

Supplying New Markets Brings Promise, Risk

Gas, NGL demand panel highlights the good and potentially bad for the market going forward.

BY **FRANK NIETO** | EDITOR, MIDSTREAM MONITOR

It has often been said that the real estate, job and stock markets naturally correct themselves. Natural gas and natural gas liquid (NGL) markets may not fit in the same boat – after all it's hard to call the construction of a pipeline or processing plant a naturally occurring phenomenon, but the principal is largely the same. However, more and more demand for cheap gas and liquids has been more or less naturally occurring.

At Hart Energy's recent Marcellus-Utica Midstream Conference in Pittsburgh, several executives from diverse end-use industries said that they are committing to large capex projects to take advantage of the North American shale gale.

PotashCorp, the largest fertilizer company in the world, decided in 2010 to expand its U.S. ammonia capacity in response to domestically produced gas helping to create one of the most economic markets in the world. According to Audrea Hill, the company's senior director of raw materials and hedging, in addition to competitive prices U.S. gas has a favorable spread and a freight advantage that allows it to compete with the strongest global markets. Other transportation needs



Tim Lawrence , manager, gas, energy and utilities at Incitec Pivot, tells a cautionary tale of Australia and LNGs to attendees at Hart Energy's Marcellus-Utica Midstream conference in Pittsburgh.

are being met through the current wave of pipeline construction that is ensuring supplies are routed to the correct areas.

The additional ammonia capacity will cause the largest year-on-year gas demand from the fertilizer industry in 2016. She noted that this demand is the third wave of demand, following the second wave last

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HIGHLIGHTS FROM TODAY'S EDITION



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Keystone Clears Hurdle

U.S. State Department gives nod to approval of contested project.

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Utilizing All Assets

Kinder Morgan makes a plan to repurpose infrastructure.

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Not Gone Yet

Snow in large parts of the country is still affecting prices.

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Separation Complete

ONE Gas Inc. is officially a stand-alone company.

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Plentiful Supplies

The north east will be faced with a surplus of gas in just a few more years.

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NGL PRICES & FRAC SPREAD | Week in Review

Cold Weather-Driven Gas Prices Cause Ethane Margins To Crater

BY **FRANK NIETO** | EDITOR, MIDSTREAM MONITOR

The frigid temperatures that closed out January cleared out in different parts of the country, but large amounts of snow throughout the Northeast the first week of February were a sure sign that winter isn't over yet. Though it's unlikely that Conway propane prices will again approach \$5 per gallon, the fact that this past week's prices averaged \$2.90 per gallon is hardly a reason for producers and operators to be down.

While NGL prices moved downward this past week, gas prices continued to rise as traders prepared for the prolonged cold front in the Northeast. Indeed, it's still heady times for Midcontinent natural gas prices, which approached levels not seen since before the

CURRENT FRAC SPREAD (CENTS/GAL)				
February 10, 2014	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	13.30		35.93	
Shrink	53.37		39.18	
Margin	-40.07	-101.87%	-3.25	-140.43%
Propane	289.76		159.66	
Shrink	73.74		54.14	
Margin	216.02	-38.43%	105.52	-1.30%
Normal Butane	151.32		159.00	
Shrink	83.48		61.29	
Margin	67.84	-33.99%	97.71	-6.66%
Isobutane	165.38		160.26	
Shrink	80.18		58.86	
Margin	85.20	-24.48%	101.40	-8.04%
Pentane+	209.98		207.98	
Shrink	89.27		65.54	
Margin	120.71	-22.46%	142.44	-8.08%
NGL \$/Bbl	63.27	-16.93%	51.27	-0.53%
Shrink	29.41		21.59	
Margin	33.87	-41.51%	29.68	-10.12%
Gas (\$/mmBtu)	8.05	61.00%	5.91	16.57%
Gross Bbl Margin (in cents/gal)	84.21	-41.96%	69.97	-9.90%
NGL Value in \$/mmBtu (Basket Value)				
Ethane	0.73	0.00%	1.98	-13.75%
Propane	10.06	-26.95%	5.54	4.11%
Normal Butane	1.63	-2.13%	1.72	1.11%
Isobutane	1.03	1.70%	1.00	-0.31%
Pentane+	2.71	-0.54%	2.68	-1.52%
Total Barrel Value in \$/mmBtu	16.16	-18.81%	12.92	-0.94%
Margin	8.11	-45.58%	7.01	-12.07%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Jan. 29 - Feb. 4, '14	35.93	159.66	159.00	160.26	207.98	\$51.27
Jan. 22 - 28, '14	41.66	153.36	157.26	160.76	211.18	\$51.54
Jan. 15 - 21, '14	34.83	136.43	148.88	152.58	207.95	\$47.60
Jan. 8 - 14, '14	29.35	127.32	139.46	144.68	207.64	\$44.95
January '13	34.55	139.87	148.36	152.20	208.83	\$47.99
December '13	29.77	127.36	136.86	137.70	213.70	\$45.11
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
1st Qtr '13	25.68	86.42	157.72	166.41	222.63	\$42.07
Jan. 30 - Feb. 5, '13	25.53	86.22	170.28	181.46	234.22	\$43.87
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Jan. 29 - Feb. 4, '14	13.30	289.76	151.32	165.38	209.98	\$63.27
Jan. 22 - 28, '14	13.30	396.66	154.62	162.62	211.12	\$76.17
Jan. 15 - 21, '14	19.50	183.43	144.88	154.85	210.25	\$51.04
Jan. 8 - 14, '14	16.80	140.50	136.78	148.28	203.50	\$44.43
January '13	16.65	240.54	146.23	154.88	207.91	\$57.28
December '13	18.84	137.56	143.70	143.56	212.33	\$45.25
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
1st Qtr '13	23.94	81.81	153.43	160.39	222.63	\$41.11
Jan. 30 - Feb. 5, '13	27.44	81.58	170.53	177.20	225.15	\$43.17

(Above) Data Provided by Bloomberg. 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.

economic recession of 2008. The price increased a staggering 61% to \$8.05 per million British thermal unit (MMBtu), which resulted in large downturns in frac spread margins at Conway despite very strong natural gas liquid (NGL) prices. The Mont Belvieu price rose 17% to \$5.91 per MMBtu, which was the highest price in more than a year. Although margins were down at the hub, they didn't fall at the same rate as at Conway.

These prices caused Conway ethane margins to fall to their lowest levels since Hart Energy has been calculating a frac spread for the last 14 years. The Conway price held firm with little volatility at 13 cents per gallon, but the strong growth in gas prices resulted in the margin hitting an astonishing negative 40 cents per gallon. Surprisingly, we

NGL PRICES & FRAC SPREAD | Week in Review

received reports that Midcontinent margins turned positive on February 5. This would indicate significant gains posted by propane as a result of the extreme weather conditions in the Midwest as gas prices remain high.

Propane prices remained well above historical norms at both hubs as the Mont Belvieu price gained 4% to \$1.60 per gallon, its highest level since it was the same price the week of September 14, 2011. The Conway price decreased 27% to \$2.90 per gallon, but this was the second-largest price at the hub since Hart Energy has tracked NGL prices.

Interestingly despite the increased heating demand for propane in the Midwest, the Energy Information Administration (EIA) reported that PADD 2 inventory levels actually increased by 771,000 barrels (bbl.). This counters trends reported at PADD 2 by the EIA, which had reported an average decline at the location of more than 1 million bbl. per week. The EIA has reconfirmed this data, but there is widespread skepticism over its veracity since large amounts of shipments from Mont Belvieu to Conway is occurring through truck-

ing because of limited pipeline capacity. This would hinder the ability to quickly build such an inventory in the face of widespread demand.

Heavy NGL prices, which traded near their 12-month high the final week of January, followed West Texas Intermediate crude prices by holding firm. Combined with the very strong propane prices, this resulted in the theoretical NGL bbl. price staying near record high levels in the Midcontinent and 12-month highs along the Gulf coast. The Mont Belvieu price of \$51.27 per bbl. was down

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / February 6, 2014	
Gas Hub Name	Current Price
Carthage, TX	6.33
Katy Hub, TX	7.29
Waha Hub, TX	7.82
Henry Hub, LA	7.18
Perryville, LA	7.08
Houston Ship Channel	7.75
Opal Hub, Wyo.	7.94
Blance Hub, NM	7.80
Cheyenne Hub, Wyo.	8.08
Chicago Hub	9.07
Ellisburg NE Hub	5.75
New York Hub	9.06
AECO, Alberta	15.18

Source: Bloomberg

RESIN PRICES – MARKET UPDATE – FEBRUARY 7, 2014					
TOTAL OFFERS: 12,938,700 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Inj	4,016,440	0.69	0.755	0.7	0.74
HDPE - Blow Mold	2,422,416	0.75	0.77	0.705	0.745
LDPE - Film	1,815,036	0.79	0.82	0.75	0.79
PP Homopolymer - Inj	1,379,288	0.795	0.86	0.78	0.82
LLDPE - Film	1,234,576	0.75	0.78	0.705	0.745
HMWPE - Film	970,024	0.73	0.77	0.735	0.775
LLDPE - Inj	752,368	0.7	0.79	0.72	0.76
PP Copolymer - Inj	348,552	0.81	0.84	0.79	0.83
LLDPE - Inj	266,368	0.74	0.79	0.74	0.78

Source: Plastics Exchange – www.theplasticsexchange.com

1% from the previous week with a 10% drop in margin to \$29.68 per bbl. The Conway price of \$63.27 per bbl. represented a 17% decline from the previous week with a 42% drop in margin to \$33.87 per bbl.

The most profitable NGL to make at Conway was propane at \$2.16 per gallon and C₅₊ at Mont Belvieu at \$1.42 per gallon. This was followed, in order, by C₅₊ at Conway at \$1.21 per gallon and propane at \$1.06 per gallon at Mont Belvieu; isobutane at 85 cents per gallon at Conway and \$1.01 per gallon at Mont Belvieu; butane at 68 cents per gallon at Conway and 98 cents per gallon at Mont Belvieu; and ethane at negative 40 cents per gallon at Conway and negative 3 cents per gallon at Mont Belvieu.

The EIA reported that natural gas in storage fell by 262 billion cubic feet to 1.923 trillion cubic feet (Tcf) the week of January 31 from 2.185 Tcf (revised from 2.193 Tcf) last week. This represented a 29% drop from the 2.701 Tcf reported last year at the same time and 22% below the five-year average of 2.479 Tcf.

The National Weather Service's forecast for the week of February 12 anticipates colder-than-normal temperatures to remain throughout the Midwest, Gulf coast and East coast with warmer-than-normal temperatures in most of the rest of the country.

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Keystone XL Closer Than Ever

BLOOMBERG

The proposed Keystone XL pipeline extension cleared a key hurdle on January 31 with the release of a government study that found its impact on the climate would be minimal, which supporters said meets President Barack Obama's test for allowing the project to be built, according to Bloomberg.

In its final environmental review, the U.S. State Department found the Canada-U.S. oil pipeline would not greatly increase carbon emissions because the oil sands in Alberta will be developed anyway.

The study, while not the final word, is important because Obama has said he wouldn't approve Keystone if it would exacerbate carbon pollution. Now the pipeline's fate comes down to broader questions about whether the project is in the U.S. national interest, weighing matters such as energy needs and diplomatic relations.

"We are one step closer toward approval of the Keystone XL pipeline," U.S. Sen. Heidi Heitkamp, D-North Dakota, a pipeline supporter, said in a statement. "Not only is it unacceptable, but it's embarrassing that we cannot approve a pipeline application in the time it took us to fight World War II."

TransCanada Corp. applied more than five years ago for a permit to build the pipeline through the U.S. heartland, connecting the oil sands with refineries along the coast of Texas and Louisiana. Its planned 830,000-barrel per day capacity would represent a fraction of U.S. oil imports, though the \$5.4 billion project has spawned a multimillion-dollar lobbying fight and is forcing Obama to choose between angering an ally in Canada or his supporters in the environmental movement.

White House press secretary Jay Carney said the Supplemental Environmental Impact Statement is "another step in the process" and declined to say when Obama will make his final determination. The State Department said it would accept public comments until March 7. Other federal agencies will have 90 days to weigh in.

"This is a status quo report," Michael Levi, a fellow at the Council on Foreign Relations in New York, an independent research organization, said in a phone interview. "There is nothing in this report that's going to lead to anyone's re-evaluation of the project one way or the other."

Supporters have said the pipeline would create thousands of construction jobs and boost the nation's energy security. The project would directly and indirectly support about 42,100 jobs during a year or two of construction, and add \$3.4 billion to the U.S. economy, the report says.



A decision is expected later this spring from president Obama regarding the final fate of the Keystone XL pipeline. (Courtesy:Whitehouse.gov)

Appalachia Midstream: Massive Amounts Of Capital Required

BY THERESA WARD | HART ENERGY

"Sleeping giant," "best basin" and "king of the resource plays" were among the superlatives heard describing the Marcellus shale play at the Marcellus-Utica Midstream conference recently held in Pittsburgh. According to a Penn State University study, the play has the potential to be the second-largest natural gas field in the world, behind only the South Pars/Asalouyeh field shared by the nations of Iran and Qatar. And thanks to the unconventional plays, gas liquids production is also substantial.

There is no doubt about the opportunity, and that it will take billions of dollars to build out the region. At a private equity panel, two executives explained their midstream strategies, discussed their portfolio companies and shared outlooks.

Ben Davis, partner, Energy Spectrum Capital and an editorial advisory board member of *Midstream Business*, focused on deal execution and business development for the midstream private equity business. The company's focus is on middle-market firms with typical investment transaction sizes in the \$25 to \$150 million range.

"Ours is a buy-and-build strategy," Davis said. "We'll go in opportunistically and buy an asset base with the plans to then build it by adding additional offsetting producers and building the infrastructure to get to them. At the end of the day, our total capital expenditure is a combination of both the capital we've invested on the initial acquisition and then hopefully work more capital that we've invested as we grow out that system organically."

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Participants at a private equity panel at the recent Marcellus-Utica Midstream conference in Pittsburgh. Left to right: moderator, Chris Sheehan, senior financial editor, *Midstream Business*; Ben Davis, partner, Energy Spectrum Capital; and Blake Webster, director, Quantum Energy Partners.

Energy Spectrum is investing in its sixth fund, Energy Spectrum Partners VI LP, totaling \$999 million and comprised of 11 companies, five of which have worked with Energy Spectrum in the past. “We take a lot of pride in that,” Davis said, as it exemplifies the company’s emphasis on maintaining continuity with repeat clients. Mid-year, the company will raise its seventh fund, which it intends to keep at the same size or below.

Spectrum detailed operations of the portfolio companies with current and past projects in the Marcellus that include Stonehenge Energy Resources, Laser Midstream Company LLC, The Ceritas Group and Velocity Midstream Partners.

When asked what specific qualities Spectrum looks for in a midstream project, Davis said it’s all about the people. “Backing guys we have confidence in ... we will back a team with no project,” he said. He noted that a number of companies in the sixth fund did not have projects in hand.

But having a project is better. “It’s a very competitive market for midstream opportunities. There has been a lot of new capital coming into the space in the past few years, so if it’s a great team, and they have a project, that’s the best of both worlds,” Davis said.

Seizing opportunities

Blake Webster, director, Quantum Energy Partners said the forecasted activity in the region will require at least \$2 to \$3 billion of annual regional midstream capital, in addition to incremental billions spent on interstate and downstream processing and related infrastructure. Webster said the Appalachian region is important to his company, as it continues to invest more capital and develop new management teams.

Quantum manages a family of energy investment funds with a primary emphasis in oil and gas, midstream, power and oilfield services. Its current fifth fund totals \$2.5 billion. Quantum’s target investment size from an equity standpoint ranges from \$100 million to \$400 million. The company partners with management teams in start-up mode as well as invests in mature companies providing growth equity to get them to the next level.

“The success of Quantum is partnering with great energy entrepreneurs and providing them with additional resources to complement their business plans,” Webster said. “Our view is less on projects, more on building great companies.”

Quantum’s historic venture in the region was with Linn Energy, with whom it partnered in 2003 on a buy-build-and-drill strategy in the Appalachia basin. Quantum took the company public in 2006 as the first E&P master limited partnership in more than a generation. “What started as a \$15 million equity investment by Quantum ended up with an enterprise value today of more than \$17 billion,” Webster said.

Two of Quantum’s midstream companies in the region are Vista Gathering, the midstream subsidiary of Vantage Energy and Ceritas Energy II, a midstream company focused on natural gas gathering and processing.

Trends and implications

Focusing on the Marcellus, Webster said it’s all about the quality of the resource backed by “better rock properties and quiet geology; the general scope of the area is massive. Layer on that the presence of liquids, it’s become the best basin in the U.S.,” he said.

Webster characterized the Marcellus and the Utica as in the “early innings,” and because he said the plays are highly economic, there will be a lot of upstream capital and, with it, a lot of “volume response.” He cautions there will be volume-growth consequences, namely centering on whether demand keep up. As a result, he expects a pretty low-price environment.

Describing mergers and acquisitions trends, Webster said that the buyer market will remain aggressive for quality assets, and capital-market windows will remain open, at least for now. “From an initial private offering (IPO) standpoint, it is a pretty compelling environment, and EQT is a good regional case study of how they were able to leverage the IPO market for their midstream business and deliver a lot of value through that,” he said.

Looking at the capital requirements needed in the region, Webster believes incumbent players will participate along with new entrants,

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both public and private. A growing trend he's watching: upstream companies playing a larger role. He reminded participants that with all of these factors, "there are only so many good projects to go around, and as a result, you're going to see a lot more competition."

What's a winning strategy, according to Webster? "It's imperative you're in the core of these plays and from a midstream standpoint, you have infrastructure that's tied to the core of these plays," he said.

"Our view is that to generate exceptional returns, you have to differentiate on execution, doing so with scale, efficiency and flexibility and the ability to maintain a good cost structure," said Webster.

One final trend he shared: liquids handling. "The big concern is the ethane component. Even if we do improve ethane takeaway, the question is can demand keep up?" The company's view is that ethane will remain weak for some time.

Webster concluded by saying it's an exciting time to be in the industry and, "the Marcellus and the Utica are in the driver's seat, which will make for a very dynamic investment environment for years to come."

Kinder Morgan: Repurposing Existing Infrastructure

BY THERESA WARD | HART ENERGY

Emphasizing his company's integrated natural gas liquids (NGL) approach, Chris Kral, vice president, NGL business development, Kinder Morgan Products Pipeline, explained the benefit of his company's existing infrastructure at Hart Energy's recent Marcellus-Utica Midstream (MUM) conference.

Kral described Kinder Morgan (KM) Energy Partners' position as the largest midstream company and the fourth-largest U.S. energy company, consisting of product pipelines, terminals, gas lines, a CO₂ group and a Canadian group. He noted that Kinder Morgan owns or operates about 80,000 miles of pipelines and 180 terminals. "We have assets that are in pretty much in every North American shale play," he said.

He explained that this position provides KM with opportunities for repurposing and expanding cheaply and more efficiently, which "drives producer value."

As production continues to grow on the gas-processing side, fractionation continues to be built and there must be market outlets, Kral explained. "You have to take your ethane, propane, isobutane, butane, and natural gasoline (C₅₊) to market if you are fractionating locally.

You can't just build a fractionator and expect the products to disappear," he said.

"We think we have a fully integrated approach for NGL solutions using existing infrastructure, low-environmental permit, low-cost, high-value, all getting pushed back to the producers so that they can continue to drill and explore, and hopefully we can stay ahead of the production before it shows up," Kral said.

Using its existing footprint, the company can repurpose, expand cheaply and efficiently—all driving producer value, he told conference participants.

UTOPIA line

KM will be using the Cochin line, most recently in propane service, to move diluent from Kankakee and Manhattan, Ill., back up to western Canada. In late 2013, KM subsidiary Kinder Morgan Cochin LLC signed a letter of intent with NOVA Chemicals Corp. to develop a new products pipeline from the Utica shale. Under the agreement, Kinder Morgan Cochin will develop, construct, own and operate a 210-mile, 10-inch diameter pipeline from multiple fractionation facilities in Harrison County, Ohio, to Kinder Morgan's Cochin Pipeline near Riga, Mich., where the company will then move product via Cochin east to Windsor, Ontario, Canada.

The Utica-To-Ontario Pipeline Access (UTOPIA) would transport previously refined or fractionated NGLs, including ethane and propane. The pipeline is expected to have an initial 50,000 barrels (bbl.) per day of capacity, which is expandable to more than 75,000 bbl. per day. A mid-year 2017 in-service date is anticipated, pending NOVA's execution of a definitive agreement during the binding open season process.

Kral said that existing third-party storage at Windsor was key. "For ethane, there is no storage in the Northeast: You need high-pressure salt caverns, and it's expensive to put in above-ground facilities. We're looking to basically bifurcate the line and have the light ends going up to Sarnia," he said.

"For the rest of the line, take it over to the Kankakee/Manhattan area. Essentially we're looking at co-lo savings to take the heavy-in product—the C₅₊, as well as the condensate—off the well pad and move it up to Cochin over to Kankakee, and we connect into both Cochin up to Canada or we can deliver into Southern Lights, Illinois," he continued.

Circling back to his opening remarks about Kinder Morgan's infrastructure, he reminded participants about the company's existing pipe and noted, "We have an existing tank farm, we have an existing terminal that we're looking to phase in as producer volumes ramp up,

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and we build critical mass to a pipeline solution so we can rail product up to Milford, Indiana, from the local fracs in the Marcellus and Utica. We have good well-access storage that we can inject into the pipeline,” Kral said.

Fairless Hills LPG export terminal project

KM’s Fairless Hills, Pennsylvania, terminal is on the Delaware River, about 10 hours from the Atlantic Ocean. Kral said the terminal can provide producers with the ability to export liquefied petroleum gas from the East Coast. Calling the terminal “the lowest-cost dock in North America,” the facility has access to three very large gas carriers per month, and the 10-acre site is serviced by NS (Norfolk Southern) and CSX rail companies.

“We’re very excited about this project, and we’re working diligently to get it subscribed out.” He said the project will take 30 months from contract to execution.

Y-grade NGLs to the Gulf Coast

“If you want to fractionate in the Appalachian basin we’re working with the producers to move products to market and achieve high value, low-cost solutions. But at some point – and pretty much every graph at this conference has said that – by 2016 product needs to either go out of the region or there needs to be a lot more fractionation built,” he said.

KM’s solution is the Utica Marcellus Texas Pipeline (UMTP) to transport Y-grade NGLs from the Utica and Marcellus shales to the Texas Gulf Coast, a proposed joint venture between MarkWest Utica EMG LLC and KM.

Kral said the project will involve converting about 1,005 miles of KM’s 24- and 26-inch Tennessee Gas Pipeline system, extending from Mercer, Pennsylvania, to Natchitoches, Louisiana, and the construction of approximately 220 miles of new pipeline.

The project is currently in a binding open season that will close on Feb. 28. “We’re looking at an in-service date of mid-2016, which will be driven by producer commitments,” he said.

Kral told MUM participants about the advantages of teaming with Targa. “Targa has existing assets in the ground, Y-grade lines in, Y-grade storage wells, ethane, propane, isobutane, butane, C₅₊ wells, products out, connections to every major petchem and refinery on the Gulf Coast for the most part, connections to other facilities, and then also a vital dock, which is becoming crucial for

producers for assurance of flow and international arbitrage opportunities,” he said.

Summing it up, Kral emphasized his company’s fully integrated approach for NGL solutions that allows producers to continue drilling and exploring “so that we can stay ahead of the production before it shows up.”

ONEOK Completes Split Of Its Natural Gas Distribution Business

ONEOK, Inc. completed its separation of the company’s natural gas distribution business into a stand-alone, publicly traded company called ONE Gas Inc.

ONEOK shareholders of record at the close of business on January 21, retained their shares of ONEOK stock and received one share of ONE Gas stock tax free (except for cash received in lieu of fractional shares as described below) for every four shares of ONEOK stock owned. No fractional shares of ONE Gas stock were issued; however, shareholders entitled to receive a fractional share of ONE Gas stock in the distribution will receive the cash value of that fractional share instead.

ONE Gas shares were distributed following the close of business on January 31.

QEP Resources To File For Midstream Spin-Off

The board of directors for QEP Resources authorized management to implement the separation of QEP Field Services Company, including the company’s interest in QEP Midstream Partners, LP, from QEP Resources into a stand-alone public company.

The company is preparing the appropriate Securities and Exchange Commission (SEC) filings for the definitive separation. In connection with the contemplated separation of QEP Field Services, Korn/Ferry International has been retained to assist in recruiting an executive management team for the new midstream company.

Simultaneous with the preparation of these SEC filings, the company and its advisers will entertain and evaluate proposals for alternative transactions for separating the midstream business.

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Northeast Gas Plays 'Need More Pipe'

BY PAUL HART | HART ENERGY

The midstream must add infrastructure to handle rapidly growing natural gas production from the Marcellus and Utica shale plays, a pair of gas-industry veterans told Hart Energy's Marcellus-Utica Midstream conference in Pittsburgh recently.

"We need more pipe in the ground and I could probably sit down now after saying that," Peter Terranova, vice president of midstream assets and services at UGI Energy Services Inc., said as he opened his presentation at the conference. UGI's interests include gas and electric utility service, retail propane and midstream services.

New infrastructure is crucial to UGI, which Terranova pointed out is Pennsylvania's largest gas utility, serving 45 of the state's 67 counties. The firm is based in suburban Philadelphia. Its gas marketing unit sells some 100 billion cubic feet (Bcf) per year through 36 local distribution companies. UGI's midstream arm has gas gathering, pipeline and storage services. Storage includes 1.25 Bcf of liquefied natural gas and 15 Bcf underground.

"We are an asset-based Pennsylvania company and our goal is to bring Pennsylvania gas to our customers," he said, adding that thanks to the abundance of the Marcellus "there's more gas than Pennsylvania can use."

To respond, UGI has placed a major emphasis on expanding its midstream operations, Terranova said. Its midstream goals are to link new gas supplies to markets, integrate existing pipeline infrastructure with other midstream assets, develop integrated products and service, provide timely and competitive midstream services and build or acquire new assets that will support long-term growth.

"Our goal is to disconnect our customers from the interstate pipelines and serve them directly" with Pennsylvania-produced gas, he added.

Projects include UGI's Auburn gathering system that will link the dry-gas producing area of northeastern Pennsylvania with customers in southeastern Pennsylvania, along with providing a link between Williams' Transcontinental Gas Pipeline system to the south and Tennessee Gas Pipeline to the north in New York.

The system and other system additions will allow UGI to move "trapped gas" to markets and provide "a catalyst for growth" in Pennsylvania and elsewhere along the East coast. He pointed to "significant natural gas expansion opportunities in existing markets," pri-

marily the opportunity to convert oil-fired heating customers as the price between heating oil and gas widens. Philadelphia's historic, and large, refining industry has come alive, thanks to Bakken crude oil supplies, and that has created "sizeable opportunities to make something happen" for new industrial gas demand.

He said UGI already has converted 31,000 residential customers in its service areas since 2009, representing 2.7 Bcf per year of new demand. Overall, the five-county Philadelphia metropolitan area has more than 300,000 potential new residential customers, some 29 Bcf per year of demand, and more than 50,000 commercial customers representing incremental volumes of 23 Bcf per year.

Fuel switching "makes a lot of sense" due to the now-attractive price of gas, Terranova said, urging his peers to "stay tuned" and watch UGI's efforts to increase the penetration of gas service in its markets.

DTE's story

Detroit-based DTE Energy is a gas and electric utility with a similar story to tell, said Peter Cianci, president of the firm's DTE Gas Storage and Pipelines, the non-utility unit of the utility firm.

He discussed the rapid development of the Marcellus and Utica plays, then added "there's still a lot of excitement in these areas" by producers and midstream operators alike.

"If you think about it, we've grown 8 Bcf per day from January 2012 to January 2014 in the Marcellus and Utica. This is impressive, just from the sheer magnitude" of the plays' output, which is approaching a combined 15 Bcf per day. A top of 22 or 25 Bcf (per day) is not inconceivable at this point," he said, adding the peak of production "won't happen anytime soon."

By 2016, the region will be a next gas exporter and regional gas exports could reach nearly 5 Bcf per day by 2020, Cianci said. But the region also has "significant seasonal variability" in gas demand so regional gas exports can easily exceed that number at times now.

To meet the regional customers' gas demand, plus the demand for regional exports, "we need a lot of pipelines going in a lot of directions," he said.

The greatest need for new infrastructure is to the north and east to major markets such as Boston and New York. The region also has a critical need for new gas storage, Cianci added.

DTE is involved in expansion of its Bluestone Pipeline and gathering system in northeastern Pennsylvania. It provides producers with links to the Millennium and Tennessee transmission lines. It has built 185 miles of gathering and mainline pipelines in the past two years

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and volumes have increased to approximately 300 million cubic feet (MMcf) per day. DTE has plans to expand Bluestone to 850 MMcf per day by the second half of 2014 after looping and addition of 17,000 horsepower in compression.

The firm also is involved expansion of the Vector Pipeline from Chicago to Dawn, Ontario, crossing DTE's core utility service area, and related new storage.

It also has an interest in the proposed NEXUS Pipeline that will provide 1 Bcf per day of gas transmission capacity for Marcellus producers in southwestern Pennsylvania and Utica producers in eastern Ohio to northern Ohio and eastern Michigan markets. DTE's partners include Enbridge and Spectra Energy. Target in-service date is November 2017.

He termed Nexus a "market pull" project that has Midwest and Great Lakes local distribution companies seeking cheaper, and closer, Marcellus and Utica gas. Also, he said Michigan-based power switching from coal to gas could create 1 Bcf per day of additional demand.

Millennium's focus has changed from Canadian imports, thanks to the Marcellus, he said. "I can assure you no gas is moving through Niagara now," Cianci added.

Angola LNG Sells First LPG Cargo

Angola LNG sold its first liquefied petroleum gas (LPG) cargo from its plant in Soyo, the facility built to create value from Angola's offshore gas resources.

The first cargo was sold to Sonangol, Angola's state oil and gas company, on a Free on Board (FOB) Soyo basis and shipped by the LPG carrier BW Broker. All LPG and condensate products have been committed for sale to the shareholder affiliates of Angola LNG.

The LPG and condensate jetty was commissioned immediately prior to commencement of loading operations. Commissioning included the testing of safety devices, mooring arrangements and loading arms.

Commenting on the first cargo Artur Pereira, chief executive, Angola LNG Marketing, said: "In addition to LNG production for international markets, propane, butane and condensate production at Angola LNG is an important part of our operational and commercial



Liquefied petroleum gas has been sold from Angola LNG's plant in Soyo. (Courtesy Angola LNG)

activity. Our LPG and condensate production will help to supply both domestic and export markets with their energy needs."

The announcement marks a further milestone in the continued development of Angola's oil and gas resources and provides a new source of energy for Angola and export markets.

Valerus Awarded Contract For Compressor Stations By Crestwood

Valerus was awarded a \$62 million contract by Crestwood Midstream Partners LP to provide engineering, procurement, construction and commissioning of two compressor stations.

The stations, both located in Doddridge County, West Virginia, will each have the capacity to handle 120 million standard cubic feet per day of gas from the Marcellus shale upon completion in 2014.

The turnkey compressor stations will together include more than 35,000 horsepower of compression; inlet separation and filtration; gas dehydration; power generation and distribution; and station instrumentation and controls.

SNAPSHOT | Industry Insight

Northeast Will Have Gas To Export

BY CHRISTINA ALTY | HART ENERGY

Energy needs of the Northeast are expected to grow during the next few years, but production in the Marcellus-Utica plays is expected to grow even more. Bradley Olson of Tudor Pickering Holt & Co. (TPH) told the audience at Hart's MUM conference last week that "the Marcellus-Utica will increase total U.S. gas supply by 15 billion cubic (Bcf) or 30% percent by 2020."

The Northeast has a current production rate of 11 Bcf per day and by the end of 2014 will be able to supply the Northeast with 60% of its needs, Olson said. If the growth that TPH predicts holds true, the Northeast will supply 97% of its own energy needs by the end of 2017 and the region will become an exporter.

While the Northeast is expected to see continued growth, TPH predicts that growth in other markets will remain flat. This throws a curve in a historical trend in which the Northeast has been an importer and not an exporter.

"TPH as a firm holds the view that between now and 2016, while we are waiting for this infrastructure to come online, we are going to see turbulent differentials," Olson said.

With the surplus of gas that will be available in the Northeast, there needs to be a reliable way to get it out and into other markets, Olson stated. Currently and during the past few years there has been a flurry of activity to build gathering systems, but there is a need to look at more long-haul pipelines and other modes of transportation to move the product out of the Northeast and to other markets.

"We think that we are going to see a much bigger focus on long-haul infrastructure. Potentially you are going to see gathering and processing players get more integrated into the downstream long-haul pipeline infrastructure, rail infrastructure and in some cases waterborne exports," Olson said.

"Clearly there are going to be price implications of this infrastructure bottleneck situation. We believe for the next three years, as we are in a period infrastructure shortage, average discount from the gas market could reach \$1 across the producing entity. It sounds like a big discount but it really is not so different from what the futures market is telling you in several cases, and long term we think the marginal cost of transportation of the Northeast will set the discount for gas compared to Henry Hub, which we expect to be about 40 to 50 cents."

Since the Northeast will have excess gas, it will need somewhere for it to go. There are several choices, Olson said: the Midwest and Chicago



Bradley Olson of Tudor Pickering Holt & Co. tells Marcellus-Utica Midstream conference attendees that the Northeast will need to look for a place to go.

market, Florida and Canada. All are possible choices but won't come without a cost, he added.

Another option is what Olson calls "the most important market" and possibly the most economically feasible: the Texas-Louisiana market.

"I know that most of you are probably thinking that the idea that Texas and Louisiana will need to import gas from the Northeast was unheard of as recently as a year or two ago. It sounds a little bit crazy even today, but what we are seeing is more than 6 bcf of pipeline projects currently proposed or contracted to move gas from the Northeast to Louisiana and Texas," he said.

His reasons behind Texas-Louisiana being such an important candidate are threefold: unparalleled industrial demand growth associated with petrochemical projects; power generation growth and coal to gas; and the biggest factor—liquefied natural gas (LNG).

"The demand sync for LNG is located in between Corpus Christi and the Louisiana Gulf Coast so there is a strong demand to move gas into that LNG area, and that is what we are seeing," he said. "And ultimately we think at least half of Northeastern exports will end up in Texas or Louisiana."

Exporting to the Gulf coast, the largest petrochemical market in the U.S., gives an outlet for ethane, the most popular of the NGLs, but that still leaves propane, butane and other products that need a market.

"We think that most propane, butane and y-grade NGLs will make their way east starting in 2016 to the port of Philadelphia and either access global markets or take a boat down to the Gulf Coast," Olson said.

Olson thinks "being prepared for the turbulence of the next several years is paramount. With insufficient infrastructure in place today and a struggle to keep up with production growth during the next two to three years, differentials and discounts will be very volatile."

LEAD STORY | From The Front

Continued from **Page 1** year from the power sector in 2015. In order to build sufficient supplies prices must reward producers, Hill said.

Several other industrial end-users have found unique approaches to securing supplies necessary to maintain the recent economic advantages of domestic shale gas. Nucor Steel's general manager, Resource Development, Brad True, said that the company acquired an interest in Encana to continue manufacturing direct reduced iron (DRI). This high-purity metallic iron feedstock is produced from natural gas by reducing and carburizing iron ore pellets. It helped the company maintain a cost advantage when its competitors began to use scrap to make steel, which drove the cost of scrap up. "DRI has consistent quality and low-residual content and is more environmentally friendly," he said.

The company is investing \$750 million to build the largest DRI plant in the world, and the only one in the U.S., in Louisiana, but the success of this project was dependent on a long-term supply of cheap gas. Nucor acquired a 50% interest in each well that Encana drills in western Colorado. As of December 2013, this was approximately 270 wells. "Gas produced from these wells offsets our exposure to the uncertain future costs of gas used in our operations," True said.

U.S. shale plays continue to attract foreign investors, but one of the more intriguing of these foreign investments has come from Dyno Nobel, an industrial explosives manufacturer, that is owned by Incitec Pivot Ltd. of Australia. The company recently announced plans to build an \$850 million ammonia plant in Louisiana despite Australia supposedly being awash in its own gas supplies.

Interestingly, Australia has built several liquefied natural gas (LNG) export terminals that have designated so much of the country's gas supplies that the domestic market is now suffering dramatically, according to Tim Lawrence, manager, gas, energy and utilities at Incitec Pivot.

"The anticipated LNG consolidation did not occur and Australia failed to properly monitor our supplies, and it has had a largely negative impact on domestic markets," he said. The new LNG trains will result in export demand increasing three times by 2017. This resulted in price spikes and drove producers into high-cost recovery projects and reserves to meet demand.

As hard as it may be to believe, Australian gas prices are expected to increase by 120% from their historic price levels by 2020. While the U.S. has more reserves and cheaper prices combined with an unprecedented infrastructure network, Lawrence said that Australia could be a cautionary tale for unchecked LNG exports.

"Unchecked LNG exports will cause domestic gas prices to spike, harming consumers, manufacturers and adversely impacting the economy," he said, citing a recent report from Purdue University that found that the GDP will decline and result in higher electric bills for Americans based on both the high and low scenarios for LNG exports.

In addition, Dow Chemical commissioned Charles River Associates to study the impact of LNG exports. That report found unchecked exports could result in gas prices tripling in value by 2030, which could adversely impact the manufacturing sector. PIRA Energy Group had similar findings this past summer.

Lawrence noted that the U.S. energy policy has several safety measures in place to prevent these negative impacts. The country retains the right to revoke LNG export permits and it has the stated objective of ensuring affordable prices by preventing Henry Hub prices from linking to international oil-linked markets.

However, he said that the U.S. Department of Energy should conduct further studies of LNG exports before approving any further export licenses to ensure that the negative impacts felt in Australia don't take place in the U.S.

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