

Despite Rough 2012, Future Bright For Natural Gas

NGL prices started 2012 in a tailspin and deteriorated as the year progressed

BY **FRANK NIETO** | EDITOR, MIDSTREAM MONITOR, MIDSTREAMBUSINESS.COM

Natural gas liquids (NGL) prices started 2012 in a bit of a tailspin and this situation, for the most part, deteriorated further as the year progressed.

The second half of 2012 experienced a pick-up in prices, but much of this was a result of prices bottomed out in June before coming back to a more normalized level.

While Conway prices were more depressed than Mont Belvieu for much of 2012, this situation reversed course in the final weeks of the year as pipelines bringing additional supplies from the Eagle Ford and Permian basin were brought online.

Although there are concerns that ethane crackers are not being brought online at a quick pace, it is important to note that the ethane market should experience a pick-up in 2013 as it benefits from a full-year of steady cracking capacity.

The NGL that suffered the most in 2012 was undoubtedly ethane, which experienced decreases as demand was lessened for



much of the year due to several important ethane crackers undergoing turnarounds and expansions in the Gulf Coast.

In addition, propane became more attractive to crackers as a feedstock as ethylene co-product prices rose and propane prices dropped as a result of a warm winter that drastically affected heating demand.

Ethane prices began the year at an average of 65¢ per gallon (/gal) at Mont Belvieu in January with an average margin of 43¢/gal in the month. By the end of the year, this average

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HIGHLIGHTS FROM TODAY'S EDITION



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Mont Belvieu NGL prices regained their standing above Conway NGL values.

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NGL PRICES & FRAC SPREAD | Week in Review

Butane Falls 12% At Conway

BY **FRANK NIETO** | EDITOR, MIDSTREAM MONITOR,
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Mont Belvieu natural gas liquids (NGL) prices regained their standing above Conway NGL values the second week of January despite an overall decrease in prices at the hub.

The biggest change in value for the week was the 12% decline for Conway butane, which fell to \$1.81 per gallon (/gal) as its short squeeze ended. Not all was doom and gloom for the product at Conway, as this is the fourth-highest price at the hub in the past year. Meanwhile, Mont Belvieu butane prices improved 1% to \$1.78/gal as they continued to recover from their own short squeeze the week of December 5.

CURRENT FRAC SPREAD (CENTS/GAL)				
January 14, 2013	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	19.60		22.63	
Shrink	21.02		21.15	
Margin	-1.42	19.62%	1.48	-48.75%
Propane	78.86		84.94	
Shrink	29.04		29.22	
Margin	49.82	-2.99%	55.72	-3.21%
Normal Butane	181.13		178.28	
Shrink	32.87		33.08	
Margin	148.26	-13.51%	145.20	2.04%
Isobutane	176.65		189.34	
Shrink	31.57		31.77	
Margin	145.08	-2.59%	157.57	5.92%
Pentane+	219.96		221.00	
Shrink	35.16		35.38	
Margin	184.80	0.64%	185.62	-0.09%
NGL \$/Bbl	41.74	-4.80%	43.00	-1.23%
Shrink	11.58		11.65	
Margin	30.16	-4.36%	31.35	-0.20%
Gas (\$/mmBtu)	3.17	-5.93%	3.19	-3.92%
Gross Bbl Margin (in cents/gal)	67.35	-4.30%	70.83	-0.36%
NGL Value in \$/mmBtu				
Ethane	1.08	-4.76%	1.25	-9.12%
Propane	2.74	-4.10%	2.95	-3.46%
Normal Butane	1.96	-12.23%	1.93	0.88%
Iso-Butane	1.10	-3.21%	1.18	4.13%
Pentane+	2.84	-0.47%	2.85	-0.72%
Total Barrel Value in \$/mmbtu	9.71	-4.84%	10.15	-1.82%
Margin	6.54	-4.29%	6.96	-0.82%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Jan. 2 - 8 '13	22.63	84.94	178.28	189.34	221.00	\$43.00
Dec. 26, '12 - Jan. 1 '13	24.90	87.98	176.73	181.83	222.60	\$43.54
Dec. 19 - 25 '12	24.66	82.38	173.30	178.95	217.80	\$42.25
Dec. 12 - 18 '12	21.55	75.54	173.82	184.53	211.96	\$40.74
December '12	22.97	79.70	175.77	184.25	214.89	\$41.75
November '12	27.15	89.20	164.16	183.49	219.64	\$43.22
4th Qtr '12	26.59	88.74	162.76	181.71	215.67	\$42.69
3rd Qtr '12	32.34	89.27	142.76	161.88	200.54	\$41.03
2nd Qtr '12	37.00	97.80	160.76	175.08	207.57	\$44.54
1st Qtr '12	53.93	125.90	192.36	204.32	238.95	\$55.05
Jan. 4 - 10, '12	76.05	133.24	205.84	232.28	235.74	\$60.57
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Jan. 2 - 8 '13	19.60	78.86	181.13	176.65	219.96	\$41.74
Dec. 26, '12 - Jan. 1 '13	20.58	82.23	206.37	182.50	221.00	\$43.85
Dec. 19 - 25 '12	20.18	74.23	204.10	179.55	217.75	\$42.41
Dec. 12 - 18 '12	16.90	68.32	181.92	182.00	206.70	\$39.33
December '12	18.42	73.02	188.65	178.77	211.62	\$40.74
November '12	18.22	78.98	159.26	169.60	211.76	\$39.65
4th Qtr '12	18.45	79.24	164.46	174.39	209.16	\$39.94
3rd Qtr '12	14.60	70.25	124.35	165.61	195.68	\$34.99
2nd Qtr '12	11.18	72.63	135.80	161.38	203.31	\$35.72
1st Qtr '12	26.93	103.34	168.65	184.75	227.16	\$45.92
Jan. 4 - 10, '12	31.16	104.26	184.68	194.50	207.20	\$46.46

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

(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. Source: Frank Nieto

Butane's sister product, isobutane, also moved in opposite directions between the hubs. The Conway price fell 3% to \$1.77/gal, its lowest price since the week of November 28, and the Mont Belvieu price improved 4% to \$1.89/gal, its highest price since it was \$1.90/gal the week of October 31.

Ethane had the second-largest drop in value this week at either hub as it fell 9% to 23¢/gal at

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NGL PRICES & FRAC SPREAD | Week in Review

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Mont Belvieu, its third-lowest price since 2005. This caused the frac spread margin to fall 49% to just 2¢/gal, which will continue the trend of ethane rejection in the Gulf Coast.

Conway ethane also remains depressed as the price tumbled another 5% to 20¢/gal. The margin was able to improve 20% to negative 1¢/gal as natural gas prices fell 6% to \$3.17 per million Btu (/MMBtu). The Mont Belvieu price for natural gas also fell 4% during the week to \$3.19/MMBtu due to warmer temperatures in the eastern portion of the U.S.

The outlook for gas prices isn't good in the short-term, according to Barclays Capital. According to the investment firm's most recent Gas and Power Kaleidoscope, gas prices fell despite colder-than-normal temperatures at the end of 2012 and they will continue to struggle as the forecasts are expecting another rush of warmer-than-normal temperatures in both February and March. "Prices are unlikely to head higher, in our view, unless there is a significant change of direction in temperatures," the report said.

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / January 10, 2013	
Gas Hub Name	Current Price
Carthage, TX	3.05
Katy Hub, TX	3.09
Waha Hub, TX	3.12
Henry Hub, LA	3.08
Perryville, LA	3.03
Houston Ship Channel	3.05
Agua Dulce, TX	3.59
Opal Hub, Wyo.	3.24
Blance Hub, NM	3.19
Cheyenne Hub, Wyo.	3.16
Chicago Hub	3.20
Ellisburg NE Hub	3.22
New York Hub	3.26
AECO, Alberta	2.90

Source: Bloomberg

Barclays Capital estimates that if February and March temperatures return to normal winter levels, the winter would up 5% warmer than normal. Although it is unlikely that heating demand would be as low as it was in 2012, another warmer-than-normal season would slow storage withdrawal levels and put pressure on prices. Already the lower heating demand caused propane prices to drop at both hubs as the Mont Belvieu price dropped 3% to 85¢/gal and the Conway price fell 4% to 79¢/gal after a week of volatile trading at both hubs.

RESIN PRICES – MARKET UPDATE – JANUARY 10, 2013					
TOTAL OFFERS: 19,358,120 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
LDPE - Film	4,726,368	0.63	0.76	0.66	0.7
PP Homopolymer - Inj	3,467,288	0.71	0.81	0.75	0.79
PP Copolymer - Inj	3,436,828	0.72	0.81	0.77	0.81
HDPE - Blow Mold	2,777,772	0.65	0.72	0.62	0.66
LLDPE - Film	2,451,380	0.66	0.715	0.64	0.68
HMWPE - Film	1,112,736	0.67	0.74	0.66	0.7
HDPE - Inj	438,828	0.64	0.7	0.64	0.68
LDPE - Inj	352,736	0.7	0.71	0.7	0.74
LLDPE - Inj	278,184	0.7	0.71	0.67	0.71
GPPS	190,000	0.93	0.93	0.88	0.93
HIPS	126,000	1.02	1.02	0.99	1.04

Source: Plastics Exchange – www.theplasticsexchange.com

While NYMEX crude prices traded above \$90 per barrel (/ bbl.) for the week, C₅₊ prices dipped slightly at both hubs. The Mont Belvieu price fell 1% to \$2.21/gal while the Conway price fell incrementally to \$2.20/gal.

Despite these price decreases, C₅₊ remained the most profitable NGL to make at both hubs as it had a margin of \$1.85/gal at Conway and \$1.86/gal at Mont Belvieu. Butane had the second-highest margin at Conway at \$1.48/gal while isobutane had this distinction at Mont Belvieu at \$1.58/gal. The situations were reversed for the third-most profitable NGL at each hub with Conway isobutane at \$1.45/gal and Mont Belvieu butane at \$1.45. These were followed, in order, by propane at 50¢/gal at Conway and 56¢/gal at Mont Belvieu; and ethane at negative 1¢/gal at Conway and 2¢/gal at Mont Belvieu.

The theoretical NGL bbl. price decreased 5% to \$41.74/bbl. at Conway with a 4% drop in margin to \$30.16/bbl. The Mont Belvieu price dropped 1% to \$43.00/bbl. with a slight drop in margin to \$31.35/bbl.

Natural gas in storage for the week of January 4 decreased 200 billion cubic feet to 3.316 trillion cubic feet (Tcf) from 3.517 Tcf the prior week, according to the Energy Information Administration. This was 3% below the 3.404 Tcf figure reported last year at the same time and 11% above the five-year average of 2.996 Tcf.

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PROCESSING TRENDS | An Inside Look

Keystone XL Pipeline Clears Environmental Hurdle In Nebraska

BY **DARREN BARBEE** | HART ENERGY

A new report says the Keystone XL pipeline would pose negligible impact to Nebraska, clearing a significant hurdle to move unconventional sources of Canadian oil from oil sands to the Gulf Coast, said David Tameron, senior analyst, Wells Fargo Securities. The TransCanada pipeline was previously rejected over environmental concerns.

The “pipeline has cleared a significant hurdle,” Tameron said. “We expect the report could be the catalyst for some volatility in the WCS-WTI differential, but should have no significant impact on equities.”

Construction and operation of Keystone XL is expected to have “minimal environmental impacts in Nebraska,” the state’s Department of Environmental Quality (NDEQ) said in a final report issued January 4. The report also said that during the operational phase of the proposed pipeline, the Nebraska reroute would not “significantly affect regional or national air quality.”

However, NDEQ found that hazardous materials such as lubricant, fuels, oils and other materials commonly found on a construction site could cause environmental damage to local surface and groundwater supplies, vegetation and wildlife in the event of an accidental release.

The report had no recommendation on the proposed 194.5-mile alternative route to avoid the Sandhills region, which had been cited as the environmentally sensitive area that prohibited construction of the northern portion of the pipeline, Tameron said. The southern portion has already been approved.

Nebraska Gov. Dave Heineman has 30 days to review the report before making a recommendation to the U.S. State Department.

In January 2012, President Obama killed the pipeline on the recommendation of the secretary of state, citing concerns about health, safety and environmental impact.

A March 2012 Gallup poll found that 57% of adults thought the pipeline should be approved, including 81% of Republicans and 44% of Democrats.



ONE STEP CLOSER | The Nebraska Department of Environmental Quality issued a largely favorable report on TransCanada’s Keystone XL pipeline, which bodes well for the project’s future.

TransCanada reapplied to construct the 1,179-mile Keystone from Alberta to Nebraska. TransCanada has said it anticipates approval of the Presidential Permit application, which is required because the pipeline crossed the U.S./Canadian border in the first quarter of 2013. The company plans to invest more than \$1 billion in Nebraska infrastructure related to the 36-inch diameter pipeline.

TransCanada noted that the NQEQ found:

- Construction of Keystone XL will result in \$418.1 million in economic benefits and support up to 4,560 new or existing jobs in Nebraska.
- The project will generate \$16.5 million in taxes from pipeline construction materials and is expected to yield up to \$13 million in local property tax revenues in its first full year of valuation.
- Normal operation of the pipeline is expected to have no effect on ground or surface water quality or use along the pipeline route in Nebraska.

“In the unlikely event of a spill from the pipeline, impacts on water resources would be localized and would not impact the Ogallala Aquifer as a whole,” the company said.

NDEQ said Keystone has committed to the state funding for a public liaison, liability insurance and private well testing

The company’s original Keystone Pipeline began operating in 2010, and has delivered more than 350 million barrels (bbl.) of oil to refineries in the U.S. Midwest without incident.

Keystone XL is designed to carry about 830,000 bbl.  Continued on Page 7

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of oil from Alberta, Montana and North Dakota to Steele City, Nebraska.

In 2011, TransCanada paid more than \$2.3 million in state and local taxes here in Nebraska on its original Keystone pipeline. “In 2012, the tax bill we will pay in Nebraska is expected to be two to three times more than in 2011,” TransCanada said in a news release.

“The State Department will have the final word on the project. In our view, the project remains possible and some indications suggest that the administration could ultimately support the project,” Tameron said.

The report was a review by NDEQ that included extensive public input gathered during a seven-month public comment period.

“The re-route ensures Keystone XL will have minimal environmental impact by avoiding the area defined as the Nebraska Sandhills, crossing fewer miles of threatened and endangered species habitat and considerably fewer miles of erodible soils,” Russell Girling, TransCanada’s president and chief executive officer, said in a release. “It also moves the route to the down-slope side of two wellhead protection areas.”

TransCanada has said the pipeline has “overwhelming support” from American and Canadian producers and U.S. refiners who have signed 17- to 18-year contracts to ship oil.

Enterprise Products Partners “Sells Out” PDH Facility

BUSINESS WIRE

Enterprise Products Partners LP announced that it has executed long-term, fee-based agreements that effectively “sell out” the partnership’s 1.65 billion pounds per year propane dehydrogenation (PDH) facility that is scheduled to begin operations in the third quarter of 2015. In anticipation of a continuing decrease in supplies of propylene, Enterprise is having ongoing discussions with additional customers that could lead to the development of additional PDH capacity.

In June 2012, Enterprise announced that it was proceeding with its plans to build a PDH facility that would consume up to 35,000 barrels (bbl.) per day of propane to produce approximately

1.65 billion pounds per year of polymer grade propylene (PGP). This facility will be integrated with the partnership’s existing propylene fractionation facilities that have a capacity of 5.3 billion pounds per year (approximately 2.4 million metric tons or 80,000 bbl. per day), which will provide operational reliability and flexibility for both the PDH unit and the fractionation facilities. The PDH facility will also be integrated with Enterprise’s PGP storage facilities, 102-mile distribution pipeline system and export terminal.

“We had very strong customer demand for the remaining capacity in our PDH unit,” A.J. “Jim” Teague, executive vice president and chief operating officer of Enterprise’s general partner, said in a release. “This demand is being driven by the combination of a 38% decrease in propylene supplies since 2006 due to additional ethane consumption by U.S. petrochemical companies and the growing supplies of domestic propane from the U.S. shale plays.”

ArcLight Forms North Sea Midstream

ArcLight Capital Partners LLC announces the recent formation of North Sea Midstream Partners and the acquisition by NSMP of Teesside Gas Processing Plant Limited.

NSMP was formed by affiliates of ArcLight in a partnership with the senior management of TGPP and with Mike Wagstaff, previously the chief executive of Venture Production plc. NSMP will focus on the ownership and commercial development of large scale midstream oil and gas infrastructure assets in and around the North Sea.

TGPP is a highly efficient natural gas processing plant located at Seal Sands on Teesside, England, that is capable of high levels of natural gas liquids extraction. The plant has current processing capacity of 450 million cubic feet (MMcf) per day serving customers delivering gas via the CATS pipeline system from the Central North Sea. The company is completing the construction of a second processing train which will add an additional 225 MMcf per day of capacity initially dedicated to serving the RWE-operated Breagh project in the Southern Gas Basin. TGPP is the only independently owned and managed gas processing plant in the UK.

PIPELINES & TECHNOLOGY | Developments

Canadian Producers Concerned About Moving Their Product

BY **CHRIS SHEEHAN** | HART ENERGY

Canadian oil sector concerns are now centered on whether production can access global markets, given a continuing lack of clarity on new pipeline routes from its landlocked Alberta production base, ATB Financial senior economist Todd Hirsch told attendees at the Energy Finance Discussion Group in Denver.

A far cry from earlier, wondering as to whether Canada had enough oil—now viewed as “an irrelevant question”—concerns subsequently transitioned to whether enough demand would exist for Canadian oil production given recent forecasts that the U.S., the foremost importer of Canadian crudes, could become self-sufficient in oil by 2020.

Hirsch said such forecasts more precisely call for self-sufficiency for North America, rather than the U.S. alone, by 2020. Even so, “We really need for the U.S. to remain an export market,” he emphasized.

And most recently, “The bigger question is, ‘can we even move our oil to global markets.’” This would be the “defining question facing the Canadian industry,” pending greater clarity on pipeline export options.

Hirsch noted that the Keystone XL Pipeline still lacked U.S. State Department approval, an issue that “dominated news headlines” in Canada in 2012. The Canadian industry is still hoping to see a favorable ruling on the TransCanada project in 2013.

Plan B is Enbridge’s Northern Gateway Pipeline, which “would have been a snap 20 to 30 years ago,” Hirsch said, but now faces “enormous opposition” in British Columbia.

“We’re not sure we’ll see that pipeline go ahead,” even though it would help diversify Canadian exports to new Asian markets, he said.

Plan C involves reversing Enbridge’s Sarnia-Montreal pipeline system, such that western Canadian oil would be able to reach refineries east of the Ottawa River and potentially access international markets via tankers on the East Coast.

A fourth option also exists in Kinder Morgan’s proposed Trans Mountain Pipeline expansion, involving the twinning of an existing pipeline running from Edmonton to the Pacific Ocean at the Washington state-British Columbia border.

In the meantime, Western Canadian Select crude continues to trade at a substantial discount to West Texas Intermediate—much steeper than the \$20 per barrel (bbl.) or less historical discount, Hirsch noted. As of January 7, the discount of Western Canadian Select to WTI stood at more than \$35 per bbl. .

With Canada facing its own “special challenges,” and the worldwide recovery seen as being “hesitant and uncertain” during the next two years, the interaction of supply and demand is expected to make for soft North American oil prices, Hirsch concluded.

Williams Seeks FERC Approval To Expand Natural Gas Service To NYC

Williams Partners LP announced that it has filed an application with the Federal Energy Regulatory Commission (FERC) to provide another natural gas delivery point from its Transco pipeline to New York City.

The Rockaway Delivery Lateral Project is designed to provide approximately 647,000 dekatherms per day of natural gas delivery capacity to National Grid’s gas distribution system in Brooklyn and Queens, New York, providing National Grid with both supply flexibility and increased capacity to meet future incremental demand growth. The project is proposed to be placed into service during the second half of 2014.

The proposed 3.2-mile 26-inch lateral would consist of approximately 2.9 miles of offshore pipeline and approximately 0.3 miles of onshore pipeline. The preferred route avoids residential, commercial and sensitive environmental areas. The sea to shore portion of the pipeline (approximately 1 mile) would be constructed using subsurface directional drilling technology, allowing Williams to avoid all impacts to the beach and near-shore areas, as well as onshore portions of Jacob Riis Park.

If approved by FERC, construction could begin in late 2013. The capital cost of the project is estimated to be \$182 million.

NEWS & TRENDS | Up To Date

Summit Midstream To Acquire Bear Tracker Energy

Summit Midstream Partners LLC executed a definitive agreement with affiliates of GSO Capital Partners LP and Bear Tracker Investments LLC to acquire 100% of the equity interests of Bear Tracker Energy LLC for \$513 million. Bear Tracker is a privately held midstream energy company with assets currently in service and under development in the Williston Basin in North Dakota, which includes the Bakken shale and Three Forks formation, and in the Denver-Julesburg Basin in Colorado, which includes the Niobrara shale. The transaction is expected to close during the first quarter of 2013, subject to customary regulatory approvals, closing conditions and adjustments.

Bear Tracker owns, operates and is developing various natural gas gathering and processing assets along with crude oil and water gathering assets to serve its exploration and production customers in Mountrail, Burke, Williams and Divide counties in North Dakota and in Weld County, Colorado. Bear Tracker performs gathering, compression, treating, processing and marketing services under long-term, primarily fee-based, gathering agreements with some of the most active producers operating in the Williston and DJ Basins. Substantially all of these agreements include long-term acreage dedications and many contain long-term minimum volume commitments. The existing Bear Tracker contracts have an average remaining life of 11.5 years.

TransCanada To Develop Natural Gas Infrastructure In Prince Rupert, BC

TransCanada Corp. was selected by Progress Energy Canada Ltd. as the successor by an amalgamation of Petronas Carigali Canada Ltd. and Progress Energy Resources Corp. to design, build, own and operate the proposed \$5 billion Prince Rupert Gas Transmission project. This proposed pipeline will transport natural gas primarily from the North Montney gas-producing region near Fort St. John, British Columbia (B.C.) to the recently-announced

Pacific Northwest LNG export facility in Port Edward near Prince Rupert, B.C.

Progress and TransCanada expect to finalize definitive agreements in early 2013, subject to approvals by their respective Boards. TransCanada will immediately commence Aboriginal and stakeholder consultation and preparation of the relevant regulatory filings for this project under B.C. jurisdiction.

In addition, TransCanada proposes to extend its existing NOVA Gas Transmission Ltd. (NGTL) system in northeast B.C. to connect both to the Prince Rupert Gas Transmission project and to additional North Montney gas supply from Progress and other parties. This new infrastructure will allow the Pacific Northwest LNG export facility to access both the abundant North Montney supplies as well as other Western Canada Sedimentary Basin (WCSB) gas supply through the NOVA Inventory Transfer (NIT) trading hub and the extensive existing NGTL pipeline network. Initial capital cost estimates associated with extensions of the NGTL System are approximately \$1 to 1.5 billion, with an in-service date targeted for the end of 2015.

If approved, the Prince Rupert Gas Transmission project and TransCanada's proposed Coastal GasLink Pipeline project to Kitimat would together add more than 1,400 kilometers (870 miles) to TransCanada's Western Canadian natural gas transmission systems.

Crestwood Midstream Acquires Remaining Interest In Marcellus Shale Joint Venture

Crestwood Midstream Partners LP purchased the remaining 65% interest in Crestwood Marcellus Midstream LLC (CMM) from Crestwood Holdings Partners LLC for \$258 million. The transaction is expected to be 7-8% accretive to Crestwood's 2013 distributable cash flow on a fully diluted basis and was funded with \$129 million of cash drawn on Crestwood's existing revolving credit facility and approximately 6.2 million new Crestwood Class D units issued to Crestwood Holdings. As a part of the consideration received for the transaction, Crestwood Holdings is maintaining its 2% general partner interest in Crestwood. Crestwood does not

NEWS & TRENDS | Up To Date

expect any additional capital markets activity related to this transaction.

Prior to the transaction, Crestwood Holdings, which is controlled by First Reserve Corporation, owned 100% of Crestwood's general partner and approximately 42% of Crestwood's outstanding limited partner units. After the transaction, Crestwood Holdings owns approximately 47% of Crestwood's outstanding limited partner units taking into account the new Class D Units. The Class D Units, substantially similar to Crestwood's existing Class C Units, allow for the payment of quarterly distributions in cash or through the issuance of additional Class D Units at the discretion of Crestwood.

The \$258 million purchase price reflects an enterprise value of \$525 million for 100% of CMM, including net CMM debt of approximately \$130 million, and implies a transaction value of approximately 8.9 times estimated CMM 2013 EBITDA, which is consistent with comparable transactions in the midstream sector. The transaction was unanimously approved by the Crestwood GP Conflicts Committee, comprised entirely of independent directors, which retained Robert W. Baird & Co. Incorporated as its independent financial advisor to assist in evaluating the transaction and to render a fairness opinion.

Valero, TGS To Build Terminal In Southeast Texas

Valero Terminals and Distribution Co., a subsidiary of Valero Energy Corp., and TGS Development LP formed a 50-50 joint venture and started construction on a new marine terminal on the lower Sabine-Neches Waterway near Port Arthur, Texas.

As participants in the joint venture, known as PI Dock Facilities LLC, TGS Development LP will act as the site developer and VTDC will act as the operator. The marine terminal will receive crude tankers of up to Suezmax class, and will be able to operate without the daylight restrictions imposed on other terminals in the upper Sabine-Neches waterway.

The crude dock, which is scheduled for completion in the fourth quarter of 2013, will deliver crude oil through a new 36-inch pipeline to Valero's Port Arthur Refinery and will have the flexibility to connect to other local refineries. The marine ter-

minal site spans over 100 acres and has space for two additional berths suitable for LPG and refined product exports or additional crude receipts.

Tradition Midstream Secures Commitment From EnCap

BUSINESS WIRE

Tradition Midstream LLC secured \$100 million in equity financing from EnCap Flatrock Midstream of San Antonio. Tradition is focused on the acquisition, expansion and greenfield development of midstream assets across North America with a current emphasis on emerging shale plays in Texas, Oklahoma and Louisiana including the Eagle Ford, Eaglebine, Mississippi Lime and Tuscaloosa Marine formations. The company provides oil and gas producers with the gathering, processing and transportation services they need to bring crude oil, natural gas, condensate and natural gas liquids to market.

Targa Continues To Expand Terminal, LPG Exports

Targa Resources Partners LP acquired additional property on the Houston Ship Channel that provides expansion potential for both its Petroleum Logistics clean fuels business and its propane/butane export capabilities.

Targa Patriot, which is located about two miles from the Partnership's Galena Park Marine Terminal, includes an existing dock, acreage for expansion build-out, an existing rail siding and nearby access to the Colonial/Explorer refined products pipeline interconnect hub. The proximity of the Patriot Terminal to Targa's existing petroleum logistics business at Channelview and to its liquefied petroleum gas (LPG) exports facilities at Galena Park offers Targa cost-effective future options to meet growing customer and market demands for both product services.

SNAPSHOT | Industry Insight

Nigeria Falls Behind In World's LNG Race, Projects Delayed

BY **OBAFEMI OREDEIN** | SPECIAL TO HART ENERGY

The story of liquefied natural gas (LNG) in Nigeria is one of missed opportunities because of the failure of its leaders to build LNG plants and monetize the country's huge gas reserves soon after independence from Britain in 1960.

Nigeria has reserves of associated and non-associated gas estimated in excess of 180 trillion cubic feet (Tcf) and is ranked seventh in terms of proven natural gas reserves in the world.

Geologists and oil experts say there is a lot more gas to be found in the country, potentially up to 600 Tcf if companies deliberately explore for more gas, rather than finding it while searching for oil.

Nigeria started commercial oil export in 1957 but only produced its first LNG 42 years later in 1999. The delay was apparently due a series of boardroom bickering, government hesitation, political instability, lack of finance, difficulty in reaching salient agreements and some initial partners withdrawing from LNG projects.

"History recorded that the windows of opportunity to build LNG plants disappeared in both the 1960s and 1970s—the two times we came so close to building an LNG plant in Nigeria. Due to delays in reaching decisions, other countries, especially in Europe (i.e., North Sea), got to the global market earlier than we did. But opportunities do not disappear; these go elsewhere, especially when we fail to utilize them," Gen. Yakubu Gowon, a former head of state of Nigeria was quoted by BusinessDay as saying in an address during his visit to the Nigeria LNG (NLNG) plant site in Finima, Bonny Island, in the Niger Delta in September 2012.

Just as it took NLNG decades to get off the ground, the other two LNG projects Nigeria is planning to construct—Olokola LNG (OK-LNG) and Brass LNG—are also running well behind schedule.

NLNG shareholders, the Nigerian National Petroleum Corp. (NNPC), Shell, Total and Eni, have upgraded the NLNG plant to six trains since 1999, when production operation started from the first two trains. Train 6 was completed in December 2007.



MISSED OPPORTUNITIES | Despite immense potential, Nigeria's LNG industry is struggling in the global market.

With six trains now operational, the entire NLNG complex is capable of producing 23.5 million metric tons (MMmt) per year of LNG, the company said.

NLNG management, in a release in November 2012, considered the company a major success story because "it is a world-class company operating to the highest global standards and transparency; it submits audited accounts to the relevant authorities annually; it was, until recently, the fastest-growing LNG facility in the world and today accounts for 8% of world LNG production, NLNG's finances are solid and its credit rating impressive with assets worth over \$13 billion."

Management further explained that the NLNG contributes over 4% of Nigeria's GDP; it has contributed to significant reduction of flaring from 65% to 25% of total gas produced; and it has a shipping subsidiary that owns 13 LNG vessels and has trained over 500 sailing officers, some of them to the ranks of captains and chief engineers.

"Plans for building Train 7, which will lift the total production capacity to 30 MMmt per year of LNG, are currently at an advanced stage," NLNG management said.

The company has marketed its Train 7 volumes with sales and purchase agreements signed in 2007 with BG, Shell, Eni, Occidental Energy and Total.

That was five years ago but the final investment decision (FID), which irrevocably commits the shareholders to constructing Train 7, has not yet been taken.

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price had decreased 65% to 23¢/gal in December while the margin took a 98% nosedive to 1¢/gal.

As bad as these figures were, Conway prices and margins were much worse, as they spent much of the year in a negative state that caused ethane to be rejected throughout the Midcontinent and Rockies for much of the second half of 2012.

While the average price of E-P mix, which is how the product is traded at Conway, fell from an average of 29¢/gal in January to 18¢/gal in December, it fell as low as an average of 7¢/gal in June. Conway E-P mix produced a theoretically positive average margin of 6¢/gal in January before closing the year with an average margin of negative 4¢/gal in December.

It is likely that ethane prices and margins will continue to struggle for at least the beginning of 2013. According to Peter Fa-

YEARLY FRAC SPREAD (CENTS/GAL)				
2012	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	18.42		22.97	
Shrink	22.34		22.01	
Margin	-3.92	-162.80%	0.96	-97.75%
Propane	73.02		79.70	
Shrink	30.87		30.41	
Margin	42.15	-40.88%	49.29	-50.29%
Normal Butane	188.65		175.77	
Shrink	34.95		34.43	
Margin	153.70	12.67%	141.34	-13.30%
Isobutane	178.77		184.25	
Shrink	33.57		33.07	
Margin	145.20	-2.56%	151.18	-15.57%
Pentane+	211.62		214.89	
Shrink	37.37		36.82	
Margin	174.25	0.76%	178.07	-9.03%
NGL \$/Bbl	40.74	-9.44%	41.75	-27.00%
Shrink	12.31		12.13	
Margin	28.43	-13.00%	29.62	-34.26%
Gas (\$/mmBtu)	3.37	0.00%	3.32	0.00%
Gross Bbl Margin (in cents/gal)	63.11	-14.95%	66.69	-36.15%
NGL Value in \$/mmBtu				
Ethane	1.01	-35.57%	1.26	-64.48%
Propane	2.53	-28.53%	2.77	-38.48%
Normal Butane	2.04	10.09%	1.90	-10.98%
Iso-Butane	1.11	-2.09%	1.15	-13.14%
Pentane+	2.73	0.62%	2.77	-7.60%
Total Barrel Value in \$/mmbtu	9.43	-12.87%	9.85	-32.13%
Margin	6.06	-18.68%	6.53	-41.67%

2012 NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
January 2012	64.67	129.56	197.46	212.13	232.57	\$57.18
February 2012	46.97	122.28	186.50	192.29	239.97	\$52.99
March 2012	50.09	125.86	192.84	207.42	245.13	\$54.99
April 2012	45.55	119.39	189.84	203.99	237.95	\$52.78
May 2012	37.89	95.11	162.91	179.74	209.64	\$44.73
June 2012	28.19	78.11	127.86	141.05	169.28	\$35.60
July 2012	33.11	87.19	131.77	150.81	186.00	\$39.04
August 2012	33.52	89.68	145.60	162.29	209.65	\$42.04
September 2012	30.06	90.96	151.48	173.05	208.33	\$42.17
October 2012	29.78	96.21	151.37	178.28	212.57	\$43.17
November 2012	27.15	89.20	164.16	183.49	219.64	\$43.22
December 2012	22.97	79.70	175.77	184.25	214.89	\$41.75
1st Quarter 2012	53.93	125.90	192.36	204.32	238.95	\$55.05
2nd Quarter 2012	37.00	97.80	160.76	175.08	207.57	\$44.54
3rd Quarter 2012	32.34	89.27	142.76	161.88	200.54	\$41.03
4th Quarter 2012	26.59	88.74	162.76	181.71	215.67	\$42.69
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
January 2012	28.59	102.17	171.36	182.59	210.31	\$44.99
February 2012	22.65	100.24	160.71	173.94	227.79	\$44.18
March 2012	29.33	107.37	172.94	193.41	241.34	\$48.21
April 2012	14.42	90.99	160.18	190.26	230.04	\$42.30
May 2012	11.85	72.43	138.80	163.54	202.23	\$35.94
June 2012	7.20	53.58	106.56	131.70	173.06	\$28.42
July 2012	7.80	57.01	103.02	145.79	183.28	\$29.81
August 2012	18.77	74.27	130.46	169.74	201.94	\$37.01
September 2012	16.72	79.32	138.29	181.99	202.61	\$38.06
October 2012	18.69	84.88	148.31	175.28	205.30	\$39.57
November 2012	18.22	78.98	159.26	169.60	211.76	\$39.65
December 2012	18.42	73.02	188.65	178.77	211.62	\$40.74
1st Quarter 2012	26.93	103.34	168.65	184.75	227.16	\$45.92
2nd Quarter 2012	11.18	72.63	135.80	161.38	203.31	\$35.72
3rd Quarter 2012	14.60	70.25	124.35	165.61	195.68	\$34.99
4th Quarter 2012	18.45	79.24	164.46	174.39	209.16	\$39.94

sullo, principal at En*Vantage Inc., the market needs to continue to reject ethane until March at the earliest, while the ethylene industry operates at 95% of nameplate capacity to bring itself back into balance.

Although propane prices and margins remained profitable at both Conway and Mont Belvieu, they also lost considerable value

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throughout 2012. However, the outlook for 2013 is more positive for propane.

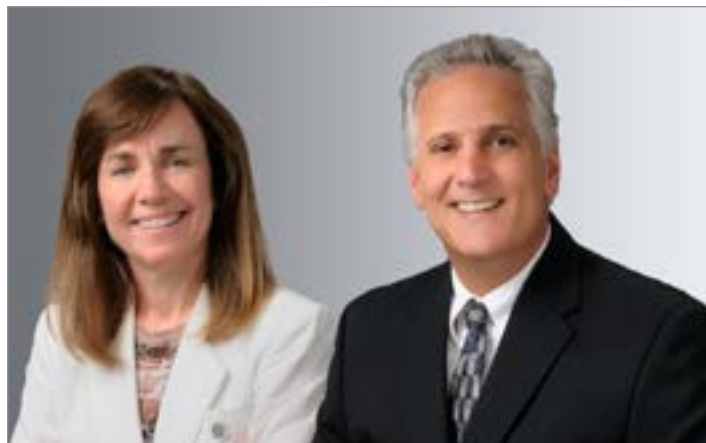
It is unlikely that the U.S. will face another winter like the one of 2012, which the U.S. National Climatic Data Center determined was the fourth-warmest winter in the more than 100 years it has kept track of temperatures.

Normalized winter temperatures should to balance propane inventory levels as export capacity will be increased once Enterprise Products Partners completes expansions to its export unit on the Houston Ship Channel. These expansions are expected to increase capacity by 3.5 million barrels (bbl.) per day to approximately 7.5 million bbl. per day.

Improvements in demand levels would certainly help the market improve from a rough 2012, which saw Mont Belvieu prices tumble 39% from an average price of \$1.30/gal in January and an average margin of 99¢/gal to an average price 80¢/gal in December with an average margin of 49¢/gal. The Conway price took less of a hit as the price increased in the fourth quarter as the weather was colder in that section of the country. The price declined 29% from an average of \$1.02/gal in January with a margin of 71¢/gal to an average price of 73¢/gal in December with an average margin of 42¢/gal.

Pipeline Projects Expected To Dominate Construction In 2013

The infrastructure story of 2012 was the amount of rail projects taking place to meet demand out of the Bakken shale. "Rail may cost more per barrel, but for producers seeking Brent pricing, it's the only game in town," according to Tudor, Pickering, Holt & Co.'s director of midstream research Bradley Olsen.



THINKING OUTSIDE THE BOX | Fuss & O'Neill's Joan Fontaine and Mike Nicoloro (above) say that finding new ways to use natural gas can create and save jobs. Photo Courtesy of: Fuss & O'Neill

However, expect a major push for more pipeline projects in 2013, especially in the Northeast and Southeast markets as they increase their use of natural gas as a power-generation fuel.

This energy source is expected to grow to surpass coal as the second-most used energy source in North America due to its increasingly lower price along with its lower greenhouse gas emission rates.

"We'll see a continued focus on utilities in 2013, particularly the transmission and natural gas distribution side, improving their infrastructure by adding new pipelines, upgrading regulating stations and increasing capacity in some cases," Joan Fontaine, vice president at Fuss & O'Neill, a civil and environmental consulting engineering firm, told x.

"A lot of what is stimulating these projects is the demand for natural gas, which has tremendous economic and environmental benefits compared to alternative sources of energy available today," she continued.

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