

Enterprise: Ethane Exports Aren't Ideal, But Necessary

Company officials stated that its planned ethane export terminal is needed to provide optionality for producers.

BY **FRANK NIETO** | SENIOR EDITOR, MIDSTREAM BUSINESS

One of the main topics of discussion this spring at recent industry conferences and during investor calls has been Enterprise Products Partners LP's announcement last month that it is moving forward with its long-rumored plan to build an ethane export terminal along the Gulf Coast. This project, estimated by industry analysts to cost between \$500 million to \$1 billion, will have the capacity to export up to 240,000 barrels per day (bbl/d) of ethane when it comes online in third-quarter 2016.

Thus far the Enterprise project is only partially subscribed, but the long-term contracts that have been secured were already sufficient for the company to move forward. The facility will integrate with the company's Mont Belvieu complex, which includes more than 650,000 bbl/d of fractionation capacity and more than 100,000 bbl/d of NGL storage capacity along with access to Marcellus and Utica ethane via the ATEX pipeline.

The project is seen as a gamble by petrochemical companies, who point out that there is a limited market for ethane in Europe since it is more economical for companies to crack propane, butane and other condensates. Officials at BASF Corp., Dow Chemical Co. and



Enterprise Products Partners' new ethane terminal will be integrated with its massive Mont Belvieu complex (above). (Source: Enterprise Products Partners)

LyondellBassell Industries also questioned if there would be enough specialty marine vessels that could transport liquefied ethane as well as the ability of this project to meet its deadline.

Enterprise officials countered that they have a strong track record of responding to market needs and delivering projects on time and under budget. "We have a high regard for the U.S. petrochemical industry and have been very supportive of their expansions to the extent that we're willing to put money in projects like the Aegis and ATEX pipe-

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HIGHLIGHTS FROM TODAY'S EDITION



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For the third straight week, injection levels were greater than expected. However, the market may still be short come the fall.

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NGL PRICES & FRAC SPREAD | Week in Review

NGL Prices Shoulder The Burden

BY **FRANK NIETO** | SENIOR EDITOR, MIDSTREAM BUSINESS

NGL prices continued to falter the week of May 7 with only Conway E-P mix and isobutane experiencing improvements at either hub. However, neither of these increases were major upticks as the NGL market remained firm during this shoulder season.

The Conway isobutane price increased 3% to \$1.70 per gallon (/gal), but this was with limited volatility and is 16 cents/gal off the 18-month high price from two weeks prior. Shortages in the market have subsided, but prices rebounded slightly from their large decline the previous week. There may be more demand for isobutane at Mont Belvieu, as evidenced by stronger volatility, but the product's price is much weaker at \$1.25/gal. This was the lowest price

CURRENT FRAC SPREAD (CENTS/GAL)				
May 19, 2014	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	26.76		28.91	
Shrink	28.77		28.71	
Margin	-2.01	50.85%	0.20	116.07%
Propane	102.20		104.22	
Shrink	39.75		39.66	
Margin	62.45	-1.39%	64.56	-1.05%
Normal Butane	117.30		120.48	
Shrink	45.01		44.90	
Margin	72.29	0.47%	75.58	-0.26%
Isobutane	169.60		124.96	
Shrink	43.23		43.13	
Margin	126.37	5.85%	81.83	0.18%
Pentane+	214.00		218.50	
Shrink	48.13		48.02	
Margin	165.87	-1.24%	170.48	1.21%
NGL \$/Bbl	41.77	-1.58%	41.35	-1.70%
Shrink	15.85		15.82	
Margin	25.92	1.09%	25.53	1.07%
Gas (\$/mmbtu)	4.34	-5.65%	4.33	-5.87%
Gross Bbl Margin (in cents/gal)	58.77	1.13%	58.52	1.02%
NGL Value in \$/mmbtu (Basket Value)				
Ethane	1.47	1.36%	1.59	-1.13%
Propane	3.55	-3.09%	3.62	-2.94%
Normal Butane	1.27	-1.97%	1.30	-2.43%
Isobutane	1.06	2.66%	0.78	-1.99%
Pentane+	2.76	-2.27%	2.82	-0.44%
Total Barrel Value in \$/mmbtu	10.10	-1.51%	10.11	-1.83%
Margin	5.76	1.85%	5.78	1.43%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
May 7 - 13, '14	28.91	104.22	120.48	124.96	218.50	\$41.35
April 30 - May 6, '14	29.24	107.38	123.48	127.50	219.46	\$42.07
April 23 - 29, '14	29.98	111.02	126.58	129.86	226.50	\$43.32
April 16 - 22, '14	29.93	112.25	127.30	131.50	228.88	\$43.70
April '14	29.66	110.44	125.32	130.16	226.07	\$43.11
March '14	30.89	106.20	124.77	129.25	218.19	\$42.21
1st Qtr '14	34.50	129.51	137.62	141.49	212.60	\$46.16
4th Qtr '13	26.76	119.81	142.56	145.02	210.66	\$44.03
3rd Qtr '13	24.87	102.65	132.06	134.86	215.56	\$41.21
2nd Qtr '13	27.12	91.38	124.01	127.46	204.12	\$38.82
May 8 - 14, '13	27.98	94.92	122.94	125.50	209.53	\$39.63
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
May 7 - 13, '14	26.76	102.20	117.30	169.60	214.00	\$41.77
April 30 - May 6, '14	26.40	105.46	119.66	165.20	218.96	\$42.44
April 23 - 29, '14	25.56	108.80	123.06	185.80	226.46	\$43.95
April 16 - 22, '14	25.50	111.93	124.48	179.75	230.40	\$44.49
April '14	26.02	110.13	122.02	170.61	228.14	\$43.83
March '14	32.20	107.10	119.02	136.50	225.70	\$43.25
1st Qtr '14	25.46	169.48	132.08	147.10	216.86	\$49.93
4th Qtr '13	20.19	122.54	144.49	147.58	205.01	\$43.33
3rd Qtr '13	20.80	99.22	129.23	142.77	209.94	\$40.07
2nd Qtr '13	20.71	85.37	116.50	123.91	204.86	\$36.89
May 8 - 14, '13	21.74	89.08	116.72	114.33	210.98	\$37.67

(Above) Data Provided by Bloomberg. Individual product prices in cents per gallon. NGL barrel in \$/42 gallons | Source: Hart Energy

(Left) 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.

at the hub since last July as the switch to summer-grade gasoline is limiting its demand.

Ethane held firm at Mont Belvieu with a 1% decrease to 29 cents/gal, the ninth straight week it has been in this range. The Conway price for ethane, which is traded as E-P mix at the hub, increased 1% to 27 cents/gal. These prices are actually fairly stronger when all things are considered. Ethane is still in widespread rejection throughout the country, ethane cracking capacity is limited with several important facilities down for maintenance, and there is no export demand for the product until Enterprise Products Partners LP's export terminal comes online next year.

NGL PRICES & FRAC SPREAD | Week in Review

Propane prices are, as expected, well off their yearly high due to no seasonal demand for the product. The Mont Belvieu price fell 3% to \$1.04/gal and the Conway price decreased 3% to \$1.02/gal. It is still somewhat surprising just how far they are falling given the amount of LPG export capacity now along the Gulf Coast. Somewhat more surprising is the fact that inventory levels are rising at the same time without a price increase. There is still concern over the industry's ability to reload propane stocks ahead of this coming winter, but thus far producers are responding admirably at meeting both domestic storage and foreign export markets.

Rather than buyers bidding up propane prices, En*Vantage reported that some of the PADD II storage build is a result of the Cochin pipeline reversal. "Kinder Morgan is in the process of draining that line of the line-fill in order to fill with C₅₊ once the reversal is complete. We estimate that the Cochin line-fill is approximately 1.3 million barrels (bbl) and it is possible this is contributing to the inventory builds in PADD II," the firm said in its May 8 *Weekly Energy Report*.

The overall theoretical NGL bbl price fell 2% with the Mont Belvieu price down to \$41.35/bbl with a 1% increase in margin to \$25.53/bbl while the Conway price dropped to \$41.77/bbl with a 1% gain in margin to \$25.92/bbl.

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / May 15, 2014	
Gas Hub Name	Current Price
Carthage, TX	4.25
Katy Hub, TX	4.29
Waha Hub, TX	4.29
Henry Hub, LA	4.35
Perryville, LA	4.27
Houston Ship Channel	4.28
Opal Hub, Wyo.	4.29
Blance Hub, NM	4.28
Cheyenne Hub, Wyo.	4.26
Chicago Hub	4.51
Ellisburg NE Hub	3.14
New York Hub	3.15
AECO, Alberta	4.09

Source: Bloomberg

The natural gas storage injection for May 9, the most recent data available from the Energy Information Administration, was greater than many analysts anticipated as it rose by 105 billion cubic feet to 1.160 trillion cubic feet (Tcf) from 1.055 Tcf. This was 41% below the 1.950 Tcf posted last year at the same time and 45% below the five-year average of 2.119 Tcf.

The most profitable NGL to make at both hubs was C₅₊ at \$1.71/gal at Mont Belvieu and \$1.66/gal at Conway. This was followed, in order, by isobutane at 82 cents/gal at Mont Belvieu and \$1.26/gal at Conway; butane at 76 cents/gal at Mont Belvieu and 72 cents/gal at Conway; propane at 65 cents/gal at Mont Belvieu and 63 cents/gal at Conway; and ethane at nil at Mont Belvieu and negative 2 cents/gal at Conway.

The natural gas storage injection for May 9, the most recent data avail-

RESIN PRICES – MARKET UPDATE – MAY 15, 2014					
TOTAL OFFERS: 22,919,032 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Blow Mold	5,091,476	0.7	0.79	0.695	0.735
HDPE - Inj	4,316,280	0.735	0.78	0.695	0.735
PP Homopolymer - Inj	3,869,980	0.79	0.82	0.75	0.79
LDPE - Film	2,562,600	0.725	0.85	0.76	0.8
PP Copolymer - Inj	1,675,496	0.81	0.81	0.76	0.8
LLDPE - Inj	1,594,576	0.77	0.81	0.72	0.76
LLDPE - Film	1,502,760	0.72	0.77	0.705	0.745
LDPE - Inj	1,244,024	0.735	0.78	0.74	0.78
HMWPE - Film	1,061,840	0.77	0.815	0.725	0.765

Source: Plastics Exchange – www.theplasticsexchange.com

Storage levels may approach a similar level this coming week as the National Weather Service's forecast for the week of May 21 anticipates normal late spring temperatures in the Northeast and much of the Midwest. The Southeast and West Coast may have increased cooling demand based on hotter-than-normal temperature expectations.

The unexpected increase in storage injection levels resulted in a 6% discount for gas prices at both hubs with the Mont Belvieu price falling to \$4.33 per million Btu (/MMBtu) and the Conway price down to \$4.34/MMBtu. According to Barclays Capital, the increased injection levels are also having an impact on forward prices. "This is the third week in a row that injections have come above consensus expectations. Indeed, the prompt contract tumbled and dropped by 13 cents as of May 8, down almost 3% on the week," the firm said in an "Energy Market Outlook" research note. "Calendars 2015 and 2016 came off by 1.5% and 1%, respectively week-on-week."

The firm anticipates that the storage deficit compared to last year will be about 400 Tcf by the end of October. However, the note also held for the possibility that this outlook was under risk if the Southeast continued to experience warmer-than-normal weather. The region represents the country's greatest displacement of coal-fired power generation and the difficulty in storing cheaper coal or securing it quickly would force power plants to burn more gas during the summer. Should the U.S. experience normal summer and winter temperatures it is likely that the country will be able to weather the storage deficit, but another summer like 2011 or a winter like 2014 would result in higher gas prices.

NEWS & TRENDS | Up To Date

OTC: Pemex Makes Its Case

BY DEON DAUGHERTY | HART ENERGY

The successful transformation of Pemex from a decentralized public entity into a state-owned productive enterprise will be driven by several key factors—including a healthy dose of both competition and partnership, according to Gustavo Hernández-García, acting director for exploration and production at the Mexican national company.

As Hernández-García spoke to a packed house during a Nov. 6 breakfast, “Mexico Energy Reform: Challenges and Opportunities,” during OTC 2014, he explained that although the nation is well on its way to opening the market to private investment, there is still work to be done at Pemex.

The company, which is the only entity that’s been able to develop hydrocarbons in Mexico during the last 76 years, is undergoing a major transition from reforms that got underway in December. Sweeping changes by the Mexican government, some of which are still in play during the multiyear process, are designed to permit foreign investment into the country’s energy market and open it to some competition. Through profit-sharing, production-sharing and licensing agreements, Mexico has high hopes for foreign investment. Internationally, companies are hoping to capitalize on opportunities to produce the abundant resources beneath Mexico, which include the Eagle Ford Shale geology just south of the Rio Grande River.

Essentially, Hernández-García explained, Pemex will be dedicated to exploring and producing for value.

“The change is a major overhaul for Pemex,” he said, adding that the chief goal for Pemex will be multifaceted: to be the best investment option for monetization of Mexico’s hydrocarbons, to quickly transform into a competitor in an increasingly technical environment and to obtain strategic partnerships.

An early step for Pemex leadership will be to join the very competitive professional market in which its top workers are paid according to the market established by the industry, he said. The inclusion of competition will impact the hydrocarbon value chain, and it will generate a variety of changes within the company, including salary changes for some of the company’s professionals.

“We would like to be a competitive company, but at the same time, we need to pay competitively. We have to convince people that we are committed to retaining talent [and] we will be competitive according to the international market,” he said, adding that Pemex will need to move in a “different way than we have in the past.”



Hernández-García said Pemex looks forward to partnering with other companies, particularly in areas where Pemex doesn’t have precise expertise, such as unconventional, deepwater, mature fields and shallow water. Whereas Pemex has been the only operator in Mexico and had to contract with service companies, the reforms will put partnerships on the table. Those relationships will be key to bringing much-needed technological expertise, as well as capital, to the company, he said.

To foster growth in potential partners’ interest, Pemex must adopt a business model that includes risk-reward parameters, valuation strategy and portfolio management. What’s more, though, the company must develop a value proposition to position it as an attractive partner. And, Hernández-García said, “We need the ability to choose the right partner.”

What’s more, Pemex leaders are preparing to compete for the first time to secure acreage during upcoming bidding rounds. As such, the company is working to foster transparency and accountability with a results-oriented culture that operates in a “fishbowl” environment, he said.

All that activity will be subject to new mandates and newly created commissions designed to enforce those mandates, he said. Agencies to oversee energy regulations, environment and safety—equipped with appropriately trained technical staff—will be critical to the reforms’ success.

All told, Hernández-García said these efforts are designed to increase operations, share risk and bring together capital and technology that will strengthen the company.

“More players and more investments will equal more production and more revenue for the country,” he said, adding that a critical function of the reform is to convince players on the world stage that “they can go to Mexico to invest, because we have a lot to offer.”

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Report: Houston Will Benefit From Mexican Energy Regs

BY MIKE MADERE | HART ENERGY

As Mexico opens its doors to foreign investment and foreign operators for the first time in 75 years, Houston's oil and natural gas-related businesses that supply the chemical and energy industries are primed for growth. Houston's exports will also get a boost from a new open-door philosophy in Mexico, according to a report from the HSBC Group, a banking and financial services organization, and the Greater Houston Partnership, an economic- and trade-development group.

The report released May 13 stated that the combined impact of a massive investment in chemical plants and LNG export terminals on the Texas Gulf Coast and the opening of Mexico's oil production could add more than 55,000 jobs to the Houston region's economy even with only a 15% percent increase in exports.

The opening of Mexico's oil and gas industry to foreign investment will allow Houston to export two innovations—deepwater drilling and hydraulic fracturing, the report said. “Many already attribute Houston's survival in the 1990s and quick economic recovery from the Great Recession to these innovations, but the opening up of Mexico to foreign investment will likely further spur investment and jobs.”

The U.S. and Canada are experiencing production booms; however, that is not the case in Mexico. For nearly a decade, Mexico's oil output has declined. Crude production peaked at 3.3 million barrels per day (MMbbl/d) in 2005, declining to 2.5 MMbbl/d in 2012. North of the border, the U.S. Energy Information Administration (EIA) forecast domestic crude production to increase from about 7.4 MMbbl/d in 2013 to 8.4 MMbbl/d in 2014 and 9.1 MMbbl/d in 2015.

The Cantarell, which was once considered the world's most prolific field, is “typical of Mexico's production decline,” the report stated. Cantarell peaked with 2 MMbbl/d in 2005 but produced just 454,100 bbl/d in 2012. Similarly, Mexico's production of natural gas peaked at 7 trillion cubic feet (Tcf) in 2009 and fell to 6.4 Tcf in 2012. In contrast, EIA's 2014 energy outlook projected that the U.S. will be a net exporter of natural gas beginning in 2018.

“There are many reasons for Mexico's production declines, but they can all be summarized in three buckets—lack of technology, lack of financing and lack of human capital. Pemex [the Mexican national oil company] currently lacks the technology and finances to develop deepwater projects in the Gulf of Mexico or shale oil deposits in the north. But foreign energy firms have the technology, which is why Mexico amended its constitution to allow them into the country.”

Mexico is drafting rules and regulations on foreign operations and investment. Recent reforms stipulate that oil and gas below the surface still belongs to the people of Mexico, but foreign-owned companies can take ownership at the wellhead through profit-sharing, license-sharing and production-sharing agreements. Pemex will continue as a national oil company.

Exports driven by Shale production

Houston's growing exports are being driven by the abundance of crude oil and natural gas produced from the Eagle Ford Shale and the Permian Basin in Texas, and the Bakken Shale in North Dakota, according to the report. Furthermore, “the U.S. would not enjoy that abundance if not for two innovations—horizontal drilling and hydraulic fracturing.”

Horizontal drilling and hydraulic fracturing, the report said, have tapped an almost unfathomable supply of natural gas. The American Chemistry Council estimated that U.S. natural gas resources, at current rates of consumption, are large enough to meet more than 115 years of demand.

“American chemical companies use ethane, a natural gas liquid derived from shale gas, as a feedstock in numerous applications. The relatively low price gives U.S. manufacturers an advantage over many competitors around the world that rely on naphtha, a more expensive oil-based feedstock. The production cost to manufacture ethylene in the United States is 35% of that in Western Europe, hence the current boom in chemical plant construction.”

Tudor, Pickering Holt & Co. identified 24 expansion and newbuild projects. If all are completed, U.S. ethylene production is expected to jump by more than 27.6 million pounds per year, an increase in U.S. capacity of 47.3%, the report stated.

The regional economic impact of chemical construction will be significant. Experienced personnel on Gulf Coast crews could earn from \$25 an hour, while the 10% of the workforce with specialized skills could earn \$40 an hour. Moreover, the report concluded that machining and fabrication of pipes, fittings, valves and other specialty components for these facilities could provide more work for U.S. firms.

Last Chance To Buy Cheap Natural Gas?

BY NISSA DARBONNE | HART ENERGY

Speculators in U.S. natural gas prices remain reluctant to dial up the thermostat on their expectations for gas futures as three supply-and-demand events are to converge in November: the onset of winter de-

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mand, new exports to Mexico and the prospect of starting the heating season without a full tank.

Kinder Morgan Energy Partners LP's Rockies-gas-to-Mexico project, Sierrita, is to begin exporting some 0.2 billion cubic feet per day (Bcf/d) this fall at a connection at the Arizona border. Privately held, Houston-based midstreamer Net Mexico Pipeline Partners LLC is to begin shipping 2.1 Bcf/d of Eagle Ford, associated-gas production to Mexico this winter at Rio Grande City, Texas. An additional 0.93 Bcf/d of U.S. gas production will be taken off the market beginning this winter as midstream operator Energy Transfer Partners LP connects South Texas supply into pipe at the Mexican border at McAllen.

Meanwhile, U.S. working gas in storage was 1,055 Bcf as of May 2, according to the U.S. Energy Information Administration, the lowest May level since 2003. In comparison, May 2003 daily demand averaged 50.5 Bcf; daily demand in May 2013 was 58.1 Bcf. Assuming demand into this fall is unchanged from 2013, producers need to make an extra 13.9 Bcf/d to refill storage to its normal level of about 3,500 Bcf entering November.

At that time, putting further pressure on supply, export of some 3.2 Bcf/d into Mexico will commence via the Net Midstream, Energy Transfer Partners and Kinder Morgan pipeline connections.

Simmons & Co. International Inc. securities analysts reported upon the EIA gas-storage news last week, saying "The pace of bigger-than-expected builds remains significantly below any trend-line ... [to] reach normal storage by the end of the [injection] season."

The 1,055 Bcf level on May 2 "decreases the storage deficit to the five-year average to 982 Bcf ... leaving storage 48% below the five-year average," they added.

Natural gas futures on Nymex are currently in the \$4s leading up to the winter of 2019-20, pushing into the \$5s and high \$4s thereafter.

Meanwhile, international growth is expected to decelerate, from 10% last year to 5% this year. While spending growth in the Middle East and by international E&Ps is expected to remain healthy at 12% and 9%, respectively, the overall growth rate is pulled down by a 10% decline in spending by European majors and a drop to 5% from 14% in spending in the Asia-Pacific region. This is surprising, considering 17% growth in India and 7% growth in China, but other Asian subregions see a 4% decline, mostly because of lower LNG-targeted spending by Woodside, Santos and Oil Search, according to the report.

In addition, the firm slightly raised its global E&P spending outlook for the year from 6% to 7%, once again due to higher-than-expected gas prices in North America. The report estimates that global spending growth, led by North America, will total \$815 billion.

"The overall forecast of 5% international growth represents a slowdown from the last four years, which averaged 11% growth annually," according to the report. "This reinforces our belief that there remains more upside for North America-exposed companies this year, as North America should again see higher growth than international after a reversal last year."

The Permian Basin will top the charts for North American E&P spending growth this year with a whopping 21% increase, according to the report. The rate was calculated from guidance from a "select group" of E&Ps. The report also predicts "healthy spending growth" in more mature basins, including 10% in the Bakken, 9% in the Marcellus and 8% in the Eagle Ford. Companies that provide services to the shale basins are projected to benefit most from the spending growth. While the report estimates 10% growth year-over-year (less in Canada), the frack stage growth is expected to be twice that, as horizontal well creation grows at a faster rate.

"Even accounting for efficiency gains, demand for pumping services should be in the low teens," according to the report.

Thus, Bernstein favors companies with shale service exposure, and rates Halliburton Co., Schlumberger Ltd., Baker Hughes Inc. and Nabors Industries Ltd. Outperform, according to the report. But, the firm remains "cautious" on offshore services and equipment.

Rising Commodity Prices Will Increase E&P Spending

BY CAROLINE EVANS | HART ENERGY

Moderate spending growth in North America should offset declines internationally, according to a recent report from Bernstein Research. The report forecast 9% growth in North American exploration and production (E&P) spending this year. Bernstein's estimate "reflects commodity prices being higher than what's likely in budgets (\$90 WTI and \$4 gas) as well as stabilization in the reinvestment rate for the industry."

FERC Approves Williams Expansions

Williams Partners and its wholly owned subsidiary Transcontinental Gas Pipe Line Co. LLC (Transco) received approval from the Federal Energy Regulatory Commission for its application to construct and operate two Transco natural gas pipeline expansions. The Rockaway

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Lateral and Northeast Connector expansions are designed to increase natural gas delivery capacity to Brooklyn, N.Y., and Queens, N.Y.

Williams Partners plans to build 3.2 miles of new Transco pipeline and related facilities in New York. It will also add equipment to increase compression at three Transco facilities in New Jersey and Pennsylvania. The Rockaway Lateral will increase the Transco system's delivery capacity by 647,000 dekatherms per day. Construction for the projects is expected to begin in June, with the expansions entering service in the fourth quarter.

Access Midstream Partners To Expand UEO Midstream Complex

Access Midstream Partners LP announced an expansion of the Utica East Ohio (UEO) midstream complex in eastern Ohio. UEO is a joint venture owned 49% by Access Midstream, 30% by M3 Midstream LLC and 21% by EV Energy Partners LP. The construction will increase UEO's nameplate capacity to 1 billion cubic feet per day (Bcf/d) and will allow for a processing capacity of more than 1.1 Bcf/d. The additional capacity is needed to meet new customer commitments from Chesapeake Energy Corp., Total Gas & Power North America, Enervest Ltd. and American Energy-Utica LLC. The new commitments are expected to increase UEO's throughput by 70%.

The expansion will include construction of a second processing train at the plant in Leesville, Ohio, and the extension of an existing high-pressure pipeline from UEO's Harrison Hub to Cardinal Gas Services' Archer Compression Facility in Harrison County, Ohio. Other services will also be added at Harrison Hub, including downstream liquids interconnects and an expansion of propane and butane storage. The new agreement between UEO and American Energy-Utica includes installation of 50 miles of gathering pipeline and compression services.

Pembina Pipeline Plans CA\$460 Million Of New Capital Projects

Calgary-based Pembina Pipeline Corp. reached binding commercial agreements to proceed with construction of a new 55,000 barrel per day (bbl/d) propane-plus fractionator at its existing Redwater fractionation and storage complex and a new high-vapor-pressure

pipeline lateral that will expand its Brazeau Pipeline in the Willesden Green area of south-central Alberta.

The new fractionator is supported by long-term take-or-pay contracts with multiple producers and is expected to cost 400 million Canadian dollars (US\$366.84 million). It will be the third fractionator at the Redwater complex. The first fractionator currently has an operating capacity of 73,000 bbl/d. It is being debottlenecked to increase its capacity to 82,000 bbl/d in fourth-quarter 2015. The second fractionator at the complex is expected to enter service during the same quarter and will increase the plant's fractionation capacity to 155,000 bbl/d. With the addition of the third fractionator expected in third-quarter 2017, the facility's total capacity will be 210,000 bbl/d, making it the largest fractionation complex in Canada. Pembina also plans to upsize the third fractionator and add a de-ethanizer tower to increase the facility's total production to 228,000 bbl/d.

The new high-vapor-pressure pipeline is expected to cost CA\$60 million and is underpinned by a long-term take-or-pay contract. Pembina plans to build about 34 miles of new pipeline and associated infrastructure, adding about 10,000 bbl/d of transportation capacity under long-term contract. The pipeline will connect to Pembina's Brazeau Pipeline and will transport ethane-plus NGL from the field for delivery to the Fort Saskatchewan, Alberta, area. The pipeline is expected to enter service in mid-2015.

Rangeland Energy Begins Construction Of RIO System

Rangeland Energy LLC announced on May 13 that it has started construction of the Rangeland Integrated Oil System (RIO System) in the Delaware Basin region of southeastern New Mexico and West Texas. The RIO System's design allows for transport of the basin's crude oil and condensate via outbound rail and pipe and for inbound transport of frac sand via rail. Construction of the system's rail facility, one of three parts for the new system, is underway.

The 300-acre rail terminal is known as the RIO hub and is located near Loving, N.M. The facility's fee-for-service customers include crude oil marketers, refiners and producers. Truck-to-rail transload operations are expected to begin in October with a capacity of 10,000 barrels per day (bbl/d). As customer demand increases, Rangeland will build high-speed unit train loading facilities, which will raise capacity to more than 100,000 bbl/d. The RIO hub will also include unloading, storage and truck loading facilities for frac sand suppliers.

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Initial rail-to-truck transload service will accommodate more than 500,000 tons of frac sand per year. Rangeland plans to expand the frac sand infrastructure at the hub to accommodate more than 1 million tons of frac sand per year.

The RIO hub will be served by the BNSF Railway Co., and will also connect to market centers via the RIO pipeline project. The first 30 miles of the pipeline will connect the RIO hub to the RIO state line terminal, a gathering hub at the Texas-New Mexico border where Rangeland will provide tankage and truck unloading facilities. Another 104 miles of pipeline will connect the RIO state line terminal and the RIO Midland terminal, which will connect to various terminals and interstate pipelines to Cushing, Okla., and Gulf Coast markets.

Rangeland secured the site for the Midland terminal and is developing terminal opportunities for crude oil customers in the Midland market. Rangeland also completed routing and environmental surveys for the RIO pipeline and is working with potential customers to obtain the volume support needed to begin construction.

Energy Transfer Partners Enters Long-Term Agreements With CFE

Energy Transfer Partners LP's (ETP) wholly owned subsidiaries Houston Pipe Line Co. LP and Oasis Pipeline LP agreed to provide transportation services for 930,000 million Btu of natural gas per day to Comisión Federal De Electricidad (CFE). CFE handles Mexico's power needs.

To facilitate the agreements, ETP will use its existing pipeline infrastructure and construct a new 24-inch pipeline from Houston Pipe Line's pipeline near Edinburg, Texas, to a new international border crossing near McAllen, Texas. ETP will also construct about 51 miles of 36-inch pipe from Robstown pipeline system in Nueces County, Texas, to its facilities in Live Oak County, Texas. The Edinburg expansion is expected to be complete in fourth-quarter 2014. The pipeline from Nueces County has an expected in-service date in early 2015.

Spectra Project Application Accepted For Review

Spectra Energy Corp.'s submission of an environmental assessment certificate application for the Westcoast Connector Gas Transmission Project has been formally accepted for review by the British Columbia Environmental

Assessment Office. An 180-day review process will follow and includes a 45-day public comment period from May 14 until June 27.

The proposed project is a new natural gas system beginning in the Cypress area in northeast British Columbia and ending at BG Group's proposed Prince Rupert LNG export facility. The project will allow for up to two pipelines with total transportation capacity of 8.4 billion cubic feet per day (Bcf/d) in a single right of way. Service of the 528-mile, 4.2 Bcf/d pipeline is expected to commence around the end of the decade, pending a final investment decision.

Magellan Midstream: Little Rock Pipeline Project To Proceed

Magellan Midstream Partners LP will proceed with its project to deliver refined petroleum products to Little Rock, Ark., via pipeline. The project is supported by commitments from Magellan's recent open season.

Magellan will transport up to 75,000 barrels per day of gasoline, diesel fuel and jet fuel to Little Rock from its Fort Smith, Ark., terminal. The project will provide Little Rock access to refined products from Midcontinent and Gulf Coast refineries through Magellan's refined petroleum products pipeline system.

Magellan contracted with Ozark Gas Transmission LLC, a Spectra Energy Partners LP subsidiary, to use an existing 160-mile pipeline on a long-term basis as part of the route. Magellan will extend the existing pipeline to its Fort Smith terminal and to the Little Rock market with about 50 miles of newly constructed 12-inch pipe. The company will make enhancements to its pipeline system to accommodate additional volumes.

Castleton Commodities Acquires San Juan Gas Plant

BUSINESS WIRE

Castleton Commodities International LLC announced May 1 that a subsidiary has acquired a gas processing facility in Kirtland, N.M., and about 225 miles of gathering pipelines from a wholly owned subsidiary of Anadarko Petroleum Corp. The transaction amount was not disclosed.

The San Juan Plant has a capacity of 75 million cubic feet per day (MMcf/d) and is able to process sour gas that is high in sulfur as well

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as recover NGL through its 20 MMcf/d cryogenic processing unit. About 150 of its 225 miles of gathering pipelines connect into Castleton's existing Lisbon gas plant based in Stamford, Conn.

"We are pleased to add the San Juan Plant to our growing portfolio of energy assets and expand our footprint in the Four Corners area," Brad Burmaster, Castleton vice president of midstream operations, said in a May 1 press release. "The San Juan acquisition is a logical expansion of CCI's existing upstream and midstream assets in Colorado, Utah and New Mexico."

QEP Midstream To Purchase Green River Interests

QEP Midstream Partners LP entered into a purchase agreement with QEP Resources Inc.'s wholly owned subsidiary QEP Field Services Co. to acquire 40% of the outstanding membership interest in Green River Processing LLC. The purchase is QEP Midstream's first acquisition since its IPO in August 2013.

The acquisition is expected to be immediately accretive to QEP Midstream's distributable cash flow per unit. The closing is expected on July 1, subject to customary closing conditions. QEP Midstream will finance the purchase with borrowings under its revolving credit facility.

At closing, Green River Processing will own four cryogenic processing plants with total processing capacity of 890 million cubic feet per day, NGL fractionation capacity of 15,000 barrels per day, interconnects to six interstate natural gas pipelines and direct pipeline access to Mt. Belvieu, Texas, and Conway, Kan., NGL markets.

Moody's: Midstream EBITDA Outlook Is Positive

The outlook for the North American midstream sector during the next 12 to 18 months is positive, according to the recently released



Moody's Investors Service report "Even With Slowdown in Spending Boom, Midstream Infrastructure to see Solid Growth." The credit ratings firm forecasted that the sector's EBITDA will grow by 12% to 14% through mid-to-late 2015.

Despite slowing infrastructure investment for 2014 amid a probable 6% to 8% decrease in capital spending growth, investment opportunities in energy infrastructure will persist to keep up with North American hydrocarbon production. Strong oil production in the Marcellus and Bakken shales, along with high oil prices, will likely support infrastructure demand and increase cash flow through the sector, according to the report.

MLPs will also contribute to the midstream's positive outlook, as they are expected to pursue more merger and acquisition opportunities while organic capital spending slows. The report said that MLP structural growth incentives will keep propelling increases in the midstream sector's EBITDA and distributable cash flow.

"Weak commodity prices [for natural gas and NGL] and a slowdown in spending pose the greatest threats to the midstream sector's robust growth," according to Moody's. However, the outlook remains positive as volume growth from past investment activity is expected to offset the low commodity prices. Companies will continue to look for MLP opportunities, and companies serving regions with reduced natural gas investment and production will look for ways to avoid stranded assets.

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Stabilis Completes Acquisition Of Encana's US-Based LNG Unit

Stabilis Energy closed the acquisition of substantially all of the U.S.-based assets of Encana Natural Gas Inc. (ENGI) of Denver. Terms of the transaction were not disclosed.

ENGI, a subsidiary of Calgary-based Encana Corp., is a distributor of LNG fuel to domestic high horsepower engine operators in the oilfield, mining, rail, marine, over the road transportation and industrial sectors. The transaction is part of Encana's transition strategy launched in 2014 to grow liquids production by 90%. The company said in December 2013 it would invest about 75% of its 2014 capital into five high-return oil and liquids-rich plays: the Montney, Duvernay, D-J Basin, San Juan Basin and Tuscaloosa Marine Shale.

Stabilis, of Beaumont, Texas, agreed to purchase ENGI's fleet of cryogenic rolling stock assets including storage and regasification trailers, mobile fueling units and other related equipment. Stabilis will fulfill all of ENGI's existing customer obligations including its existing contracts.

TransCanada Files Project Description With NEB

TransCanada Corp. filed a project description with Canada's National Energy Board for the Eastern Mainline Project. The project will add new facilities to TransCanada's existing Canadian Mainline natural gas transmission system in southeastern Ontario.

The proposed scope of the project will ensure that appropriate transportation capacity is available to meet current shipper requirements as well as the new firm service commitments contracted by TransCanada for services in the Eastern Triangle segment of the Canadian Mainline. The project proposes a transfer of parts of the Canadian Mainline system to crude oil service from natural gas service as part of TransCanada's planned Energy East Pipeline Project. The project calls for the construction of as much as 230 miles of up to 36-inch pipe and associated compression facilities adjacent to existing Mainline facilities in eastern Ontario.

Discussion between TransCanada and shippers to determine the required capacity is ongoing.



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SNAPSHOT | Industry Insight

Regulations On The Rise:

BY **JON KASITZ AND ETHAN PROUT** | SPECIAL TO HART ENERGY

On the frigid morning of Jan. 9, chemicals began leaking through a seemingly insignificant hole in a steel storage tank near Charleston, W.Va. The fluid flowed into the Elk River, from there downstream into the intake of a public water supply treatment plant, and then more than 300,000 residents lost access to potable water.

Less than three months later, the West Virginia legislature finalized a bill authorizing additional regulations on both aboveground storage tanks and public water supply safety. These new regulations, while not yet fully developed by the West Virginia Department of Environmental Protection (WVDEP), will affect regulatory compliance procedures and costs for midstream companies operating in the state.

The incident

The primary chemical within the solution leaked was 4-methylcyclohexane methanol, known as MCHM, used to separate and clean coal products in a process known as froth flotation. Freedom Industries Inc., the owner of the storage tank, acts as a middleman by purchasing and storing chemicals and then selling them to coal companies. Estimates report that between 4,000 and 10,000 gallons of the solution leaked into the river 1.5 miles north of the treatment plant, which supplies drinking water to portions of nine counties in the southwestern part of West Virginia. The state instructed affected residents to stop all drinking, cooking and showering with their tap water for several days.

Legislative overview

One week later, Sen. John Unger II D-W.Va. introduced S.B. 373, aiming to add information, permitting, spill prevention plans and more regulatory oversight to protect private and public water supplies. Neighboring state Pennsylvania passed regulations with similar intent in 1989, and the federal government maintains the Toxic Substances Control Act, finalized in 1976.

After review of S.B. 373 by the Senate Natural Resources and Judiciary committees, the Senate passed it on Jan. 28. In the House, the Human Resources, Judiciary, and Finance committees reviewed the bill. On March 5, a revised version passed, and by March 8, both bodies had agreed on the final structure of the bill with more than 100 amendments. West Virginia Democratic Gov. Earl Tomblin signed it into law April 1; the statute will go into effect on June 6.



An incident last year related to the coal industry that saw contaminants leak into water supplies in West Virginia, is causing new storage regulations in the state that is impacting the midstream. (Source: RETTEW)

The bill contains two major new acts: the Aboveground Storage Tank Act (ASTA) and the Public Water Supply Protection Act (PWSPA). The ASTA outlines additional WVDEP oversight of ASTs such as registration, permitting and inspections, while the PWSPA stiffens regulations for all potential contaminants stored within zones of critical concern around public water supply systems.

Aboveground Storage Tank Act

The ASTA applies to all aboveground storage tanks holding more than 1,320 gallons of fluid with 90% of the storage above ground level. It applies to both stationary and some mobile tanks—those that remain in one location for 60 days or more. Some ancillary aboveground or underground piping associated with the tanks also will be regulated under the ASTA.

Owners and operators must register their tanks by Oct. 1, 2014. The registration includes tank ownership, installation date, capacity, volume, type of fluid stored, identification and location of nearest groundwater public water supply or surface water intake. If an existing program already regulates the tank, this information must also be included. The WVDEP may require fees for registrations to help offset the administrative cost. Operators must affix signs to ASTs detailing registration identification and emergency contact numbers, as well as provide financial documentation to the WVDEP demonstrating their ability to cover the cost of related environmental liability. The new AST regulations also come with requirements such as providing a leak detection system, a spill prevention response plan, corrective action plans, annual inspections by qualified personnel and notice to public water systems.

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LEAD STORY | From The Front

line systems. Frankly, producers need markets,” Jim Teague, the company’s COO, said during a May conference call to discuss first-quarter earnings.

“I know that some people don’t have the same robust forecasts that we do, but invariably, when we sit down with a petrochemical company or with a producing company, by the time we’re through, they have a full understanding of what it is we’re looking at ... and become a big believer,” he continued.

The fact that all of the North American processing facilities are currently running negative margins for ethane means that foreign markets and their margins are attractive based on the projected supply levels. Teague added that the company doesn’t believe this terminal will change the market dramatically, but it will serve as a bridge until the North American market can fully absorb these supplies.

Teague acknowledged that in an ideal world, it would be easier to export ethylene resin rather than liquefy ethane for export, but he cited that the current market dynamics require more options. “I would rather have everything this country exports be solid rather than liquid, but that’s not the reality today,” Teague said. The company is planning to secure long-term contracts at 10+ years, which is another indicator on just how long the country will be on ethane in the years ahead.

Teague declined to comment on what markets the company is eyeing for the exports, but said that the Panama Canal will be “helpful.” Interestingly, he said that he views this proposed project closer to a pipeline rather than an LPG export terminal because it would not be dependent on spot market prices. This strategy would see dedicated carriers make regular runs between the terminal and buyers with long-term contracts, with Enterprise collecting a delivery fee as with their pipeline operations.

Although this new project was a large topic of discussion among investors, it is hard to ignore the success that Enterprise has had with LPG exports. Earlier this year, the company announced plans for an expansion of its LPG export terminal that is supported by a 50-year

service agreement with Oiltanking for additional dock space and related services.

“When this expansion is completed, which is expected to occur by the end of 2015, we will have an aggregate loading capacity in excess of 16 million bbl per month of low ethane-propane and/or butane, which is twice the capacity that we have today,” Mike Creel, Enterprise CEO, said during the call.

In addition, “traditional” midstream operations such as gas processing and pipelines are still the company’s bread and butter. Its processing segment reported record fee-based volumes of 4.7 billion cubic feet per day in the quarter, which is a 4% improvement from last year’s quarter. Equity NGL production increased 12% over the previous year’s quarter to 137,000 bbl/d. Creel said that the bulk of the fee-based processing volumes were from Enterprise’s South Texas plants with equity NGL production being increased at its Meeker and South Texas plants.

Gross operating margin from its NGL pipelines and storage segment rose by 25%, or \$58 million, to \$290 million in the quarter. The ATEX pipeline, which began operations in January, was a particular standout in the segment with \$31 million in gross operating margin in the quarter. This was despite the pipeline averaging 30,000 bbl/d, 68,000 bbl/d below committed volumes, due to unplanned fractionation facility outages in the Marcellus Shale along with several still being under construction or in the process of connecting to the pipeline.

For the quarter, the company completed \$2.5 billion of capital projects, including the ATEX pipeline, the Front Range pipeline, and its Mid-America pipeline expansion. “Those collectively have resulted in about 1,100 miles of new pipeline being placed into service. We have another \$2.5 billion of capital projects targeted for completion this year, and \$4.2 billion planned to begin service in 2015 and 2016,” Creel said while noting there are several other projects in its backlog that are being worked on.

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