situations by adding more gathering pipeline and a 60 million cubic feet per day cryogenic plant," Firth said.

This processing plant is expected to be online in February 2013 and will be expandable to handle increased demand from producers. Caballo Energy is also prepared to build a second processing plant in the region if demand dictates this need. Firth added that the growth opportunities presented by these plays will see the company primarily focus on growing the Eagle Chief Midstream assets.

These assets also include crude oil and salt water gathering in the play. "We're going to try to grow revenue on each of these. It's low-hanging fruit that can be expanded with minimal costs," Everett said.

"The private equity model is to buy, build up and create long-term value. This could come through an outright sale or an IPO or a merger of some kind. EnCap will be very engaged in these decisions."

| KEY NORTH AMERICAN HUB PRICES | |
|---|---|
| 2:30 PM CST / February 9, 2012 | |
| Gas Hub Name | Current Price |
| Carthage, TX | 2.45 |
| Katy Hub, TX | 2.45 |
| Waha Hub, TX | 2.44 |
| Henry Hub, LA | 2.50 |
| Perryville, LA | 2.49 |
| Houston Ship Channel | 2.41 |
| Agua Dulce, TX | 3.01 |
| Opal Hub, Wyo. | 2.54 |
| Blance Hub, NM | 2.45 |
| Cheyenne Hub, Wyo. | 2.47 |
| Chicago Hub | 2.67 |
| Ellisburg NE Hub | 2.73 |
| New York Hub | 2.80 |
| AECO, Alberta | 2.18 |

Source: Bloomberg

### Lessons Learned

Firth and his management team bring a wide variety of experience from small companies and big companies, but they prefer a start-up model of starting from scratch and then exiting it via the private equity model. "At a smaller company we can move faster and make things happen faster, get approvals faster and get pipe in the ground faster. Operationally we bring a lot of experience. Starting up a company and then doing an acquisition is like going from 0-125 mph in 5.3 seconds. We've done that, so we understand what it takes to be successful with this. We pride ourselves not just on growing the business, but containing costs, which is key," he said.

Past experience has taught the management team to not be too heavily staffed as it is more pertinent to hire the right people. "It's not like a big company where you can afford one or two hires that aren't quite the 'right fit.' It has to be the right people all the time," Firth added.

Relationships that the management team has created through their previous experiences have also had large impacts on Caballo Energy's operations. Their track records helped them secure their relationship with EnCap Flatrock Midstream and enabled Caballo Energy to enter into a negotiated deal for Eagle Chief Midstream.

"It's a relationship business and we take those relationships with us from one company to another. It's also about service and how you've performed in the past. When we walk in a room all the producers know us," he said. – Frank Nieto

## Teague: Enterprise's Marcellus Ethane Pipeline Is A Home Run

While Enterprise Products Partners (NYSE: EPD) has one of the most diverse profiles of any midstream company in terms assets and location, the project that has been generating the most interest from producers of late is the recently announced Appalachia to Texas pipeline (ATEX Express).

This 1,230-mile project aims to solve the Marcellus and Utica shale's ethane takeaway conundrum by transporting up to 190,000 barrels per day (b/d) of ethane from the play to the Gulf Coast.

"For Enterprise, this is a home run. It is a home run for the producers in the Marcellus and Utica, and it's a home run for the Gulf Coast petrochemical industry," Jim Teague, executive vice president and COO of Enterprise, said during the company's recent conference call to discuss Q4 2011 earnings.

"It adds significant value to both Marcellus and Utica [shale] producers and to the Gulf Coast petrochemical [industry], as these volumes are key to both realizing their growth potential. The project integrates Marcellus/Utica volumes into our NGL infrastructure at Mont Belvieu and all along the Gulf Coast," he added.

Prior to the announcement of this project, there had been worries over costs and completion time. However, Teague said that the project is able to be cost and timing competitive since it will use significant amounts of existing pipeline. This also has the added benefit of increasing the value of existing assets for the company.

Countering claims by some analysts that the ethane market risks being oversupplied in the coming years, Teague stated that Enterprise's internal model shows that ethane will likely remain balanced even after this project comes into service.

"In a market this big, there are always variables on both the supply and demand side of the equation, each with numerous possibilities and timelines. These include things such as how quickly the reserves can be developed and brought online, how quickly petrochemicals can do their conversions and builds. Turnarounds play a part, and then how quickly new pipe will be built. I can tell you they won't be full on day one and they are not contracted this way," he said.

Teague said that the company doesn't envision Marcellus/Utica propane production to exceed local demand for the next five to seven years, but after that time the company could utilize a similar approach to solving the potential propane takeaway issue as it did with the ethane takeaway issue.

### Eagle Ford Continues To Beat Expectations

"The Eagle Ford continues to beat everyone's expectations, and frankly our assets can't get up and running soon enough. Our pipes, plants and fractionators in the Eagle Ford are chock-a-block full," Teague said.

The company anticipates bringing the first train on its new 600 million cubic feet per day (MMcf/d) Yoakum processing plant in the play into service in early May with the second train coming online in Q1 2013. He added that this first train will be full on day one because of the amount of drilling rigs focused on the play.

Enterprise remains on schedule for its two-phase Eagle Ford crude oil pipeline, which will run 215 miles through the heart of the play. The system will have an initial transportation capacity of 350,000 b/d and connect to the company's new ECHO terminal near Houston. This facility will have a storage capacity for approximately 5 million barrels of crude.

Although the company has already been successful in the Eagle Ford, Teague said that it is far from through from finished. Its acquisition of the Seaway Pipeline, which is in the midst of a reversal and expansion project, is going so well that the company anticipates looping the system and increasing capacity up to 1 million b/d if there is enough demand.

"One of the things that differentiates Seaway is in combination with our partner, Enbridge, we can access supplies from Alberta, the Bakken and Cushing, and then deliver these volumes to every refinery in Houston, Beaumont and Port Arthur," he said. – Frank Nieto

## Boardwalk To Expand Eagle Ford Gathering System, Build Processing Plant

Boardwalk Field Services LLC, a Boardwalk Pipeline Partners LP (NYSE: BWP) subsidiary, announced plans to expand its Eagle Ford shale gathering system and build a new cryogenic processing plant in the play at a cost of $180 million. The company announced that the project, which would go into service in Q1 2013, is supported by long-term, fee-based gathering and processing agreements.

"This is a major step in the implementation of our strategy to serve the growing needs of producers in the prolific Eagle Ford Shale basin, and we are pleased to have Statoil Natural Gas LLC and Talisman Energy USA Inc. as anchor customers," Stan Horton, president and chief executive of Boardwalk, said in a news release. "We have long-term processing agreements and associated gathering agreements for approximately 50% of the processing plant's capacity and we are in discussions to sell the remaining gathering and processing capacity to other credit-worthy customers with long-term, fee-based agreements. Production in this rich-gas area is outpacing existing infrastructure and, therefore, timely execution of our South Texas expansion will fill a critical need for capacity."

The project involved adding approximately 55 miles of 20" and 24" gathering pipeline to its 340-mile system, which would increase capacity to more than 300 million cubic feet per day (MMcf/d). The 150 MMcf/d processing plant will be built in Edna, Texas, and will provide re-delivery of processed residue gas to a number of interstate and intrastate pipelines, including Boardwalk's Gulf South Pipeline.

## Southcross Energy To Build Eagle Ford Fractionator, Processing Plant

Southcross Energy has begun construction of a fractionator and natural gas liquids (NGLs) and residue pipeline outlets in South Texas, which will create a sizable natural gas processing and fractionation complex. The development will expand the company's ability to serve producers operating in the liquids-rich Eagle Ford shale area where the NGLs infrastructure is constrained. Southcross will have the capability to process 335 million cubic feet of natural gas per day (MMcf/d) and fractionate 16,300 barrels per day (b/d) of NGLs when all facilities are operational in July 2012.

Southcross is installing its Bonnie View Fractionator in Refugio County, 26 miles northeast of Corpus Christi near the company's previously announced 200 MMcf/d Woodsboro gas processing facility, which is under construction, and its existing 135 MMcf/d Gregory gas processing plant and fractionator. The Bonnie View Fractionator will have an initial capacity of 11,500 b/d of NGLs, which could be expanded to 15,000 b/d.

As Southcross previously announced in 2011, the company enhanced the efficiency and capacity of its Gregory processing plant located 13 miles east of Corpus Christi in San Patricio County to 135 MMcf/d. This resulted in increased plant liquids extraction capacity and full utilization of the plant's 4,800 b/d fractionator.

Southcross also is constructing pipelines that will interconnect the Woodsboro, Gregory and Bonnie View facilities, as well as NGL and residue gas outlets. When all planned facilities are completed, Southcross will have the ability to coordinate the transportation of natural gas and NGL volumes between the Woodsboro and Gregory plants and market residue gas, NGL products and y-grade NGLs.

"Our new facilities will expand fractionation capacity and related infrastructure at our South Texas processing complex to alleviate a constrained NGL infrastructure environment. We are providing our customers with much-needed solutions, especially producers operating in the Eagle Ford Shale area who face the challenge of processing and fractionating their liquids-rich gas, and then transporting NGL products and residue gas to attractive markets," David Biegler, chairman and chief executive of Southcross Energy, said in a news release.

Southcross' pipeline connectivity from the Woodsboro and Gregory facilities will allow producers to access several major interstate and intrastate residue gas pipeline outlets, as well as the company's traditional Corpus Christi ship channel industrial market. The backbone of Southcross' residue gas header system is the former Tennessee Gas Pipeline Company (TGP) 5A system. Southcross' 2011 acquisition of this pipeline was previously announced.

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## PwC: 2011 M&A Deals Highlighted By Shales, Foreign Investment, Private Equity

The total value of U.S. oil and gas mergers and acquisitions increased significantly in 2011 due to continued investment in U.S. shale plays and related infrastructure, sustained interest from foreign buyers, and private equity entrants deploying capital in the energy industry, according to an analysis of energy M&A data by PwC US. A major trend in the energy sector driving the increase in deal value throughout the year was a shift toward more investments in oil and liquid plays as natural gas prices remained depressed amid hitting a 10-year low in 2011.

In 2011, there were 191 deals with values greater than $50 million accounting for $186.5 billion, a significant jump in total deal value from the $138.5 billion during 2010, which had five more announced deals. Average deal size also increased in 2011 to $977 million, a 38 percent increase from $706 million in 2010, driven by 32 'mega' deals (deals with values of $1 billion or more).

"M&A activity in the U.S. oil and gas sector was extremely active in 2011 as shale plays continued to attract the large multinational energy companies, foreign buyers and private equity firms," said Rick Roberge, principal in PwC's energy M&A practice. "New drilling techniques in hydraulic fracturing are uncovering vast amounts of crude oil and natural gas in a very accessible environment to oil and gas reserves, and this is what is contributing to the huge interest in shale plays. The low price of natural gas, partially due to the increase in supply, has also driven a shift toward more oil and liquid plays as companies and investors look to take advantage of oil prices, which is holding steady at $100 a barrel. We expect deal flow to remain active in 2012, despite continuing economic uncertainty due to attractive commodity prices, which promotes exploration and development as well as upstream M&A activity."

Q4 2011 had a total of 48 deals (with values over $50 million) worth $80.5 billion, representing a 25 percent decline in volume but an 89 percent increase in total deal value from the 64 deals valued at $42.6 billion during the fourth quarter of 2010.

There were 11 corporate transactions with values greater than $50 million, generating 72 percent, or $58 billion, of total fourth-quarter deal value, a 350% increase in total deal value over the same period last year. Thirty-seven asset deals with values greater than $50 million contributed $22.5 billion, compared to 51 asset deals with a combined value of $29.7 billion seen during the fourth quarter of 2010.

Although upstream deals made up the majority of activity in the fourth quarter of 2011 with 23 transactions, or 48% of total deal volume, accounting for $24 billion in transactions, midstream deals represented 60% of total deal value with $48 billion and 12 transactions. Oilfield equipment followed in deal activity and volume with eight transactions totaling $4.5 billion, while downstream deals contributed $4.1 billion with five deals.

There were 17 shale-related deals in the fourth quarter of 2011 with a total deal value of $57 billion, compared to 32 shale-related deals representing $29.3 billion during the final three months of 2010. Average deal value in the fourth quarter increased 209 percent to $3.4 billion for shale deals. In all of 2011, there were 68 total shale-related deals with values greater than $50 million – a decline from the 85 shale-related deals in all of 2010. But the total value of shale deals in 2011 jumped 55% to $107 billion from $68.9 billion in 2010.

In the upstream sector, shale deals represented 51 percent of total upstream deal value in the fourth quarter of 2011, accounting for 11 deals with a total value of $12.3 billion. For full-year 2011, there were 55 shale deals in the upstream sector that totaled $59.6 billion, or 81 percent of total upstream deal value.

Included in all the shale-related deals in the fourth quarter of 2011 were four transactions involving the Marcellus shale totaling $3.5 billion, and three Utica Shale deals with a total value of $3.6 billion. For full-year 2011, there were a total of 13 deals in the Marcellus shale worth $9.9 billion, compared with 22 deals that totaled $20.3 billion during 2010. The Utica shale had seven transactions that represented $6.7 billion in 2011, a jump from one deal in all of 2010 with a value of $178 million.

"The industry continued to make a paradigm shift to shale in 2011 with virtually every major oil and gas company taking a position in unconventional plays," said Steve Haffner, a Pittsburgh-based partner with PwC's energy practice. "Activity in the Marcellus Shale remained strong for patient buyers waiting out the supply-demand dynamics of natural gas. Toward the end of last year, we saw many investors looking at the Utica shale as the next area of interest to take advantage of the more liquids-rich resource and its proximity to major metropolitan areas. Companies are now focused on building the related infrastructure to transport the extracted oil and gas, which we believe will likely be a key driver of M&A activity in 2012."

Foreign buyers announced 10 deals during the fourth quarter of 2011 that had a value greater than $50 million, two fewer deals when compared to the last three months of 2010. Total deal value, however, increased in the fourth quarter of 2011 to $13.9 billion from $9.4 billion during the same time period in 2010. For full year 2011, there were 40 transactions by foreign buyers, five less than full year 2010, but total deal value in 2011 jumped 55 percent to $56.4 billion.

Additionally, the total value of the five financial sponsor-backed transactions over $50 million increased dramatically in the fourth quarter of 2011, representing $8.8 billion, compared with a total deal value of $353 million during fourth quarter 2010, which had three deals. For all of 2011, there were 10 deals that involved financial sponsors, one less than in 2010 – although total deal value skyrocketed to $13.2 billion in 2011 from $3.1 billion in 2010.

"International players invested heavily in U.S. shale plays through joint ventures in 2011 – and we believe a trend to watch out for in 2012 is for foreign buyers to look to acquire entire companies that operate in shale plays so they can take more control of the assets through operatorship," added Roberge. "We also saw major private equity firms making big bets in the energy industry in 2011, and we expect their activity may accelerate as favorable oil price outlooks provide an attractive investment rationale. As deals continue in 2012, corporates and PE firms should consider focusing on maximizing the assets they acquire and ensuring they have the right deal strategies, integration plans, and controls in place to successfully navigate this evolving and complex landscape."

### New Pa. Bill Includes Funding For Ethane Cracker ... *(continued from page 1)*

from $190,000 to more than $300,000, depending on prices.

The Pennsylvania Senate passed the conference committee report of the bill by a vote of 31-19, and the Pennsylvania House passed the measure by a vote of 101-90. The bill has been passed on to Gov. Tom Corbett (R), who has said he will sign it.

"After long negotiations and a lot of hard work, we have reached a consensus on how to address the impacts in the Marcellus shale regions," Corbett said. "I am very pleased with the cooperative spirit shown by the General Assembly and their staffs while working to resolve this complex issue."

The legislation includes a provision for the Department of Community and Economic Development to utilize approximately 5% of the revenues generated from the wellhead fees in 2011, 2012 and 2013 for the planning, development, remodeling, remediation and construction of an ethane cracker or refinery. After 2013, these funds would be used for a hazardous sites cleanup fund.

Last month, the West Virginia legislature passed legislation to provide a substantial tax break for any company spending at least $2 billion to build an ethane cracker in the state. The state would tax such a facility at 5% of its original value for 25 years. It is expected that the state of Ohio will also seek to craft legislation to entice petrochemical companies to develop a similar facility in their state. – Frank Nieto

## PIPELINES & TECHNOLOGY

### Plains All American To Build Mississippian Lime Pipeline

Plains All American Pipeline LP (NYSE: PAA) will build a 170-mile crude oil pipeline in the Mississippian Lime play in northern Oklahoma and southern Kansas. The pipeline will work with the previously announced Medford-to-Cushing pipeline conversion to provide roughly 175,000 barrels per day of crude transportation to Cushing when it completes in mid-2013.

The company also announced it had signed a long-term contract to purchase SandRidge Energy (NYSE:SD) production from a multicounty area around the new system.

"We are excited about the opportunity to expand our presence in the Mississippian Lime play and to further develop our relationship with SandRidge, which has a substantial acreage position in the area," Harry N. Pefanis, president and COO of Plains All American, said in a news statement.

## U.S. Bill Would Block Export Of Keystone Fuels

U.S. Democrats unveiled legislation that would block export of any oil transported by the Keystone XL pipeline, as they challenged claims that the delayed project would boost U.S. energy security, Reuters reported.

TransCanada Corp.'s $7 billion Keystone pipeline has become a political lightning rod this election year, with Republicans arguing that the pipeline will provide a critical link to Canada's vast oil sands crude and lessen U.S. dependence on oil from more hostile regimes.

But critics of the project charge that "dirty" oil sands crude will exacerbate climate change and leaks on the pipeline could harm sensitive ecosystems. They also question how much oil transported through the 1,600-mile (2,575-kilometer) pipeline would actually remain in the United States.

Democrats sponsoring the bill blocking exports of oil and refined fuels from Keystone said their measure would ensure that Americans benefit from the pipeline if it is constructed, according to the report.

"Without my bill, this pipeline will not do a thing to enhance the security of our country," said Congressman Ed Markey (D-Mass.), an outspoken opponent of the pipeline, at a House energy committee hearing on the project.

The bill would allow waivers to the rule if President Obama certifies that selling the fuel to other countries would not increase imports of fuel from hostile countries and would not raise costs for U.S. consumers, according to the report.

Facing a congressional Feb. 21 deadline, the Obama administration delayed the project again last month, saying it needed more time to review alternative routes for the pipeline.

Since then, Republicans have doubled down on efforts to get the pipeline approved.

Sen. John Hoeven (R-N.D.) has crafted legislation that would bypass the White House and empower Congress to give Keystone the green light.

Another bill in the House of Representatives would move approval authority to the Federal Energy Regulatory Commission.

The legislation backed by Markey and four other Democrats will likely have a hard time making it into law, with many Republicans opposed to putting such limits on fuel exports, the report noted.

In responding to Markey's discussion of his bill on Feb. 3, Congressman Ed Whitfield (R-Kent.) pointed out that the U.S. exports fewer than 5% of its petroleum products, according to the report.

## Williams Holds Open Season For Atlantic Access Expansion

Williams Partners LP (NYSE: WPZ) announced an open season for the remaining capacity on the proposed 350-mile Atlantic Access expansion on its Transco interstate pipeline. This expansion would add up to 1.8 million dekatherms per day of capacity for producers in the western West Virginia and Pennsylvania regions of the Marcellus and Utica shales to markets in the Northeast, Gulf Coast, Mid-Atlantic and Southeast by late 2014.

Williams Partners previously received binding commitments for 900,000 dekatherms per day of the expansion's initial capacity. This open season for the remaining capacity began on Feb. 3 and will extend to April 2.

"The Atlantic Access project would serve as a vital connection, creating a direct link from the burgeoning Appalachian supply basin to diverse, growing natural gas markets and storage facilities from the Gulf Coast to the Northeast," Randy Barnard, president of Williams' interstate gas pipeline business, said in a news release. "This access to abundant, long-lived supplies of shale gas should serve as an economic boost to these markets."

This open season will allow subscribers to choose from three different paths originating from either Marshall County, W.V., Butler County, Pa., or Bergen County, N.J.

## Crosstex Energy Secures Long-Term Commitments For Cajun-Sibon Extension

Crosstex Energy LP (NASDAQ: XTEX) announced it will begin construction of the $230 million, 130-mile, 12-inch-diameter Cajun-Sibon natural gas liquids (NGL) pipeline extension after receiving sufficient long-term supply commitments. The project will expand the company's 440-mile Cajun-Sibon NGL system and connect its fractionators in south central Louisiana to the Mont Belvieu market.

The expanded pipeline will have an initial capacity of 70,000 barrels per day. Crosstex is negotiating long-term agreements for the remaining capacity on the system, which will begin construction in Q3 2012. Construction is expected to complete in H1 2013.

"We are pleased with the strong interest in this project," Barry E. Davis, Crosstex president and chief executive, said in a news release. "The willingness

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of midstream and producer customers to make long-term commitments reflects increasing demand for fractionation and NGL handling as producers continue to pursue liquids-rich natural gas plays. We will be able to offer our customers an integrated NGL transportation, fractionation and marketing alternative to Mont Belvieu."

## NEWS & TRENDS

### AltaGas To Purchase Semco Holding

AltaGas Ltd. entered into a definitive agreement with Continental Energy Systems LLC to acquire Semco Holding Corp. for US$1.135 billion, including approximately US $355 million in assumed debt.

SEMCO is the sole shareholder of SEMCO Energy Inc. a privately held regulated public utility company headquartered in Port Huron, Mich. SEMCO indirectly holds a regulated natural gas distribution utility in Alaska through ENSTAR Natural Gas Co. and an interest in a regulated natural gas storage utility in Alaska under construction called Cook Inlet Natural Gas Storage Alaska LLC. SEMCO also indirectly holds a regulated natural gas distribution utility and an interest in an unregulated natural gas storage facility in Michigan.

"AltaGas' vision is to be a leading North American infrastructure company. This acquisition continues the successful execution of our growth strategy," said David Cornhill, chairman and chief executive of AltaGas. "These assets come with strong management teams and employees who have a strong track record of delivering safe and reliable service to their customers and have excellent relationships with the communities in which they operate. We look forward to welcoming the SEMCO management teams and employees to AltaGas. We have a long history of operating natural gas utilities, and we will continue to deliver safe and reliable service to our customers. This acquisition establishes a significant foothold in the U.S. in areas with strong growth potential that are near existing AltaGas assets and operations.

"Over the past several years, we have worked hard to ensure SEMCO Energy Gas Co. and ENSTAR are well-positioned to provide excellent service to customers in the communities they serve," said

George Schreiber, chairman and chief executive of Continental Energy Systems. "This acquisition by AltaGas demonstrates the long-term value and growth potential of these operations and is a vote of confidence in both Michigan and Alaska as good places to do business."

The acquisition is subject to regulatory approval, including approvals from the Michigan Public Service Commission and the Regulatory Commission of Alaska. The acquisition is expected to close in the third quarter of 2012.

## Exco Resources Considers Offering One-Third Interest In Midstream JV

Exco Resources Inc., Dallas, (NYSE: XCO) has entered into an agreement granting a 45-day exclusivity period to an unaffiliated private infrastructure fund to negotiate the sale of a one-third equity interest in TGGT Holdings LLC for $400 million.

Exco anticipates that an affiliate of BG Group PLC, London, (London: BG) will participate in the sale transaction on a pro rata basis. TGGT is a joint-venture entity owned 50/50 by affiliates of Exco and BG Group.

TGGT Holdings owns and operates more than 1,000 miles of non-jurisdictional gathering pipelines that move natural gas from North Louisiana and East Texas supply basins to 25 existing/pending major intrastate and interstate pipelines in the region. The pipelines have a combined delivery capacity of approximately 4 billion cubic feet per day including 1.4 billion cubic feet of treating capacity.

## Second Canadian LNG Project Gets Export License

The National Energy Board of Canada (NEB) approved an application by BC LNG Export Co-operative LLC (BC LNG) for a license to export liquefied natural gas (LNG) from Kitimat, British Columbia, primarily to Asian markets.

The export license authorizes BC LNG to export 36 million metric tons (MMmt/y) of LNG, which is equivalent to approximately 47.9 billion cubic meters of natural gas, over a 20-year period. The maximum annual quantity allowed for export will be 1.8 MMmt/y of LNG.

A cooperative comprised of natural gas producers, marketers and LNG buyers is a central feature of BC LNG's export proposal, where members of the co-operative will submit bids to provide natural gas to be liquefied or purchase LNG. A committee will review the bids and choose those that will yield the greatest margin to the cooperative.

There currently are 13 members in the cooperative. BC LNG's export model permits smaller natural gas market participants in Canada to play a part in exporting LNG.

In approving BC LNG's application, NEB satisfied itself that the quantity of gas to be exported is in excess of the requirements to meet the foreseeable Canadian demand.

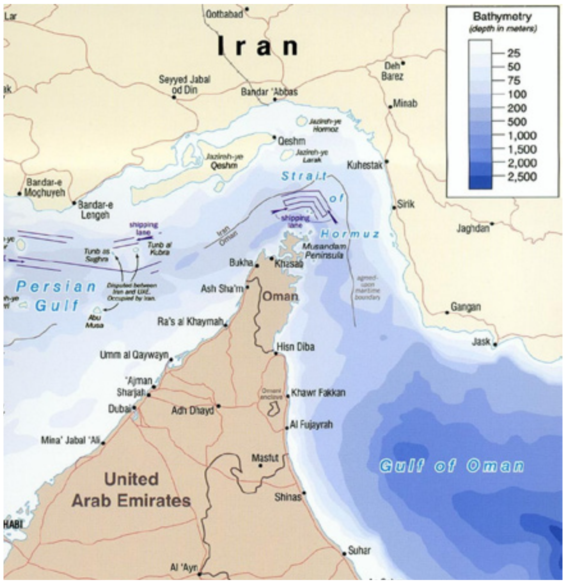
## Report: Qatar Would Shut Down LNG Production If Strait Of Hormuz Closed

Qatar is planning to cease production out of its 14 LNG facilities in the Ras Laffan section of the country if Iran carries out its threats to close the Strait of Hormuz, according to a Dow Jones report.

The country doesn't have an alternative route for these volumes, which would necessitate the shutdown on production. "If you can't export, you have to shut down," the report quoted an anonymous Qatari official as saying. "Shutting down a lot of facilities is not easy."

Iran has threatened the closure of the Strait of Hormuz, where approximately one-fifth of the world's traded crude oil passes. The threat is a response to stricter sanctions imposed by the U.S. and Europe, which have concerns about Iran's ongoing nuclear program.

A shutdown of Qatar LNG production would have a significant price increase on global LNG prices as South Korea, China, Japan and India are major purchasers of these volumes.



## Lucid Energy Forms With $75M Commitment

Lucid Energy Group LLC, a start-up midstream company that provides oil and natural gas producers with a full range of midstream services, secured a $75 million equity commitment from EnCap Flatrock Midstream. Lucid Energy's service offerings include crude oil and natural gas gathering, gas compression, treating, processing and transmission. The company will pursue greenfield initiatives and acquisitions in conventional and unconventional resource basins across the country with a particular emphasis on the Mid-Continent.

Lucid Energy's management team is led by company president Michael J. Latchem; chief financial officer W. Kyle Bebee; and chief operating officer Jay L. Langham. Prior to the formation of Lucid Energy Group, Latchem served as president of TPF Gas Services LLC. Previously, he was vice president of business development at Crosstex Energy, where he also served in various managerial roles in business development, engineering and operations. While at TPF and Crosstex, Latchem was directly responsible for more than $500 million of organic growth projects in unconventional shale producing regions. Bebee has broad experience in private equity and bank finance, deal origination and structuring, and risk management. His recent track record includes more than 30 transactions in excess of $1.4 billion. Langham's energy experience includes engineering design, construction and operation of natural gas gathering, treating and processing facilities and liquids handling and storage facilities. Immediately prior to forming Lucid Energy Group, Langham served as vice president of engineering and operations for TPF Gas Services.

"Lucid is led by a team of outstanding executives with proven experience in developing creative solutions for their customers in natural gas gathering, processing and project development," Latchem said. "We're excited about the common vision that we share with EnCap Flatrock Midstream. Considering the depth of experience of both teams, Lucid can and will be acutely responsive to producers in the resource plays where we're focused."

"We are very excited about taking this first step in our partnership with Lucid Energy Group," said Bill Waldrip, managing partner at EnCap Flatrock Midstream. "Our team has a long history with the senior leadership at Lucid. We welcome their innovative approach to structuring deals and finding creative new solution sets in the midstream service sector. We're confident their industry relationships will lead to long-term project opportunities that will benefit Lucid and its customers."

## Koch Supply & Trading Sárl Adds Global Gas Business To Portfolio

Koch Pipeline Co. L.P. is receiving Eagle Ford crude oil at its Helena Terminal in Karnes County, Texas.

"This new terminal is serving a growing area of Eagle Ford production," said Kim Penner, president of Koch Pipeline Co. "The terminal will allow more efficient transportation of crude oil by eliminating the distance trucks have to travel. The crude oil will be transported from Helena to Pettus via a new 16-inch pipeline to be commissioned soon. That 24-mile pipeline ties into our existing lines in Pettus for transportation to Ingleside and Corpus Christi."

Six Koch Pipeline employees support this terminal and the new line. As a result of the company's ability to quickly adapt to customer needs, Koch Pipeline has added 24 employees at its Corpus Christi operations headquarters and has 29 positions open.

"We need more talent," said Larry Van Horn, vice president of South Texas operations. "From operators to inspectors to engineers, Eagle Ford is creating career opportunities with Koch Pipeline."

With this new 16-inch pipeline, and the other investments Koch Pipeline has made in terminals, lines and lease agreements with other companies, the company will have increased transportation capability significantly into Corpus Christi and Ingleside.

"We are also working with producers to develop gathering lines, either to common tank batteries or through tie-ins to our existing system," Penner said.

Koch Pipeline's 20-inch line from Karnes County to San Patricio County that ultimately will tie into Ingleside is progressing. The line is expected to be in service in mid-2012.

The company is the largest transporter of South Texas crude oil.

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# SPOTLIGHT

## Gas Transmission Northwest Should See Further Growth

The Gas Transmission Northwest Pipeline, formerly known as the Pacific Gas Transmission Pipeline, has been operating as one of the largest and most important natural gas pipelines in the western portion of North America since 1961.

The TransCanada-owned system stretches 1,356 miles from the British Columbia-Idaho border through Washington to the Oregon-California border with a capacity of 2.9 billion cubic feet per day (Bcf/d). The system has the capacity to deliver more than 2.1 Bcf/d of natural gas to California and up to 1 Bcf/d to the Pacific Northwest. It is powered by 12 compressor stations with 513,400 horsepower. According to TransCanada, the volumes shipped on the pipeline primarily come from Western Canada, but additional volumes from the U.S. are received at Stanfield, Ore.

The pipeline has interconnections with TransCanada's BC System at Kingsgate, British Columbia; Williams' Northwest Pipeline at Spokane and Palouse, Wash., and Stanfield, Ore.; and the Pacific Gas & Electric Co. and Tuscarora Gas Transmission Co. at Malin, Ore.

As natural gas becomes more important on the West Coast as a fuel for both electric power generation and transportation, the Gas Transmission Northwest system will increase in value. The system is already benefiting from the increase of natural gas production out of Western Canada, but it will further benefit as production is added from the Mackenzie Delta and Alaska.

According to Hart Energy's Mapping & Data Services, the largest transportation customer on the system is Pacific Gas & Electric Co. at 610,000 dekatherms per day (Dth/d). This is followed by Avista Corp. at a combined 245,000 Dth/d; EDF Trading North America at 150,000 Dth/d; Shell Energy North America at 139,000 Dth/d; Northwest Natural Gas Co. at 106,000 Dth/d; Puget Sound Energy at 90,000 Dth/d; IGI Resources at 85,000 Dth/d; Iberdrola Renewables at 80,000 Dth/d; and Sierra Pacific Power Co. at 80,000 Dth/d.

In the four-year period from 2006 to 2009, the system's best year for transportation revenue was 2007 at $300 million. This was also the system's best year for throughput volumes at 2.3 million Dth/d.

Click here to download maps and charts – Frank Nieto

| RESIN PRICES – MARKET UPDATE – FEBRUARY 9, 2012 | | | | | |
|---|---|---|---|---|---|
| TOTAL OFFERS: 15,085,852 lbs | | SPOT | | CONTRACT | |
| Resin | Total lbs | Low | High | Bid | Offer |
| LLDPE - Film | 6,257,868 | 0.695 | 0.79 | 0.66 | 0.7 |
| LDPE - Film | 4,907,844 | 0.69 | 0.81 | 0.72 | 0.76 |
| HDPE - Inj | 3,585,084 | 0.67 | 0.72 | 0.65 | 0.69 |
| HDPE - Blow Mold | 3,395,084 | 0.67 | 0.71 | 0.64 | 0.68 |
| PP Homopolymer - Inj | 2,630,760 | 0.74 | 0.86 | 0.74 | 0.78 |
| HMWPE - Film | 1,292,300 | 0.73 | 0.74 | 0.69 | 0.73 |
| LDPE - Inj | 1,186,300 | 0.79 | 0.79 | 0.71 | 0.75 |
| PP Copolymer - Inj | 1,005,000 | 0.77 | 0.88 | 0.76 | 0.8 |
| LLDPE - Inj | 795,472 | 0.64 | 0.73 | 0.69 | 0.73 |
| GPPS | 380,000 | 0.86 | 0.87 | 0.84 | 0.89 |
| HIPS | 380,000 | 0.95 | 0.96 | 0.94 | 0.99 |

Source: Plastics Exchange – www.theplasticsexchange.com

  

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