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FEATURE

Eagle Ford Production Will Require Midstream Growth

As Eagle Ford shale production continues to increase, it is hastening the need for midstream infrastructure development in the play. “The pace of reserve development in the Eagle Ford is challenging producers, midstream service providers, and downstream customers to provide adequate infrastructure to timely monetize the play’s prolific reserves,” according to a paper, “Eagle Ford Shale: Where Are All Those Liquids Gonna Go?,” presented by Lesa Adair and Susan Starr of Muse, Stancil & Co. at the recent GPA Annual Convention in New Orleans, La.

In just three years, crude and condensate production has increased from nearly zero in 2008 to roughly 160,000 barrels per day (b/d) in Q4 2011. According to the report production is expected to continue to increase to levels of approximately 500,000 to 800,000 b/d of crude and condensate by 2020.

Much of this production will be consumed locally as it will displace imports of light



crude as there is enough refining capacity in the region and nearby regions to handle the Eagle Ford production. In order to access other regions there are planned midstream infrastructure projects to transport crude from the Eagle Ford to Corpus Christi, Texas City and Houston. In addition, it is possible that additional projects can transport this crude to other refineries east of the Eagle Ford.

“Based on current Eagle Ford production forecasts, planned regional infrastructure development appears to exceed (continued on page 7)

NGL PRICES & FRAC SPREAD

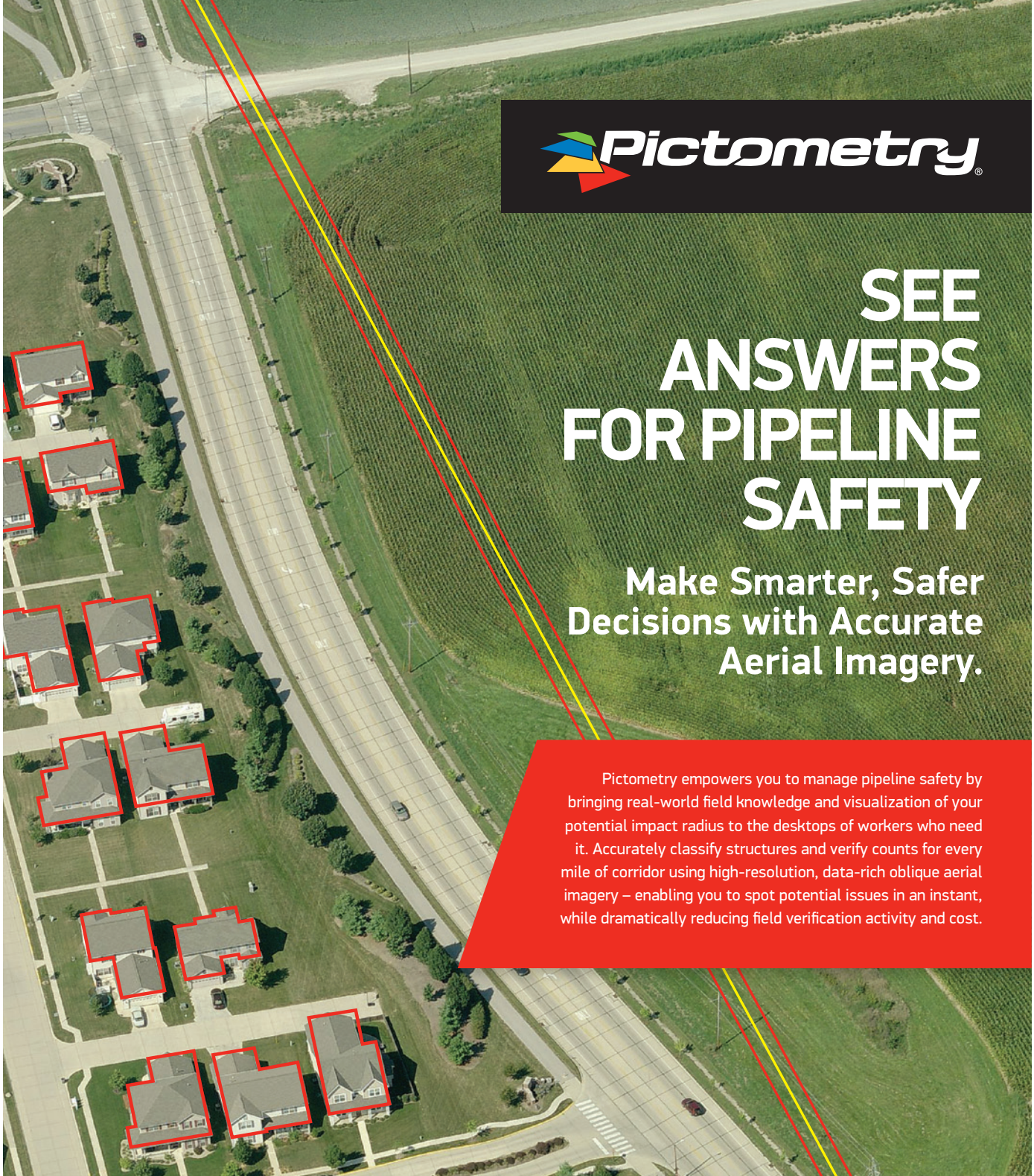
NGL Prices Fail To Grow At Same Rate As Gas, Crude Prices

Natural gas liquid (NGL) prices remained relatively stable as the month of April came to a close. This was in contrast to gains experienced by both crude oil and natural gas prices this week as the NGL market is beginning to become oversaturated.

Crude prices increased 4% to \$102 per barrel (bbl) on May 3 while natural gas prices improved 18% to \$2.25 per million Btu (MMBtu) at Mont Belvieu and 14% to \$2.20/MMBtu at Conway. The increase in dry gas prices was attributed to the Energy Information Administration (EIA) revising its storage figures for the previous month, which lowered them approximately 11 billion cubic feet.

“This indicates that fundamentals have been slightly tighter than what the market previously perceived. On top of the storage revisions, EIA’s 914 report showed a 420 million cubic feet per day (MMcf/d) decline in production for February. Although the decline was in line with pipeline data, market sentiments was, nevertheless, affected,” according to Barclays Capital’s *Gas and Power Weekly Kaleidoscope* for the week of May 1.

It is expected that the storage overhang will experience significant reductions this summer as coal-fired power plants are displaced by gas-fired plants. This should further help to move gas prices higher, po- (continued on page 3)



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tentially keeping them above the \$2.00/MMBtu price threshold. However, if there is limited cooling demand or these displacements don't happen, then the storage overhang could grow and cause prices to plunge further.

The only NGL to experience a marked improvement or decline this week was Conway ethane, which improved 16% to 14¢ per gallon (/gal). While the Midcontinent market remains weak for E-P mix, this improvement was a reaction to the deep price cuts experienced last week. *Midstream Monitor* spoke to Kinder Morgan this week and the company confirmed that it anticipates the Cochise pipeline to begin transporting 13,000 barrels per day (b/d) of E-P mix to Sarnia, Canada this month once Canadian regulatory approvals have been received. Once these shipments begin it is expected that Conway prices will see further improvements.

Mont Belvieu ethane prices dipped slightly to 47¢/gal as the EIA reported strong build-up of ethane storage levels. In addition there was further pressure placed on ethane prices

Current Frac Spread (Cents/Gal)				
May 4, 2012	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	13.70		47.09	
Shrink	14.61		14.94	
Margin	-0.91	-12.29%	32.15	-8.08%
Propane	84.96		116.40	
Shrink	20.15		20.61	
Margin	64.81	-8.80%	95.79	-5.83%
Normal Butane	156.76		191.54	
Shrink	22.81		23.33	
Margin	133.95	-3.72%	168.21	-1.14%
Iso-Butane	186.96		203.78	
Shrink	21.91		22.41	
Margin	165.05	-2.40%	181.37	-0.94%
Pentane+	224.84		235.03	
Shrink	24.68		25.25	
Margin	200.16	-2.48%	209.79	-2.33%
NGL \$/Bbl	40.84	-1.05%	52.55	-0.71%
Shrink	8.06		8.24	
Margin	32.78	-4.16%	44.31	-3.53%
Gas (\$/mmBtu)	2.20	13.99%	2.25	17.80%
Gross Bbl Margin (in cents/gal)	74.13	-4.51%	102.28	-3.73%
NGL Value in \$/mmBtu				
Ethane	0.75	16.30%	2.59	-1.20%
Propane	2.95	-4.26%	4.04	-2.37%
Normal Butane	1.69	-1.49%	2.07	0.83%
Iso-Butane	1.16	-0.73%	1.27	0.82%
Pentane+	2.87	-0.91%	3.00	-0.50%
Total Barrel Value in \$/mmBtu	9.43	-0.90%	12.96	-0.89%
Margin	7.23	-4.70%	10.71	-4.09%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
April 25 - May 1, '12	47.09	116.40	191.54	203.78	235.03	\$52.55
April 18 - 24, '12	47.66	119.22	189.96	202.12	236.22	\$52.92
April 11 - 17, '12	44.37	120.88	189.98	203.98	237.92	\$52.78
April 4 - 10, '12	43.30	119.24	188.14	205.38	238.92	\$52.43
April '12	45.55	119.39	189.84	203.99	237.95	\$52.78
March '12	50.09	125.86	192.84	207.42	245.13	\$54.99
1st Qtr '12	53.93	125.90	192.36	204.32	238.95	\$55.05
4th Qtr '11	84.49	144.13	188.16	227.18	224.44	\$61.34
3rd Qtr '11	76.03	153.87	188.27	208.52	237.59	\$61.59
2nd Qtr '11	75.14	149.59	186.75	202.07	248.23	\$61.42
April 27 - May 3, '11	83.46	158.38	199.94	210.30	268.58	\$66.04
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
April 25 - May 1, '12	13.70	84.96	156.76	186.96	224.84	\$40.84
April 18 - 24, '12	11.78	88.74	159.13	188.33	226.90	\$41.28
April 11 - 17, '12	15.10	93.18	161.84	194.20	231.96	\$42.99
April 4 - 10, '12	16.30	93.32	161.23	191.83	232.65	\$43.16
April '12	14.42	90.99	160.18	190.26	230.04	\$42.30
March '12	29.33	107.37	172.94	193.41	241.34	\$48.21
1st Qtr '12	26.93	103.34	168.65	184.75	227.16	\$45.92
4th Qtr '11	34.29	129.43	160.82	204.27	196.08	\$48.23
3rd Qtr '11	46.69	143.07	166.30	199.68	210.98	\$53.06
2nd Qtr '11	52.63	139.38	170.76	192.47	236.00	\$55.34
April 27 - May 3, '11	56.23	146.30	183.33	199.00	258.13	\$59.09

(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

this week as ethane cracker turnarounds continued, and there was news that new processing plants were scheduled to come online in the Eagle Ford shale that will help to increase supplies. The cracker turnarounds will be completed this month and in June.

According to En*Vantage, the market might be overestimating the impact that these new plants will have on ethane. "Right now Eagle Ford gas production is probably about 1.1-1.2 Bcf/d. We believe that all the Eagle Ford gas is rich and is being processed in the legacy gas plants in South Texas. The conventional gas in South Texas, that is 2 to 3 gpm, is declining as much as 10% to 15% per year which is providing spare processing capacity for current Eagle Ford gas production. The only problem is that these legacy plants were not designed for gas as rich as Eagle Ford shale, which could be over 5 gpm. Consequently, the legacy plants are suffering

from low ethane recovery rates, some as low as 40% to 60%. When the new Eagle Ford processing plants come online, the Eagle Ford gas will be transferred from the legacy plants into the new plants. The only incremental NGLs we will probably see from these new plants are the increased recoveries for ethane (80% to 85% C2 recoveries) and for some propane. We estimate that incremental NGL production from new Eagle Ford processing plants may only be 20% to 30%. So if a new Eagle Ford plant is advertised to recover 30,000 b/d only about 6,000 b/d to 9,000 b/d is truly incremental.”

While prices were flat at Mont Belvieu and improved at Conway, ethane margins tumbled at both hubs with the Texas margin down 8% and the Midcontinent margin down 12% due to the much improved gas prices at each location.

Ethane prices were also negatively impacted by weak propane prices due to the storage overhang caused by the unusually warm winter that limited heating demand, as well as lower prices in Europe. As foreign imports of propane increase in Europe, they are causing prices to once again fall. It is estimated that U.S. propane exports could be 150,000 b/d this month.

Conway Ethane Margins Down Nearly 100% In April

Conway ethane margins dropped nearly 100% in the month of April as prices suffered from the delay in the start-up of transportation of E-P mix out of the hub to Nova Petrochemical's plant in Sarnia, Canada.

Kinder Morgan expected to begin transporting 13,000 barrel per day of E-P mix out of the region to Canada on April 1, but delays in securing regulatory approvals has pushed the start-up back. It is expected to begin transportation later this month.

Enterprise Products Partners announced this week that it anticipates a record number of propane exports this year as it is expanding its refrigeration export facility on the Houston Ship Channel. This will bring the facility's total export capacity to 7.5 million barrels per month when it is completed in Q4 2012.

The Mont Belvieu propane price fell 2% to \$1.16/gal, its lowest price since it was \$1.15/gal the week of Sept. 22, 2010. This resulted in the margin at the hub decreasing 6%. The Conway price declined at a faster rate of 4% to 85¢/gal, its lowest price since it was 83¢/gal the week of Sept. 23, 2009. This resulted in a 9% drop in margin.

Heavy NGL prices were stronger this week at both hubs thanks to improved crude prices. Butane and isobutane prices rose 1% at Mont Belvieu, though both prices were down 1% at Conway. Pentanes-plus (C5+) prices were down 1% at both hubs. Despite being stronger than the light NGLs, margins were down at both Conway and Mont Belvieu for the heavy NGLs with the largest decrease being for Conway butane at 4% and the smallest being the 1% drop for Mont Belvieu isobutane.

The margin for Conway ethane dropped 96% in April and left the product marginally profitable. However, since ethane trades as E-P mix at Conway it has been able to retain its profitability due to the higher value of propane even after a 16% drop in margin for propane at the hub.

Mont Belvieu ethane's margin improved 4% in the month due to the market correcting the price in the last full week of trading in April following a sharp drop early in the month. The near-term fundamentals for Mont Belvieu

The theoretical NGL barrel price fell 1% with a 4% drop in margin at both hubs with the Conway price down to \$40.84/bbl with a margin of \$32.78/bbl and the Mont Belvieu price at \$52.55/bbl with a margin of \$44.31/bbl.

Natural gas in storage for the week increased 28 billion cubic feet to 2.576 trillion cubic feet (Tcf) from 2.548 Tcf the previous week. This was 48% greater than the 1.736 Tcf recorded last year at the same time and 50% greater than the five-year average of 1.719 Tcf.

Cooling demand is likely to remain slow next week in much of the country although there could be an increase in heating demand in parts of the country, according to the forecast from the National Weather Service. The forecast anticipates cooler than normal temperatures in the Northeast through the Midwest and into the Gulf Coast. Normal spring temperatures are expected in the Southeast and portions of the Southwest and Mountain region. The West Coast is expected to experience warmer than normal spring temperatures.

— Frank Nieto

ethane were slightly negative because of the scheduled maintenance at ethane crackers in the Gulf Coast. These turnarounds will be completed in May and June, which will help to improve prices and demand.

However, there are several fractionators in the Gulf Coast that are scheduled for maintenance just after these crackers come back online. That will continue a pushback on price increases until they're completed near the end of

summer. At that time, forecasts anticipate Mont Belvieu ethane prices to increase to 60¢ per gallon (/gal).

Propane prices have also been negatively impacted by the warm winter weather this year, which decreased heating demand and increased storage levels to record highs. While the displacement of coal-fired power plants by natural gas-fired plants and increased propane exports will help to work off this storage overhang, Bentek Energy’s Kristen Holmquist stated that the complete work-off of this overhang will require at least one cold winter and possibly two to fully balance the market.

Heavy NGL prices and margins were stronger than light NGLs because of their relationship with crude oil prices, but still experienced decreased margins for the month because of the much improved gas prices.

Natural gas prices at Conway rose 12% to \$2.02 per million Btu (/MMBtu) and 17% to \$2.06/MMBtu at Mont Belvieu due to the Energy Information Administration’s storage revision that caused traders to re-evaluate the fundamentals of the natural gas market.

While gas prices improved, the theoretical NGL barrel price dropped at both hubs. The Conway price was down 7% to \$40.89 per barrel (/bbl) with an 11% drop in margin to \$33.49/bbl. The Mont Belvieu price dropped 1% to \$52.80/bbl with a 3% drop in margin to \$45.26/bbl.

The most profitable NGL to make at both hubs was C5+ at \$2.02/gal at Conway and \$2.12/gal at Mont Belvieu. This was followed, in order, by isobutane at \$1.67/gal at Conway and \$1.83/gal at Mont Belvieu; butane at \$1.36/gal at Conway and \$1.71/gal at Mont Belvieu; propane at 67¢/gal at Conway and 98¢/gal at Mont Belvieu; and ethane at less than 1¢/gal at Conway and 34¢/gal at Mont Belvieu.

– Frank Nieto

INSIDE LOOK AT PROCESSING

Enterprise Starts Up Yoakum Processing Plant For Eagle Ford Production

Enterprise Products Partners L.P. (NYSE:EPD) announced the start-up of the first train at the partnership’s new cryogenic natural gas processing plant at Yoakum, Texas. This facility has a design capacity of 300 million cubic feet per day and can extract approximately 37,000 barrels per day of natural gas liquids.

During the start-up period, the plant will process existing Eagle Ford production in a reduced recovery mode to en-

able testing of the plant and supporting facilities and make adjustments to plant operations. Incoming natural gas volumes and recovery percentages at the facility will continue to increase throughout the month of May, with full production from the plant expected by June 1, 2012. Prior to the start-up of the Yoakum plant, Enterprise had been utilizing capacity at natural gas processing plants owned by third parties. Most of these vol-

umes will now be diverted and processed at the Yoakum facility.

“The coordination, hard work and dedication exhibited by our employees in Houston and in the field has been tremendous and allowed us to complete this first train on schedule and under budget,” said A.J. “Jim” Teague, executive vice president and chief operating officer of Enterprise’s general partner. “The long-term outlook in the Eagle

Monthly Frac Spread (Cents/Gal)				
APRIL 2012	Conway	Change from Start of Month	Mont Belvieu	Change from Start of Month
Ethane	13.63		47.89	
Shrink	13.41		13.68	
Margin	0.22	-95.78%	34.21	4.26%
Propane	85.45		117.05	
Shrink	18.50		18.87	
Margin	66.95	-16.17%	98.18	-6.52%
Normal Butane	157.20		192.18	
Shrink	20.95		21.36	
Margin	136.25	-4.94%	170.82	0.19%
Iso-Butane	186.58		203.48	
Shrink	20.12		20.52	
Margin	166.46	-2.98%	182.96	-3.05%
Pentane+	224.68		235.47	
Shrink	22.66		23.11	
Margin	202.02	-6.82%	212.36	-5.14%
NGL \$/Bbl	40.89	-6.90%	52.80	-0.78%
Shrink	7.40		7.54	
Margin	33.49	-10.28%	45.26	-3.23%
Gas (\$/mmBtu)	2.02	12.22%	2.06	17.05%
Gross Bbl Margin (in cents/gal)	75.84	-10.75%	104.55	-3.36%
NGL Value in \$/mmBtu				
Ethane	0.75	-20.29%	2.63	7.62%
Propane	2.97	-11.31%	4.06	-3.38%
Normal Butane	1.70	-2.96%	2.08	1.82%
Iso-Butane	1.16	-1.54%	1.27	-1.34%
Pentane+	2.86	-5.20%	3.00	-3.34%
Total Barrel Value in \$/mmbtu	9.44	-7.78%	13.04	-0.30%
Margin	7.42	-12.05%	10.98	-3.00%

(Above) 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

Ford Shale continues to show growth in rich gas production and Enterprise is well-positioned to help meet the need for midstream infrastructure through the cost-effective expansion of our integrated network.”

Permian Takeaway Crisis Creates Urgent Demand For Spare Capacity

Confirming the concerned buzz permeating from Permian Basin producers, Pioneer Natural Resources chief executive Scott Sheffield forewarned attendees at Hart Energy's DUG conference last week in Fort Worth that the rapidly rising flow of oil out of the basin is progressing toward a constriction unless midstream providers act quickly to expand takeaway capacity.

“One of the biggest issues we have in the Permian Basin is just getting the oil out,” Sheffield said. “It's tight right now. We cannot afford to have a \$25 discount (to West Texas Intermediate) like you've seen in the Bakken.”

The current discount for a barrel of Midland sweet crude to prices at Cushing, Oklahoma, ranges between \$4 and \$5, but has been as high as \$9 recently. Historically, the discount has trended about 50 cents.

Current takeaway capacity in the Permian is 1.1 million barrels per day, which is more than 90% utilized with current spare capacity hovering between 50,000 to 100,000 barrels per day. That is a narrow cushion that can squeeze to zero instantly if a local refinery goes on downtime, he noted. “Any little hiccup can cause an issue.”

Williams Partners Completes Caiman Eastern Acquisition

Williams Partners L.P. (NYSE:WPZ) completed its previously announced acquisition of Caiman Energy's wholly owned subsidiary, Caiman Eastern Midstream, LLC. The acquisition provides Williams Partners with a significant

A 65-mile, 36-inch diameter residue natural gas pipeline linking the Yoakum plant to Enterprise's Wilson natural gas storage facility was completed in April 2012. Additionally, the partnership has also completed construction of 169 miles

Local refineries absorb about 20% of Permian production.

The rig count in the Permian is approaching 500, a five-fold increase in the last three years, with drilling reinvigorated by high oil prices and a new era of unconventional drilling targets in the multi-layered basin. Such activity is growing production by 150,000 barrels of oil per day annually from the region, Sheffield projected.

In the near term, Magellan Midstream's reversal of its Houston-to-El Paso pipeline will add capacity of 225,000 barrels per day in the next year, along with another 220,000 barrels of capacity per day coming online from other operators for a total of 345,000 extra barrels by mid-2013.

“You can see in two years we will add 300,000 barrels per day” of new production, he said, essentially utilizing all the planned extra capacity. “In two years we could be full again.”

Sheffield estimates production out of the basin to once again reach 2 million barrels per day by 2020, equaling peak production from the Permian achieved in 1975.

Anticipating this, he lobbied for an urgent commitment to an additional 500,000 barrel capacity of new projects

of 20-inch and 24-inch diameter pipeline for delivering mixed NGLs extracted at Yoakum to Enterprise's fractionation and storage complex at Mont Belvieu, Texas
– **Business Wire**



from midstream providers, which he said have to get comfortable with new unconventional shale plays before committing to expansion projects.

“We need these projects online by the end of 2014 and through 2016.”

And when they do, he hopes they will go to the Gulf Coast and California rather than Cushing, which is overwhelmed with capacity.

“We don't need any more lines to Cushing. There's too much coming into Cushing from the Niobrara play, the Mississippi lime play, the Bakken shale and, eventually, the Canadian oilsands.”

Short of timely midstream expansion, Permian operators will have to rely on rail and trucking for crude outtake, but pipelines remain the best option by far, he said. “We have to be able to get the oil out. A lot more pipelines have to be built.”

– **Steve Toon**

“With the completion of this major acquisition, we're well on our way to become the leading provider of gathering, processing and transportation solutions for producers in the Marcellus Shale,” Alan Armstrong, chief executive officer

of Williams Partners' general partner, said in a news release.

The acquisition establishes Williams Partners' new Ohio Valley Midstream business. The operation area is northern West Virginia, southwestern Pennsylvania and eastern Ohio. Work is under way to expand the existing physical assets, which include a gathering system and a processing facility. In addition, construction is underway on fractionation and additional processing facilities and there are plans to construct natural gas liquid pipelines.

The new business is anchored by long-term contracts, including gathering dedications totaling 236,000 acres from 10 producers. In addition, there are processing commitments in place for 100 million cubic feet per day.

Williams Partners plans to operate its Ohio Valley Midstream business from West Virginia. The partnership has put an experienced management team in place, along with approximately 50 former Caiman Eastern employees, to facilitate continued operations and expansions. It plans to continue to add staff locally.

Williams Partners and the owners of Caiman Energy are continuing work to create a joint venture to develop midstream infrastructure in the NGL- and oil-rich areas of the Utica Shale, primarily in Ohio and northwest Pennsylvania. Caiman Energy's private-equity backers include EnCap Flatrock Mid-

stream, EnCap Investments L.P. and Highstar Capital.

Williams Partners funded the approximate \$2.4 billion purchase price of the Caiman Eastern acquisition with a combination of approximately \$1.72 billion in cash, net of purchase price adjustments, and the issuance to Caiman of approximately 11.8 million Williams Partners common units.

The Caiman Eastern acquisition builds on Williams Partners' strategy to develop large-scale infrastructure that connects Marcellus shale producers' natural gas and NGLs to the best markets.

Across the Marcellus shale, the partnership has gathering dedications on 1.2 million acres. It expects gathering volumes there to reach 5 billion cubic feet per day (Bcf/d) by 2015.

In Northeastern Pennsylvania, Williams Partners is building the Susquehanna Supply Hub, with plans for 3 Bcf/d of takeaway capacity by 2015 to deliver Marcellus Shale production into four major interstate gas pipeline systems.

In western Pennsylvania, Williams Partners owns a 51% interest and operates the Laurel Mountain Midstream joint venture. Laurel Mountain includes a gathering system of nearly 1,400 miles of pipeline with a capacity of approximately 230 MMcf/d. The Laurel Mountain system is expected to reach approximately 1 Bcf/d of gathering by 2015.

Eagle Ford... (continued from page 1)

forecasted requirements...In the future, Eagle Ford crude and condensate volumes will be more widely distributed and will compete with light crude imports to the Houston/Texas City, Port Arthur, and Mississippi River market areas," the report said.

Eagle Ford production isn't expected to have much impact on medium and heavy crude imports unless there are significant price downgrades for Eagle Ford producers, the authors noted.

"In contrast to the crude supply balance, the regional NGL supply and de-

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / May 3, 2012	
Gas Hub Name	Current Price
Carthage, TX	2.24
Katy Hub, TX	2.24
Waha Hub, TX	2.21
Henry Hub, LA	2.28
Perryville, LA	2.25
Houston Ship Channel	2.23
Agua Dulce, TX	1.88
Opal Hub, Wyo.	1.91
Blance Hub, NM	1.97
Cheyenne Hub, Wyo.	1.99
Chicago Hub	2.29
Ellisburg NE Hub	2.47
New York Hub	2.45
AECO, Alberta	1.88

Source: Bloomberg

Williams Partners' Transco interstate gas pipeline system runs through eastern Pennsylvania and has several expansion projects that are outlets for Marcellus shale production. As well, the partnership has an ongoing open season to gauge customer interest in its proposed Atlantic Access project. As proposed, Atlantic Access would significantly expand direct access for Marcellus and Utica shale natural gas to both Northeast and Southern U.S. markets by late 2015.

mand picture has changed significantly in the last seven years with net propane and butane imports falling from just under 200,000 b/d in 2005 to net exports of just over 100,000 b/d in 2011. Texas imports of foreign, waterborne NGL in the 2009 to 2011 period have been negligible

making the longer term disposition of Eagle Ford-sourced NGL more complex,” according to the report.

Natural gas liquids (NGL) production out of the play is leading to significant midstream infrastructure growth as these volumes will overwhelm local demand. It is anticipated that NGL production will keep pace with the increase in crude production and reach between 300,000 to 400,000 b/d by 2020.

The new infrastructure projects that will add processing and fractionation capacity in the Gulf Coast is expected to be large enough that additional volumes from other producing regions, such as the Rockies, Marcellus and West Texas, will be shipped to these facilities.

The biggest market for NGLs, especially ethane, is the petrochemical market, which has seen a major revitalization

in North America in the past year with petrochemical producers switching from gas oil and naphtha to lighter feedstocks.

Between 2012 and 2015, more than 2.8 billion pounds per year of ethane cracking capacity is scheduled to come online. In addition, Chevron Phillips and Dow announced projects that will add more than 7.5 billion pounds of capacity in the Gulf Coast by 2017.

Propane and butane market balance has also shifted from relying on foreign imports to meet marginal demand to exporting excess supplies. “Through October 2011, none of these products were imported to the U.S. Gulf Coast while exports of propane and butane totaled approximately 120,000 b/d,” the report said.

As more and more shale plays come online throughout the country in regions that haven’t traditionally housed oil and

gas production, they will increasingly find homes in the Gulf Coast as this represents the most economic choice for producers, refiners, petrochemical manufacturers and the midstream.

While there are other major processing, treating and cracking projects being developed in other parts of the country closer to plays such as the Marcellus, Utica and Bakken shales, ultimately each of these plays will wind up shipping volumes to the Gulf Coast as these projects won’t have enough capacity to absorb all of the production. Although the Eagle Ford shale has a history of production, it too will be required to ship production to the Gulf Coast because of the sheer size of the play.

– Frank Nieto

PIPELINES & TECHNOLOGY

Blueknight Energy, XTO Plan Cushing Crude Pipeline

Blueknight Energy Partners, L.P. (NASDAQ: BKEP) (NASDAQ:BKEPP), a midstream energy company focused on providing integrated services for companies engaged in the production, distribution and marketing of crude oil, asphalt and other petroleum products, announced plans to construct a crude oil pipeline as part of a long-term transportation agreement with XTO Energy Inc., a subsidiary of ExxonMobil Corp.

In connection with the agreement, BKEP will construct a 65-mile pipeline from southern Oklahoma to Wynnewood,

Oklahoma, where it will intersect with an existing BKEP pipeline. The pipeline will transport committed XTO crude oil production from the Woodford Shale area in Southern Oklahoma to BKEP’s crude oil terminal in Cushing, Oklahoma.

“We’re pleased to have the opportunity to provide XTO with an efficient and reliable way to transport their crude oil production from the Woodford Shale to the market hub in Cushing, Oklahoma,” said J. Michael Cockrell, Blueknight Energy Partners’ president and chief operating officer. “The new pipeline and

associated infrastructure represents a significant expansion of our Oklahoma mainline system and positions the company to pursue additional crude oil transportation opportunities throughout southern Oklahoma.”

BKEP expects construction of the new pipeline and associated enhancements to its Oklahoma mainline system to begin this quarter with completion targeted early-mid 2013 at an approximate total cost of \$37 million.

– Business Wire

Penn Virginia, Aqua America Brings Water Pipeline Online In Marcellus

Aqua America Inc. (NYSE: WTR) and Penn Virginia Resource Partners, L.P. (NYSE: PVR) announced that a newly constructed private pipeline supplying fresh water to certain natural gas pro-

ducers drilling in the Marcellus shale in north-central Pennsylvania is now fully operational. It marks the first time water is being commercially supplied directly to drill sites in the Marcellus without

the public-highway use of heavyweight 5,400-gallon tanker trucks customarily employed in well completions.

In less than a month of operation, the pipeline has already eliminated

more than 2,000 water truck trips over rural roadways. In addition, this project supported the creation of approximately 100 local jobs over the course of construction.

The pipeline project is owned and operated by Aqua-PVR Water Services LLC, a joint venture of certain Aqua America and PVR operating subsidiaries. The 12-inch diameter steel pipeline largely parallels the trunkline of PVR's gathering system in Lycoming County and shares PVR's existing rights-of-way.

PVR constructed the fresh water pipeline and handled negotiation of water pipeline capacity contracts with producers. Each company has invested approximately \$12 million for construction of the first segment of the project. The joint venture has entered into a three-year

agreement with Range Resources-Appalachia LLC, a wholly owned subsidiary of Range Resources Corp. (NYSE: RRC), to supply fresh water to three of Range's water impoundments.

William H. Shea, Jr., chief executive of PVR, said, "We are pleased to see the start of service of the first phase of this new private pipeline water delivery system that so tangibly benefits both the residents and the contracting producers in the local communities where we operate. We look forward to completing the planned extensions of the pipeline and the expansion of service to additional producers in the region."

Aqua America chairman and chief executive Nicholas DeBenedictis said, "We are glad to have entered a business offering a positive alternative to

the impact of truck hauling through rural communities, while reducing diesel emissions and the overall carbon footprint of providing needed water to the drilling business. By reducing truck traffic, we are also reducing the noise from the vehicles and wear-and-tear on local roadways, plus helping to reduce carbon emissions associated with the thousands of truck trips that have been eliminated because of the pipeline.

"We've been in the water business for more than 125 years and shale drilling is a very water intensive business," DeBenedictis continued. "As this business continues to grow, it's important that water professionals like Aqua America be involved to ensure the proper management of such an important resource."

FERC Approves Northwest Pipeline Pre-Filing Rate Settlement

Williams Partners L.P. (NYSE: WPZ) announced that its Northwest Pipeline system received approval from the Federal Energy Regulatory Commission on a pre-filed rate settlement.

Northwest filed a Stipulation and Settlement Agreement with the FERC on March 15, 2012.

The supporting or non-opposing customers named in the Settlement represent approximately 99.5 percent of Northwest's long-term firm transportation and storage capacity.

Williams (NYSE: WMB) owns approximately 69 percent of Williams Partners, including the general-partner interest.

"We're pleased to have reached a settlement with our customers. We appreciate the long-standing relationships with them that allowed us to work cooperatively and reach a timely quick settlement," Randy Barnard, senior vice president of the partnership's interstate gas pipeline business, said in a news release.

The settlement is based on an annual cost of service of \$466.5 million and established a new general system firm transportation rate of \$0.44 per dekatherm, a 7.4 percent increase over the current rate. New rates will become effective Jan. 1, 2013. Northwest can file another rate case in three years and must

file within five years. The settlement is in line with Williams Partners' and Williams' earnings and cash flow guidance for 2013 and 2014.

Northwest Pipeline is a primary artery for the transmission of natural gas to the Pacific Northwest and Intermountain Region. The 4,000-mile system crosses Washington, Oregon, Idaho, Wyoming, Utah and Colorado. Peak capacity is 3.8 billion cubic feet per day. Northwest's bi-directional system provides markets with access to British Columbia, Alberta, Rocky Mountain and San Juan Basin gas supplies.

NEWS & TRENDS

ETP Reaches Agreement To Acquire Sunoco Inc.

Energy Transfer Partners, LP (NYSE: ETP) and Sunoco Inc. (NYSE: SUN) entered into a definitive merger agreement whereby ETP will acquire Sunoco in a unit and

cash transaction valued at \$50.13 per share, or a total consideration of approximately \$5.3 billion, based on ETP's closing price on April 27, 2012. This com-

bination will create one of the largest energy partnerships in the country by expanding ETP's geographic footprint and strengthening its presence in the

transportation, terminalling and logistics of crude oil, NGLs and refined products.

The merger consideration, which consists of \$25 in cash and 0.5245 of an ETP common unit, or approximately 50% cash and 50% ETP common units, represents a 29% premium to the 20-day average closing price of Sunoco shares as of April 27, 2012. By acquiring Sunoco, ETP will also own Sunoco's general partner interest and the incentive distribution rights (IDRs) in Sunoco Logistics Partners (NYSE: SXL), as well as Sunoco's 32.4% interest in Sunoco Logistics Partners' limited partner units and Sunoco's branded retail business, which generates additional stable cash flows from a portfolio of approximately 4,900 retail locations in the U.S.

"This transaction, which will be immediately accretive, represents the next step in Energy Transfer Partners' transformation into a more diversified enterprise with an integrated and expanded footprint," Kelcy Warren, ETP's chief executive officer and chairman of the board of directors, said in a news release. "As we have said in the past year, our goal is to derive more of our distributable cash flow from the transportation of heavier hydrocarbons like crude oil, NGLs, and refined products. With this transaction, we make a major move in that direction, bringing our cash flow mix related to the combined enterprise's pipeline businesses to approximately 70% natural gas and 30% heavier hydrocarbons. At the same time, we will enhance the size and scale of the ETP platform by creating new service capabilities and entering new geographic operating areas

NDR Energy Group Signs Contract With Utility For Gas Storage

Universal Bioenergy Inc., (OTCMarkets: UBRG), a publicly traded independent diversified energy company, that markets natural gas, propane, and produces petroleum and coal, announced that NDR

RESIN PRICES – MARKET UPDATE – MAY 4, 2012					
TOTAL OFFERS: 23,788,828 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Inj	4,592,532	0.65	0.70	0.63	0.67
LDPE - Film	3,560,324	0.65	0.76	0.69	0.73
PP Homopolymer - Inj	3,469,496	0.74	0.79	0.71	0.75
HDPE - Blow Mold	2,950,024	0.62	0.72	0.62	0.66
PP Copolymer - Inj	2,234,036	0.72	0.86	0.73	0.77
LLDPE - Film	2,142,024	0.66	0.80	0.67	0.71
HMWPE - Film	1,071,840	0.64	0.73	0.66	0.70
LLDPE - Inj	1,034,000	0.68	0.78	0.66	0.70
GPPS	950,000	0.82	0.90	0.85	0.90
HIPS	950,000	0.97	1.03	0.97	1.02
LDPE - Inj	834,552	0.66	0.70	0.68	0.72

Source: Plastics Exchange – www.theplasticsexchange.com

"This transaction will enable Sunoco's businesses to realize their full potential by becoming an important part of a diversified leader in the energy industry," Brian P. MacDonald, Sunoco's president and chief executive officer, added. "In addition, it delivers an attractive premium to our shareholders, while enabling them to participate in the future growth of the business. The combination with ETP provides substantial future value-creation opportunities for Sunoco shareholders and ETP unitholders alike."

Commenting further, MacDonald said, "ETP recognizes that the steady, ratable cash flows that our logistics and retail businesses generate are backed by great assets, deep expertise, and the potential for future growth. ETP has an interest in growing its Marcellus Shale-related activity, and I am pleased that the combined enterprise will retain a strong Pennsylvania presence."

Sunoco's logistics and retail businesses will continue to maintain headquarters

in the Philadelphia area consistent with their current operating presence. In addition, under the merger agreement, Sunoco will continue its plans for exiting its refining business as previously announced, as well as continue its plans for the proposed refinery joint venture being discussed by Sunoco and The Carlyle Group.

The transaction has been approved by each company's board of directors and is expected to close in the third or fourth quarter of 2012, subject to approval of Sunoco shareholders and customary regulatory approvals. Following the closing, Sunoco and Sunoco Logistics Partners will operate under the Energy Transfer Equity, L.P. umbrella of companies. By acquiring Sunoco, ETP will own Sunoco's general partner interest, limited partner interest and the incentive distribution rights in Sunoco Logistics Partners. Sunoco Logistics Partners will continue to be traded on the NYSE as a separate publicly traded MLP.

Energy Group, its subsidiary, signed an agreement for natural gas storage facility services with the largest natural gas distributor in the U.S. to generate more revenue and profits.

The gas distribution company supplies and delivers natural gas to over 20.9 million customers on the west coast. Its parent company, a Fortune 500 company, traded on the New York Stock Exchange,

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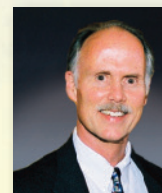
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reported revenues of \$10.0 billion in 2011, in its annual report.

NDR Energy Group, signed a Master Core Secondary Market Services Agreement with the gas utility under their Park, Loan and Wheel Program for natural gas storage facility services. Under the terms of the agreement, the company which owns and operates 134 billion cubic feet of underground gas storage facilities will provide the storage facility, and Universal / NDR Energy Group would purchase, supply and transport the natural gas from the gas fields to the facility for storage. NDR Energy will sell the natural gas

in the marketplace to meet seasonal load imbalances, engage in futures contracts and spot market sales, physical gas trading, financial gas trading; includes hedging, and the use of natural gas derivatives and other financial instruments to generate greater revenues and profits.

“We are very excited about this agreement. We have been talking about this for over a year, and now NDR has done it. This is a real game changer for us,” Universal’s President Vince M. Guest said in a news release. “NDR Energy will now add gas storage as one of our major new profit centers for the company. This

should bring us significant revenues and profits in the coming year. Gas storage will position us to generate millions in potential sales and profits from gas trading, hedging, management, options, swaps and transportation. NDR Energy has been working on this deal for many months, and has finally scored a major financial coup for the company. The contract limits NDR Energy from disclosing the customer’s name and certain details of the transaction, however, we’ll be providing more details on the benefits to our shareholders at later date.”

DCP Midstream Announces \$2B Of Investments In Midcontinent

DCP Midstream LLC announced that it has more than \$2 billion of capital investment underway in the Midcontinent, significantly enhancing its position in the area as the largest gatherer and processor of natural gas. The growth projects will supply producers with full-value chain service, including NGL takeaway services to the premium Mont Belvieu, Texas, market.

DCP Midstream is upgrading its National Helium Plant in Liberal, Kansas, to enable it to achieve deep-cut natural gas liquid (NGL) extraction. National Helium is the largest gas processing plant in the Midcontinent capable of processing more than 600 million cubic feet per day (MMcf/d) of liquids rich gas. In addition, DCP is increasing the interconnectivity of National Helium with its gas gathering and processing systems in the Texas Panhandle and central Oklahoma for improved flexibility. This allows DCP to further reroute gas between multiple processing facilities and residue/NGL outlets.

DCP Midstream is extending its gas gathering infrastructure in the Texas

and Oklahoma panhandle areas and western Oklahoma to accommodate more than 250 MMcf/d of liquids rich gas in the growing Granite Wash, Woodford Cana, Tonkawa, Marmaton and Cleveland plays. DCP recently secured long-term, large acreage dedications in these plays and continues to seek additional growth opportunities.

DCP Midstream is also constructing grassroots gathering systems in the western and eastern Mississippi Lime play to meet the needs of multiple producers that have dedicated up to 1 million acres of land to DCP.

“These projects increase our reach and flexibility in the Midcontinent, with special focus on liquids rich production in the Granite Wash, Woodford Cana, Tonkawa, Marmaton, Cleveland and Mississippi Lime plays,” said Wouter van Kempen, president of DCP Midstream’s gathering and processing business unit. “We are working with our producers in the area with long-term dedications and providing our producers with full-value chain service to meet their exciting growth opportunities.”



DCP Midstream’s previously announced Southern Hills Pipeline is proceeding on plan with an expected in service date of mid-2013 and a target capacity of more than 150,000 barrels per day. Southern Hills will extend to the northwest to connect National Helium Plant as well as multiple other DCP-owned and third-party gas processing plants and provide producers connectivity to the Mont Belvieu market.

DCP Midstream’s existing Midcontinent assets consist of more than 28,000 miles of pipeline, 645,000 horsepower of compression, and 12 processing plants with a total capacity of more than 2 billion cubic feet per day.

“DCP Midstream has numerous growth opportunities derived from the

strength and scale of our asset portfolio and our substantial footprint,” said Tom O’Connor, chairman, president and chief executive officer of DCP Midstream.

Fitch Ratings: Push For LNG Export Capacity Accelerating

U.S. regulators’ approval of the first major U.S. export facility for liquefied natural gas (LNG) is likely to trigger an acceleration of project approval requests. Moreover, as new export contracts are signed with major LNG customers, Fitch Ratings expects global demand for cheap and plentiful U.S.- and Canadian-produced gas to rise steadily over the next few years.

Cheniere Energy’s receipt of final regulatory approval on April 16 for a \$10 billion LNG export terminal in Cameron Parish, LA, has increased pressure on other project sponsors to move quickly to lock up long-term supply contracts with international customers anxious to find cheaper LNG import sources. Dominion Resources followed the Cheniere decision quickly by announcing last week that it would move ahead to construct its Cove Point liquefaction and export facility in Maryland. That project still requires final regulatory approval.

Besides Cheniere’s Sabine Pass terminal, which could come online as early as

“We have positioned DCP for continued growth with more than \$4 billion of growth projects in flight, including new gas processing plants in liquids-rich

2015, at least eight active applications, or proposed sites for LNG export terminals, are being reviewed by U.S. regulators. The Federal Energy Regulatory Commission (FERC) and the U.S. Department of Energy must approve the applications, weighing opposition from environmental groups as well as domestic gas consumers (including utilities and chemical firms) that expect broadening LNG export opportunities to drive up the cost of North American natural gas.

Outlets for exports of Canadian gas exist already in Apache Canada’s Kitimat export terminal in British Columbia. At least two other terminal projects in that province are being proposed. Cost advantages for Canadian suppliers could be particularly large in key Asian markets as a result of lower transportation costs from Pacific ports.

Over time, we expect the development of greater LNG export capacity to help narrow the gap between prices for land-locked North American gas (now near \$2 per million British thermal units

areas and two NGL pipelines that will transform markets, and another \$2 billion in development.”

– Business Wire

[mBtu]) and landed LNG prices in key markets such as Japan and South Korea, where purchased gas prices are linked to the price of crude oil. As North American shale gas production has boomed, international buyers stand to benefit from a shift to supply contracts based on the benchmark Henry Hub gas price in North America, which remains well below global crude prices.

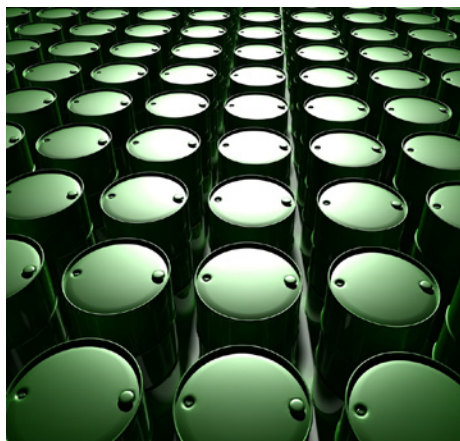
While early entrants into the market are likely to see excellent returns as long as prices for competing LNG remain high in the near term, a rapid ramp up of global LNG export capacity, including substantial new capacity in Australia, could begin to reduce arbitrage opportunities for LNG exporters by the end of the decade. Furthermore, a flurry of new project announcements may drive up costs in North America as numerous sponsors compete for the services of specialized design and construction firms. Inflationary pressure of this kind has already been seen in Australian LNG projects.

SNAPSHOT

TPH: NGL Production To Outpace Crude, Gas

Natural gas liquids (NGL) and crude oil production has been the savior for shale play producers since the downturn in natural gas prices. However, with demand for these products running at a slower pace than their production, it appears this market will face some stiff headwinds.

According to a Tudor, Pickering, Holt & Co. (TPH) report, NGL supply growth will outpace that of crude oil and natural gas with NGLs from natural gas production increasing by more than 50% by 2016.



These supplies will require more than \$30 billion to fund the construction of new natural gas processing plants, pipelines and fractionators to absorb these volumes. This financing is especially costly for producers as it is estimated by TPH to absorb approximately 20% of producer margins from new NGL production.

Ethane and propane specifically face challenges in the next decade, according to the report, as it is expected that petrochemical expansion projects will lag

behind the production of ethane. "Given lengthy lead times for cracker construction, we expect an ethane glut in the second half of 2013 to 2018," the report said. This forecast includes all potential ethylene projects being built during this timeframe.

Cheaper natural gas prices will also push down heating demand for propane – especially in the Northeast – thanks to production out of the Marcellus shale. "[Propane] demand destruction is not a matter of 'if,' it's 'how quickly does the gas grid expand?'" according to TPH.

The two lighter NGLs are also being placed in competition with each other as petrochemical projects are focused on consuming ethane at the expense of propane because of the lower price and larger supplies of ethane.

The positive for propane in this situation is that the heavy consumption of ethane is causing a propylene shortage that could result in a stronger demand of propane, which could grow to nearly 100,000 barrels per day (b/d) by 2017-18.

However, the ultimate destination for propane will be found through the ex-

port market as the export capacity will be tripled by 2013 due to expansion projects from Enterprise Products Partners and Targa Resources.

TPH anticipates NGLs will realize 40-45% of WTI prices between 2013 and 2017.

"Ethane and propane weakness will drive down realizations; supply growth makes ethane/propane prone to downside price shocks. Butanes and [natural gasoline] will be supported by direct price linkage to the refined product pool," the report said.

– Frank Nieto

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