

Marcellus/Utica Projects In Need Of Commitments

Northeast NGL supplies will exceed capacity by 2018 until long-term subscribers are signed up to projects.

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

The production growth of NGLs out of the Northeast is expected to exceed midstream capacity by 2018. Although ethane will remain a problem during this time frame, increasingly in-demand propane and butane will also need new transport capacity out of the region, according to Wells Fargo Securities' "NGL Snapshot" for March 2014.

The biggest issue at getting production to meet capacity has been the inability of producers to commit to potential takeaway projects. The report attributes this lack of commitment to the number of options available to producers along with uncertainty over future netbacks. In addition, questions remain over which areas will remain targets of production, given shifting economics. This is especially true for ethane, which continues to have an uncertain future over needed supply and when rejection may stop. Given these uncertainties, it is difficult for producers to make a long-term, large-capital commitment to these projects. Wells Fargo Securities anticipates producers will continue to take a reactive approach to takeaway solutions.

"We believe it is becoming increasingly difficult to predict long-term ethane supply/demand fundamentals. In a scenario in which



ethane remains oversupplied indefinitely and prices remain at or near fuel value, we believe a y-grade pipeline solution may not receive sufficient customer commitments," the report said.

In this scenario, the investment firm anticipates excess ethane being rejected into the gas stream while propane and butane would be exported out of the region via small-scale projects. C5+ could be railed to diluent pipelines.

It is expected that by 2018, NGL supplies from the Marcellus and Utica shales will exceed local demand and takeaway capacity by 348,000 barrels per day (bbl/d), including 182,000 bbl/d of ethane, 101,000 bbl/d of propane and 64,000 bbl/d of butane. This will require new ca-

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HIGHLIGHTS FROM TODAY'S EDITION



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Moving In Circles

Despite volatility throughout the year, NGL prices are at similar levels to last year.

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NGL PRICES & FRAC SPREAD | Week in Review

NGL Prices Returning To Last Year's Levels

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

There has been a great deal of volatility in NGL prices throughout the past 12 months, but in many cases the trail for prices has been a circular one. The market has experienced price spikes and crashes, but compared to this time last year, most NGL prices are at the same level.

While there is something to be said for the shoulder season providing a regular decrease in prices as demand dips, this doesn't explain why prices the week of April 17, 2013, were markedly different than prices the week of April 18, 2012.

Instead what the market movements indicate is that NGL prices may spike during high short-term weather-related demand

CURRENT FRAC SPREAD (CENTS/GAL)				
April 28, 2014	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	25.50		29.93	
Shrink	30.43		31.16	
Margin	-4.93	3.98%	-1.23	-32.12%
Propane	111.93		112.25	
Shrink	42.04		43.05	
Margin	69.89	-3.44%	69.20	-0.34%
Normal Butane	124.48		127.30	
Shrink	47.60		48.74	
Margin	76.88	1.85%	78.56	1.84%
Isobutane	179.75		131.50	
Shrink	45.72		46.81	
Margin	134.03	12.56%	84.69	-1.00%
Pentane+	230.40		228.88	
Shrink	50.90		52.12	
Margin	179.50	-0.94%	176.76	-0.96%
NGL \$/Bbl	44.49	1.24%	43.70	0.61%
Shrink	16.77		17.17	
Margin	27.72	0.38%	26.53	-0.52%
Gas (\$/mmBtu)	4.59	2.68%	4.70	2.40%
Gross Bbl Margin (in cents/gal)	63.01	0.19%	60.88	-0.53%
NGL Value in \$/mmBtu (Basket Value)				
Ethane	1.40	4.08%	1.65	1.46%
Propane	3.89	-1.23%	3.90	0.69%
Normal Butane	1.34	2.17%	1.37	2.05%
Isobutane	1.12	9.87%	0.82	0.18%
Pentane+	2.97	-0.16%	2.95	-0.22%
Total Barrel Value in \$/mmbtu	10.72	1.24%	10.69	0.69%
Margin	6.13	0.18%	5.99	-0.61%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
April 16 - 22, '14	29.93	112.25	127.30	131.50	228.88	\$43.70
April 9 - 15, '14	29.50	111.48	124.74	131.26	229.38	\$43.44
April 2 - 8, '14	29.46	108.40	123.56	129.10	222.10	\$42.45
March 26 - April 1, '14	29.36	105.98	123.98	128.56	221.78	\$42.13
March '14	30.89	106.20	124.77	129.25	218.19	\$42.21
February '14	38.25	143.12	139.85	143.10	210.70	\$48.38
1st Qtr '14	34.50	129.51	137.62	141.49	212.60	\$46.16
4th Qtr '13	26.76	119.81	142.56	145.02	210.66	\$44.03
3rd Qtr '13	24.87	102.65	132.06	134.86	215.56	\$41.21
2nd Qtr '13	27.12	91.38	124.01	127.46	204.12	\$38.82
April 17 - 23, '13	28.24	94.72	127.30	131.42	198.00	\$39.25
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
April 16 - 22, '14	25.50	111.93	124.48	179.75	230.40	\$44.49
April 9 - 15, '14	24.50	113.32	121.84	163.60	230.78	\$43.94
April 2 - 8, '14	27.17	108.72	120.02	157.58	226.50	\$43.29
March 26 - April 1, '14	31.25	103.90	120.12	146.06	234.60	\$43.63
March '14	32.20	107.10	119.02	136.50	225.70	\$43.25
February '14	25.76	160.37	130.93	150.07	216.97	\$48.92
1st Qtr '14	25.46	169.48	132.08	147.10	216.86	\$49.93
4th Qtr '13	20.19	122.54	144.49	147.58	205.01	\$43.33
3rd Qtr '13	20.80	99.22	129.23	142.77	209.94	\$40.07
2nd Qtr '13	20.71	85.37	116.50	123.91	204.86	\$36.89
April 17 - 23, '13	18.68	86.52	119.04	120.00	217.30	\$37.57

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

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

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

periods, but they will fall back to previous levels when this peak demand retreats.

The NGL that had the greatest rise and fall in price this year has been propane, which rose to nearly \$4.00 per gallon (/gal) at Conway and more than \$1.60/gal at Mont Belvieu in late January before falling to its current level of \$1.12/gal at both hubs.

This is just slightly below the \$1.20/gal average that propane was trading at in late November, just before winter heating demand began to kick in throughout much of the country. Propane has benefitted from increased demand centers as LPG export capacity has increased in the past year, which has provided it a significant uplift from prices last year at the same time.

NGL PRICES & FRAC SPREAD | Week in Review

The same can't be said, at least not yet, for ethane. While Enterprise Products Partners announced plans on April 22 to build an ethane export terminal along the Gulf Coast and Sunoco Logistics is operating its Mariner East terminal along the East Coast, there isn't enough export capacity at this time to make much of a dent in the ethane storage overhang.

As a result, there hasn't been significant price movement for ethane year-on-year. The Mont Belvieu price was 30 cents/gal at Mont Belvieu the week of April 16, 2014, compared to 28 cents/gal last year at the same time. The Conway price was 26 cents/gal the week of April 16, 2014, compared to 19 cents/gal the previous year at the same time. Similar to propane, ethane experienced sizable price growth in the winter as prices rose to 40 cents/gal at Mont Belvieu and 35 cents/gal at Conway in February. These increases were tied to ethane's close relationship with propane and the cracker turnarounds. These prices helped to push margins to a sustained positive state for the first time in more than a year, but they have been unable to sustain this growth.

Butane prices have remained at similar levels at both hubs year-on-year as has Mont Belvieu isobutane, but Conway isobutane prices have increased considerably at the same time due to refinery turn-

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / April 24, 2014	
Gas Hub Name	Current Price
Carthage, TX	4.72
Katy Hub, TX	4.77
Waha Hub, TX	4.73
Henry Hub, LA	4.81
Perryville, LA	4.69
Houston Ship Channel	4.78
Opal Hub, Wyo.	4.63
Blance Hub, NM	4.70
Cheyenne Hub, Wyo.	4.63
Chicago Hub	4.80
Ellisburg NE Hub	4.03
New York Hub	4.07
AECO, Alberta	4.44

Source: Bloomberg

the week of April 16, 2014, from \$1.19/gal last year at the same time. Isobutane at Conway increased to \$1.80/gal the week of April 16, 2014, compared to \$1.20/gal last year.

Pentanes-plus prices experienced steady gains at both hubs on a year-on-year basis due to improved crude oil prices. The Mont

arounds and shortages at the hub. It is therefore likely that this increase is an anomaly. Butane and isobutane prices traded at similar values between the two hubs for much of the past 12 months.

Mont Belvieu butane and isobutane prices were nearly identical on a year-on-year basis with butane trading at \$1.27/gal for the week of April 16, 2014, and the same time last year while isobutane was nearly identical at \$1.32/gal the week of April 16, 2014, compared to \$1.31/gal last year. Conway butane prices rose to \$1.25/gal

RESIN PRICES – MARKET UPDATE – APRIL 24, 2014					
TOTAL OFFERS: 22,907,100 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Inj	5,739,224	0.7	0.76	0.69	0.73
PP Homopolymer - Inj	4,001,980	0.78	0.82	0.76	0.8
LDPE - Film	3,176,692	0.725	0.85	0.74	0.78
HDPE - Blow Mold	3,141,428	0.715	0.76	0.69	0.73
PP Copolymer - Inj	2,482,784	0.725	0.81	0.77	0.81
LLDPE - Film	1,539,036	0.75	0.795	0.7	0.74
HMWPE - Film	1,031,380	0.76	0.815	0.72	0.76
LLDPE - Inj	899,104	0.77	0.81	0.705	0.745
LDPE - Inj	895,472	0.735	0.8	0.725	0.765

Source: Plastics Exchange – www.theplasticsexchange.com

Belvieu price rose to \$2.29/gal from \$1.98/gal last year at the same time while the Conway price increased to \$2.30/gal from \$2.17/gal last year.

Overall the NGL barrel (bbl) price rose 1% at both hubs the week of April 16 from the previous week with the Mont Belvieu price improving to \$43.70/bbl with a 1% drop in margin to \$26.53/bbl. The Conway price increased to \$44.49/bbl with a slight gain in margin to \$27.72/bbl.

The most profitable NGL to make at both hubs was C₅₊ at \$1.80/gal at Conway and \$1.77/gal at Mont Belvieu. This was followed, in order, by isobutane at \$1.34/gal at Conway and 85 cents/gal at Mont Belvieu; butane at 77 cents/gal at Conway and 79 cents/gal at Mont Belvieu; propane at 70 cents/gal at Conway and 69 cents/gal at Mont Belvieu; and ethane at negative 5 cents/gal at Conway and negative 1 cent/gal at Mont Belvieu.

Natural gas storage levels continue to struggle to reload this injection season as the Energy Information Administration reported an increase of 49 billion cubic feet (Bcf) the week of April 18, the most recent data available. This brought the storage level to 899 Bcf from 850 Bcf the previous week with the largest injection coming from producing regions at 22 Bcf. The storage level is 48% lower than the 1.73 trillion cubic feet (Tcf) posted last year at the same time and 53% lower than the five-year average of 1.907 Tcf.

Cooling demand should remain limited the week of April 30, which should help natural gas injections increase. According to the National Weather Service's forecast for the week, the bulk of the country (the East Coast, Midwest, Rockies and parts of the Southwest) is expected to experience cooler-than-normal temperatures.

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Sources: Shell Moving Ahead With Pennsylvania Ethane Cracker

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

After officials at Royal Dutch Shell announced plans in March to pull back on infrastructure projects in North America, there were some questions over what this meant for the company's proposed world-scale ethane cracker that would be built outside of Pittsburgh, Pa. The answer appears to be that the project is still moving forward.

Sources have informed *Midstream Business* that Shell will be moving ahead with the project and is expected to submit an environmental study shortly. Unless there are issues with this study, a formal announcement is expected from Shell for the go-ahead on the \$2.5 billion cracker before the end of this year.

It is also expected that the project will include a polyethylene option with the company working to secure supplies of ethane. Interestingly, it appears that while the investment is being made in North America, the company views it more as an international investment as it will potentially have access to export markets via Sunoco Logistics' Mariner East ethane export terminal as well as Enterprise Products Partners' recently-announced ethane export along the Gulf Coast via the ATEX Pipeline.

Earlier this month, Shell contracted with the Linde Group for 10 years to build cracking units on a global basis, which will include the proposed Pennsylvania cracker should the project move forward.

When asked to comment, a Shell spokesperson told *Midstream Business* that the company is in the FEED phase of the project and continues to evaluate the proposed facility. "A number of steps remain before Shell will be in a position to make a final investment decision," the spokesperson said.



Enterprise Products Announces Plans For Ethane Export Facility

Enterprise Products Partners LP announced April 22 that it will build a fully refrigerated ethane export facility on the Texas Gulf Coast. The facility's design will give it an aggregate loading rate of up to 240,000 barrels per day (bbl/d), and it is expected to begin operations in third-quarter 2016. The facility will be integrated with Enterprise's Mont Belvieu, Texas, complex, which is connected to growing ethane supplies from the Marcellus and Utica shales and includes over 650 million barrels per day (MMbbl/d) of NGL fractionation capacity and 100 million bbl of NGL storage capacity.

Michael A. Creel, CEO of Enterprise's general partner, said, "We estimate U.S. ethane production capacity currently exceeds U.S. demand by 300 MMbbl/d and could exceed demand by up to 700 MMbbl/d by 2020, after considering the estimated incremental demand from new ethylene facilities that have been announced. By providing new markets access to ethane, we are assisting U.S. producers to increase their production, which assures the U.S. will have access to abundant supplies of domestically produced natural gas and crude oil."

Though this is big news, there is still some way to go before this project comes to fruition. Tudor, Pickering, Holt & Co. analysts stated in a research note that the facility still requires support from producers via long-term contracts to proceed.

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“We’ve been long-time skeptics of ethane exports due to the lack of an ethane-capable fleet and higher refrigeration costs make it a harder sell vs. tried-and-true LPG exports. That said, Enterprise proved us wrong with a big facility [announcement]. On the other hand, the dock isn’t fully subscribed; even if it was, the U.S. is long on ethane through 2020 and ethane will remain gas-linked. Finding E&Ps to lock in the current gas/ethane price for the next 10+ years is hard, but finding foreign petrochemical [manufacturers] willing to spend \$1 billion on ethane conversion [construction] is harder, so we’re not sold that it will run full by a 2016 startup, at least not yet,” the firm said in the research note.

ConocoPhillips To Resume LNG Exports From Kenai

ConocoPhillips Alaska Natural Gas Corp. has been authorized by the U.S. Department of Energy to export LNG for two years to Free Trade Agreement (FTA) and non-FTA countries. ConocoPhillips received approval for export to FTA countries on Feb. 19 and for non-FTA countries on April 14. The company plans to resume exports this spring.

ConocoPhillips suspended export of LNG in September 2013, when the state of Alaska requested that it apply for LNG export authorizations. The state sought to provide additional market opportunity to Cook Inlet natural gas production, because Southcentral utilities have their natural gas needs under contract. ConocoPhillips had said previously that it would consider seeking a new export authorization if Cook Inlet gas needs were met and there was surplus gas available for export.

During 2013, local utilities contracted to secure their gas supply needs through at least the first quarter of 2018. The Cook Inlet area gas supply forecast has also increased, and LNG exports will provide a market opportunity for Cook Inlet gas production that exceeds local demand. The excess supply led ConocoPhillips to seek export authorization in December 2013.

Natural Gas Heats Up Kinder Morgan Earnings

BY **DEON DAUGHERTY** | ASSOCIATE EDITOR, MIDSTREAM BUSINESS

Moving roughly one-third of the natural gas in the U.S.—and setting an all-time record average of 33 billion cubic feet per day in January—demand for natural gas buoyed Kinder Morgan Inc. earnings during the first-quarter 2014.

The company—general partner in its MLP, Kinder Morgan Partners—reported available cash of \$573 million, a 12% increase from last year. The firm increased its dividend by 11%, year-over-year, to 42 cents per share. The partnership’s distributable cash reached \$693 million, a 26% increase from the same period in 2013. Its distribution grew 6% to \$1.38 per unit for the quarter.

CEO Rich Kinder said during a conference call with analysts that the company has several opportunities to grow across its business segments, and the “supply demand equation for natural gas” has solid upside. He explained that when the company acquired El Paso Corp., leaders believed there would be a “tremendous need for capacity to transport natural gas around the country as both the demand and supply side grew.”

As such, Kinder noted that since December of last year, the partnership has executed long-term binding contracts with an average life of about 15 years on the Tennessee system and the El Paso natural gas system in the West. In addition, the KMP has executed a long-term contract to supply another Gulf Coast LNG terminal once final FERC approval is made. Plus, Kinder has had three non-binding open seasons—each of which Kinder said were vastly oversubscribed.

“All in all, we see all of these events and the national statistics, for that matter, as a very positive trend that will drive growth at Kinder Morgan in the years to come,” he said.

Analysts agree the MLP partnership is well-positioned to capitalize on natural gas. At Tudor, Pickering, Holt & Co., analysts said in a note to investors that the MLP has found two macro seams to mine profitably for the next several years: Northeast gas reversals and exports to Mexico.

At Simmons & Co. International, analysts said Kinder Morgan’s operations “are well-diversified across several different business lines and geography.”

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“The partnership is in a very strong position to transport natural gas emanating from the Marcellus and Utica plays to markets in the Northeast, New England and Southeast utilizing its Tennessee Gas Pipeline,” Simmons & Co. International said in a recent note to investors. “Additionally, we think the partnership is in a good position to benefit from increasing exports of U.S. natural gas to Mexico with its Sierrita Lateral pipeline project that is expected to go into service in late 2014.”

Rail Remains At Forefront Of Crude Transportation

BY MARY HOGAN | HART ENERGY

With the American energy renaissance fully underway, rail plays an ever more crucial role in helping develop plays like the Bakken and Niobrara, according to Tom Williams, vice president of escrow product sales for BNSF Railway.

“Now we understand very well the role of rail in this American energy renaissance. And we at BNSF take this responsibility very seriously, and that’s what I’d like to focus on today: the role of rail, specifically the role BNSF is playing in transporting domestic crude production to the refinery markets,” Williams said at Hart Energy’s recent DUG Bakken and Niobrara conference.

Since the earliest days of oil production, rail has been at the forefront of crude transport, but the modern-day crude-by-rail model started precisely at 11:45 p.m. on Dec. 31, 2009, when EOG moved the first train out of its terminal in Stanley, N.D. The move came after about a year of planning and development.

“After that first train, it took a little while before the model took off,” Williams said. “But in 2011 we opened three new terminals on our network, followed by six more in 2012 and another in 2013. This development continues in 2014 and beyond.” These terminals have a collective capacity of more than 1 million barrels per day (MMbbl/d).

The Niobrara is a more recent development in terms of crude by rail, with the first facility opened in first-quarter 2013 in Upton, Wyo., followed by four more and with several more set to open this year. “Currently, we’re shipping from seven unit train facilities in Wyoming and Colorado,” Williams said. “Two additional are scheduled to be open this year. And combined, these nine facilities will have a loading capacity of [more than] 300,000 bbl/d.”

Since that first train in 2009, crude by rail has seen unprecedented growth in capacity. “There was slow startup through 2010, but by the end of 2010 we were moving more than 120,000 bbl/d,” Williams said.



“By the end of 2011, with four unit train facilities, we ramped up to 500,000 bbl/d.” As of year-end 2013, BNSF is handling 700,000 bbl/d.

“In February, we reached a milestone,” he added. “We shipped our 5,000th unit train of crude oil out of the Bakken, which equates to about 350 MMbbl moved by rail on our network since the inception of the program. And we forecast strong demand into the future.”

To accommodate the growth, BNSF has made significant investments in its network. Having invested \$4 billion last year, the company is increasing that figure by 25% to \$5 billion. “The largest component of the capital plan is \$2.3 billion that will be spent on our core network, benefiting all of our customers including the shale plays along our network,” Williams said. “We’ll invest [more than] \$500 million on line capacity initiatives.”

On the human-factor side, BNSF has installed positive train control (PTC)—a predictive advanced safety technology—across more than 7,900 miles of track in 20 states. The Rail Safety Improvement Act of 2008 subsequently mandated PTC implementation by 2015.

Pertaining to the equipment side, the company has a proactive network of rail detection devices that monitors wheel impacts and worn wheel bearings and determines temperature and acoustic responses. On the tracking side, BNSF inspects key routes four times per week—more than twice the inspection frequency required by the Federal Railroad Administration—along with inspecting its busiest main lines daily, Williams said.

The company’s focus on safety includes first responder training, with a team of about 220 emergency responders in place at more than 55 locations across its network. Geographical response plans also are in place for sensitive areas, and a geographic information system helps ensure personnel and emergency responders have all of the relevant information about containing an incident at their fingertips.

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Anti-Flaring Rule Could Make Bakken A Natural Gas Powerhouse

BY CAROLINE EVANS | HART ENERGY

The Bakken Shale has for several years been a stronghold of crude oil, rocketing North Dakota to second place in the rankings of the oil-producing states. Now, the Bakken could add to the already accelerating growth of U.S. natural gas production, according to a recent report from Barclays Commodities Research.

The report cites a new rule in North Dakota that requires producers to cut natural gas flaring to 95% by 2020. In January, North Dakota captured only 64% of natural gas associated with crude oil production.

The report expects the newly captured volumes to result in greater gas output as midstream infrastructure catches up with the rapidly growing play.

“If gas output were to remain at January 2014 levels for the rest of the year, and the share of captured gas were to rise from 64% to 75%, the output boost would amount to 140 MMcf/d [million cubic feet per day],” according to the report. “Assuming that production growth matches last year’s pace in 2014, but captured volumes rise to 75% over the course of the year, the state’s natural gas output could rise 250 MMcf/d year-over-year in 2014. Similar production growth and a further increase of captured volumes to 85% would yield y/y production growth of 330 MMcf/d for 2015.”

Transport Canada Requires New Crude-By-Rail Standards

In a press conference on April 23, Canada’s Minister of Transport Lisa Raitt announced immediate action to address recommendations from the Transportation Safety Board of Canada in the wake of the Lac-Mégantic train derailment. Transport Canada will immediately:

- Issue a Protective Direction removing the least crash-resistant DOT-111 tank cars from dangerous goods service;

- Require DOT-111 tank cars used to transport crude oil and ethanol that do not meet the standard requirements of thicker steel construction, additional top fitting and head-shield protection, or any other future standard, to be phased out or refitted within three years;
- Issue a Protective Direction requiring Emergency Response Assistance Plans for crude oil, gasoline, diesel, aviation fuel, and ethanol;
- Create a task force that brings stakeholders such as municipalities, first responders, railways and shippers together to strengthen emergency response capacity across the country; and
- Issue an Emergency Directive requiring railway companies to reduce the speed of trains carrying dangerous goods and implement other key operating practices.

Railway companies are also ordered to formulate rules promoting the safe operation of trains carrying certain dangerous goods and submit them to Transport Canada for approval.

“As the Minister responsible for Canada’s transportation system, I am committed to making our country a model of world class safety. The measures I am announcing today improve the safety of the railway and transportation of dangerous goods systems from coast to coast to coast,” Raitt said.

Navigator Holdings To Build Three New Ethylene And Ethane Carriers

Navigator Holdings Ltd. announced April 23 that it exercised its option to build three, 35,000-cubic meter ethylene/ethane capable semi-refrigerated liquefied gas carriers. Another vessel of the same size is already under construction. The three carriers will be built at the Jiangnan Shipyard in China for \$78.4 million each.

The carriers are specifically designed to export the expected surplus of ethane that is becoming available from U.S. shale gas production. In addition to ethylene and ethane, the vessels will have the capability to transport liquefied gases, including propane and butane, and petrochemicals. Navigator has 13 carriers in its newbuilding program, with four scheduled for delivery in late 2014, another four in 2015 and five in 2016.

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Alaska Passes Bill To Become An Owner In LNG Project

The Alaska Legislature passed Senate Bill 138 on April 20. The bill advances a large-diameter Alaska natural gas pipeline project, with Alaska as a partial owner, and empowers the Alaska Gasline Development Corp. (AGDC) to carry the state's equity interest in the project's infrastructure, especially the liquefaction and marine facilities.

The project will now enter the Pre-FEED phase to refine the cost and engineering aspects of the project. The phase is expected to last 12 to 18 months and cost about \$500 million. The cost will be shared among the parties, with Alaska's portion estimated at between \$70 million and \$90 million. While the Alaska LNG Project advances, Senate Bill 138 authorizes AGDC to pursue the advancement of the Alaska Stand Alone Pipeline to provide gas to state residents.

TransCanada CEO: New Keystone Delay Is Inexplicable

Russ Girling, the president and CEO of TransCanada Corp., released a statement on April 20 expressing frustration with another process delay announced by the U.S. Department of State regarding the permitting process for Keystone XL. The State Department said that it will extend the period during which eight federal agencies will submit their views on the project to aid the department's assessment of the National Interest Determination. The department had originally asked for those submissions by early May, but extended the period to consider the potential impact of the Nebraska Supreme Court case on the pipeline route.

Of the State Department's decision, Girling said, "Another delay is inexplicable. The first leg of our Keystone pipeline began shipping oil to refineries outside St. Louis in 2010. It is about the same length of pipe as Keystone XL, carries the same oil and crosses the 49th parallel. It took just 21 months to study and approve. After more than 2,000 days, five exhaustive environmental reviews and over 17,000 pages of scientific data Keystone XL continues to languish ... Our view remains that the current 90-day National Interest Determination process that is now underway should not be impacted by the Nebraska lower court ruling since the approved re-route remains valid during appeal."

ONEOK Partners Completes \$1B In Capital-Growth Projects

ONEOK Partners LP announced on April 21 that three natural gas gathering and processing and NGL projects in their planned \$6 billion to \$6.4 billion capital-growth program through 2016 have been completed. The three projects are estimated at about \$1 billion and include the Sterling III Pipeline, the Canadian Valley natural gas processing facility in the Cana-Woodford Shale and an ethane/propane splitter at the company's Mont Belvieu, Texas, NGL storage facility.

The Sterling III Pipeline has a transport capacity of 193,000 barrels per day (bbl/d) of either unfractionated NGL or NGL purity products and connects ONEOK Partner's NGL infrastructure at Medford, Okla., to its storage and fractionation facility at Mont Belvieu. The Sterling I and II pipelines are also being reconfigured to transport either unfractionated NGL or NGL purity products. The Sterling III Pipeline traverses the Woodford Shale and provides NGL transportation capacity from the Cana-Woodford Shale and Granite Wash. The total cost for the Sterling III construction and the reconfiguration of the Sterling I and II pipelines is about \$760 million to \$790 million.

The Canadian Valley plant in the Cana-Woodford Shale will add 200 million cubic feet per day (MMcf/d) to the partnership's NGL processing capacity in Oklahoma, increasing production to about 700 MMcf/d. The Canadian Valley plant is ONEOK's largest NGL processing facility in Oklahoma and cost about \$340 million to \$360 million. The completed \$46 million ethane/propane splitter in Mont Belvieu has a production capacity of 40,000 bbl/d, producing 32,000 bbl/d of purity ethane and 8,000 bbl/d of propane.

Canadian Regulators Approve LNG Export License

The joint-venture Triton LNG project submitted by Triton LNG LP, formed by AltaGas Ltd. and Japan-based Idemitsu Kosan Co., was approved by regulators from Canada's National Energy Board on April 16. The approval grants Triton a 25-year export license for LNG from a proposed export point near either Kitimat or Prince Rupert, British Columbia.

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The Triton Project expects to process and ship about 325 million cubic feet per day from a planned floating LNG facility. The facility's site has not yet been determined.

Western Refining To Construct New Delaware Basin Pipeline

On April 17, Western Refining Inc. announced construction plans for an additional pipeline in the Delaware Basin, originating near Western Refining Logistics LP's Mason Station crude oil gathering facility in Reeves County, Texas, and terminating at a new crude oil gathering facility at Wink Station in Winkler County, Texas.

The pipeline will be about 40 miles long and able to receive and transport up to 125,000 barrels per day of light crude oil and condensate for delivery to common carrier pipelines at Wink, Texas. The pipeline is expected to enter service by mid-2015.

Opal Plant Explosion Cuts Pipe Flows, Town Evacuated

BLOOMBERG

The Williams Cos. halted natural gas supplies to interstate pipelines from its Opal gas processing plant in southwestern Wyoming, a major processing point and pricing hub for the fuel in the western U.S., after an explosion that triggered a town-wide evacuation. It was the second plant fire in less than a month along Williams' Northwest Pipeline system. Earlier, an explosion and fire occurred at the system's LNG storage facility outside Kennewick, Wash.

Natural gas gathering from surrounding areas stopped after the blast, which occurred April 23, Williams said in a statement. No injuries were reported and an investigation into the cause of the incident will start when it's safe to return to the plant, which was recently processing about 1 billion cubic feet per day (Bcf/d) of gas, according to the company. The nearby town of fewer than 100 residents was evacuated as a precaution, a Lincoln County, Wyo., official said.

The outage threatens to trap supplies from the Rocky Mountains at the gas hub, where interstate pipelines operated by Williams, Questar Corp., Kern River Gas Transmission Co. and Colorado Interstate Gas Co. LLC meet. A prolonged disruption may boost spot prices at other supply centers for the western U.S., including the Waha Hub in Texas.

"We might see a few-cents blip on gas at the Henry Hub" in Louisiana, the delivery point for futures traded on the New York Mercantile Exchange, said James Williams, president of WTRG Economics, an energy consultant in London, Arkansas. "Gas out of West Texas should also get a little bump for a while until this is resolved."

Natural gas for May delivery rose as much as 6.7 cents, or 1.4%, to \$4.783 per million British thermal units (MMBtu) in electronic trading on Nymex Thursday morning. Spot prices at Opal rose 6 cents to \$4.6288/MMBtu yesterday, while Waha supplies gained 5 cents to \$4.67, data compiled by Bloomberg show.

The explosion affected cryogenic processing unit TXP-3, one of five at the facility, which has a maximum capacity of 1.5 Bcf/d, the company said in the statement. The town of Opal was evacuated in case the fire at the complex spread and created a smoke plume, Stephen Malik, a Lincoln County spokesman based in Afton, Wyoming, said by telephone. Kern River notified shippers yesterday that Williams had cut volumes and would reduce flows to zero. The line operator extended its nomination deadline to allow its customers time to find replacement supplies.

RiverRock Energy Receives \$125 Million Equity Commitment

RiverRock Energy LLC received an initial equity commitment of \$125 million from private equity firm EnCap Flatrock Midstream. RiverRock will provide infrastructure for condensate, fresh and produced water and NGL and natural gas.

The company said it is pursuing greenfield and acquisition opportunities in emerging resource plays and other basins experiencing rapid growth. RiverRock will also provide crude oil logistics services to gather, store and transport crude oil by pipeline and rail.

SNAPSHOT | Industry Insight

IEA Trims 2014 Global Oil Demand Growth Forecast

BY JACK PECKHAM | HART ENERGY

The International Energy Agency (IEA) announced in its latest monthly Oil Market Report (released April 11) that it has trimmed slightly its 2014 global oil-demand forecast to 92.7 million barrels per day (MMbbl/d)—still up 1.3 MMbbl/d year-on-year—“reflecting downward adjustments to the projection of Russian demand.”

However, according to the IEA, “the absolute demand estimate remains roughly unchanged, as upward revisions to baseline non-OECD Asian demand counterbalance lower Russian growth.”

Meanwhile, global refinery crude demand is set to drop by 2.0 million bbl/d from February through April because of planned maintenance in the Atlantic basin and the Pacific, according to the IEA.

Global refinery crude throughputs are set to average 75.9 MMbbl/d in second-quarter 2014, down from 76.4 MMbbl/d in the first quarter of 2014, but up 0.9 MMbbl/d year-on-year because of “higher runs in the U.S., Russia and the Middle East,” according to the IEA.

Meanwhile, global supplies in March 2014 fell by 1.2 MMbbl/d to 91.75 MMbbl/d, compared to February 2014. A decline in OPEC crude output accounted for nearly 75% of the loss, according to the IEA.

“Compared with a year ago, global production in March was still around 1.1 MMbbl/d higher, with higher non-OPEC supply of 1.98 MMbbl/d more than offsetting a decline of nearly 1 MMbbl/d in OPEC crude output,” according to the IEA.

OECD demand trends

According to the IEA, February OECD petroleum product delivery data “suggest a continuation of the [demand] decline that resumed in January [2014].”

Besides the “macroeconomic challenges still facing many OECD economies,” exceptionally cold weather in the OECD Americas region “curtailed travel and disrupted industrial activity, resulting in an estimated year-on-year decline of 1.4% in regional deliveries, to 23.5 million b/d,” according to the IEA.

On the other hand, “exceptionally mild weather” in OECD Europe and South Korea “suppressed demand” as OECD Europe saw a 0.6% drop year-on-year in petroleum deliveries, led by the “other gasoil” (mainly heating oil) category, according to the IEA.



Meanwhile, OECD Asia Oceania demand for gasoline, residual fuel oil and jet/kerosene segments showed “steep declines” while the relatively low winter heating requirement in OECD Asia Oceania also curbed kerosene demand, according to the IEA.

Non-OECD: Diesel demand-growth slips

As for countries outside the OECD, petroleum demand in first-quarter 2014 “accelerated once more having struggled in fourth-quarter 2013 as sharp currency depreciations in many countries made products more expensive,” according to the IEA.

“The most notable first-quarter 2014 accelerations were seen in the Middle East, Latin America and non-OECD Asia, offsetting modest forecast decelerations in Africa, the former Soviet Union and non-OECD Europe,” according to the IEA.

“Overall, the greatest upside is observed in the LPG, jet/kerosene and ‘other products’ categories.”

China: A “slowdown” in oil demand growth that emerged in mid-2013 “has continued in line with the underlying macroeconomic trend,” according to the IEA.

“Demand for industrial fuels (including gasoil/diesel, residual fuel oil and naphtha) has been particularly soft. Following a contraction of 1.0% in fourth-quarter 2013, Chinese oil deliveries are projected to rebound by just 1.8% for first-quarter 2014, in sharp contrast with average growth of roughly 7% per annum in the four years previous,” according to the IEA.

Meanwhile, the “closely tracked” HSBC/Markit Chinese Manufacturing Purchasing Managers’ Index (PMI) returned to “contracting” territory in January 2014 “and has since deteriorated in each month through March,” according to the IEA.

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LEAD STORY | From The Front

Continued from **Page 1** capacity to be brought online to keep the Northeast in balance.

“Currently, there are seven proposed projects jockeying for customer commitments to solve the anticipated NGL oversupply situation in the Northeast. The most logical solution is to transport ethane to the Gulf Coast to satisfy incremental petrochemical demand from new crackers assuming ethane prices ultimately recover, in our view,” according to the report.

Projects that have been proposed to alleviate the potential oversupply situation in the future include the Bluegrass Pipeline joint venture from Boardwalk Pipeline Partners and Williams Cos. Inc. that would transport 200,000 bbl/d of NGL from the Marcellus and Utica shales to the Gulf Coast. The companies also announced plans to build fractionation and storage facilities in Louisiana that would connect to petrochemical facilities along the Gulf Coast as well as to the proposed Moss Lake LPG Terminal in Louisiana. This project is expected to be placed into service in mid- to late-2016 with a potential cost of \$5 billion to \$6 billion, according to the investment firm.

Another joint venture between Kinder Morgan Energy Partners and MarkWest Utica EMG is also considering building a 400 million cubic feet equivalent per day natural gas processing plant in Tuscarawas County, Ohio, along with a 200,000 bbl/d y-grade pipeline that would transport volumes from the plant to Mont Belvieu.

Kinder Morgan Energy Partners is also planning to build the 210-mile, 10-inch Utica To Ontario Pipeline Access (UTOPIA) pipeline after signing a letter of intent with NOVA Chemicals in December 2013. This NGL pipeline would originate in the Utica Shale and connect to Kinder Morgan’s Cochin pipeline to deliver volumes to petrochemical plants in Windsor, Ontario, Canada. The project is estimated to cost \$300 million and provide an initial capacity of 50,000 bbl/d that could be upgraded to 75,000 bbl/d with a mid-2017 startup date.

Sunoco Logistics is also planning the Mariner East II project that would involve the construction of a 300-400 mile pipeline that would transport ethane, propane and butane from Marcellus and Utica processing plants to its Marcus Hook complex. This would provide the flexibility for producers to transport propane to Northeast markets during heating season, provide supplies for butane blending into winter-grade gasoline or export to international markets. This project could be in-service by 2016 if sufficient commitments are obtained.

Additionally, Enterprise Products Partners held an open season to gauge shipper interest in adding propane service to the Appalachia To Texas (ATEX) pipeline. Should sufficient support be received, the company would loop out a portion of the system and increase pumping capacity to begin propane service in the first-quarter of 2015.

According to Wells Fargo Securities, there could be an additional 335,000 bbl/d of fractionation capacity constructed in the region based on the proposed projects. However, ethane extraction is likely to remain constrained through the end of 2016 as margins will remain challenging. “We estimate processors could generate a higher netback by leaving ethane in the natural gas stream, versus extracting the commodity and paying steep transportation and fractionation costs.” The exceptions to this rule would be producers that already contracted for capacity on Enterprise Products Partners’ ATEX pipeline or Sunoco Logistics’ Mariner East and West projects.

LPG exports have been the big NGL success story for the last 12 to 15 months, but the report anticipates Northeast propane supplies to exceed combined regional and export demand by 2016. By 2018, this oversupply could reach more than 100,000 bbl/d and require new takeaway capacity through new y-grade pipelines, export projects or adding propane service on the ATEX pipeline.

However, the NGL most at risk for low prices and demand without additional infrastructure build-out is butane, according to the report. “While normal butane supply could increase by 60,000-70,000 bbl/d over the next five years, demand is likely to remain essentially flat. We estimate that excess supply of normal butane could grow to almost 65,000 bbl/d by 2018.”

Possible solutions for the butane market also include a new y-grade pipeline as well as additional isomerization capacity to convert butane to isobutane or increased LPG export capacity out of the Northeast. The latter is the most pressing, according to Wells Fargo Securities, due to the sheer size of the potential oversupply.

The other two heavy NGL—*isobutane* and C_{5+} —should have adequate takeaway capacity to remain in balance. *Isobutane* produced out of the Marcellus and Utica shales should displace volumes currently supplied to Midwest refineries from the Midcontinent. *Pentanes-plus* (C_{5+}) is expected to be transported to the West Coast via truck, rail and possibly pipeline in order to meet diluent demand from Western Canadian oil sands production.

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