

## CERI NGL Outlook: Market Will Struggle

Delays in midstream infrastructure construction could lead to an unstable future

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

Production of gas and liquids has increased significantly in the past five years as production has shifted from conventional resources to unconventional resources, but production could be even greater except for delays in midstream infrastructure build out.

This new production isn't just providing vast increases in resources in North America, it is doing so at regions that have not traditionally been hotbeds for gas and liquids. Consequently, the need for new infrastructure is even greater as there isn't much for the midstream to work with in many shale plays.

In its *Natural Gas Liquids In North America: Overview And Outlook To 2035*, the Canadian Energy Research Institute (CERI) stated that although new wells can be brought online in a few weeks, infrastructure can take anywhere from one to three years to build.

The report stated that such construction delays have hampered production out of liquids-rich plays such as the Marcellus and Bakken. "The midstream business is playing catch-up to add sufficient gas processing plants, NGL pipelines and fractionation



facilities to keep up with liquids-rich gas additions," Carlos A. Murillo, the report's author, said.

He added that ethane and propane production is forecasted at high enough levels to warrant the continued expansion and construction of new ethane crackers, propane export facilities and fractionation units throughout North America.

According to the report, ethane production out of PADD I on the East Coast will reach as much as 150,000 barrels (bbl.) per day of ethane by 2015. This production will eventually grow to more than 250,000 bbl. per day in order to support the Mariner West export pipeline to Canada, pipelines to the Gulf Coast and at least one world-scale ethane cracker.

Continued on  
 Page 12

### HIGHLIGHTS FROM TODAY'S EDITION



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#### PROCESSING TRENDS

##### Regency Energy expands

The \$75 million facility expansion will increase processing capacity by 210 MMCF per day. **PAGE 5**

#### NGL PRICES & FRAC

##### NGL prices take dive

The Natural Gas Liquids market slowed a bit at both Conway & Mt. Belvieu hubs.

**PAGE 3**



#### SNAPSHOT

##### Energy demand slowing

U.S. power demand will grow by half of its normal growth rate in the next 20 years. **PAGE 11**

#### PIPELINES

##### Out for delivery

KMP to invest \$90 million in KMCC pipeline extension. **PAGE 7**

#### NEWS & TRENDS

##### New kid in town

New terminal provides industry with inbound gathering access. **PAGE 8**





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## NGL PRICES & FRAC SPREAD | Week in Review

# Ethane, Propane Prices Fall At Both Hubs

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

After experiencing healthy gains the previous two weeks, the natural gas liquids (NGL) market slowed a bit at both Conway and Mont Belvieu as prices settled. In particular, the light NGLs experienced the biggest setback after rapid increases in the early part of August.

Mont Belvieu propane had the largest drop of any NGL this week as it moved down 9% to 84¢ per gallon (/gal), its lowest price since the week of July 4 when it was 82¢/gal. This drop was a combination of the market rebalancing as well as high propane inventory levels and a slowing de-

CURRENT FRAC SPREAD (CENTS/GAL)				
August 31, 2012	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	19.04		31.27	
Shrink	17.37		17.64	
Margin	1.67	-25.23%	13.63	-9.09%
Propane	75.88		84.28	
Shrink	24.00		24.37	
Margin	51.88	-8.07%	59.91	-11.59%
Normal Butane	144.24		151.90	
Shrink	27.17		27.58	
Margin	117.07	4.34%	124.32	0.22%
Iso-Butane	196.45		169.76	
Shrink	26.10		26.49	
Margin	170.35	7.24%	143.27	2.63%
Pentane+	209.46		217.47	
Shrink	29.06		29.50	
Margin	180.40	3.84%	187.97	-0.38%
NGL \$/Bbl	39.19	0.12%	42.11	-3.24%
Shrink	9.57		9.72	
Margin	29.62	1.28%	32.40	-3.23%
Gas (\$/mmBtu)	2.62	-3.32%	2.66	-3.27%
Gross Bbl Margin (in cents/gal)	66.58	0.85%	73.71	-3.71%
NGL Value in \$/mmBtu				
Ethane	1.05	-5.74%	1.72	-5.90%
Propane	2.63	-6.62%	2.93	-9.34%
Normal Butane	1.56	2.81%	1.64	-0.43%
Iso-Butane	1.22	5.70%	1.06	1.66%
Pentane+	2.70	2.79%	2.80	-0.78%
Total Barrel Value in \$/mmbtu	9.16	-0.75%	10.15	-3.98%
Margin	6.54	0.32%	7.49	-4.23%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Aug. 22 - 28 '12	31.27	84.28	151.90	169.76	217.47	\$42.11
Aug. 15 - 21 '12	33.23	92.96	152.56	166.98	219.18	\$43.52
Aug. 8 - 14 '12	35.84	94.15	142.28	155.57	208.18	\$42.48
Aug. 1 - 7 '12	35.38	88.24	132.14	151.98	197.32	\$40.34
July '12	33.11	87.19	131.77	150.81	186.00	\$39.04
June '12	28.19	78.11	127.86	141.05	169.28	\$35.60
2nd Qtr '12	37.00	97.80	160.76	175.08	207.57	\$44.54
1st Qtr '12	53.93	125.90	192.36	204.32	238.95	\$55.05
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
Aug. 24 - 30, '11	68.78	154.14	189.36	208.14	233.78	\$60.30
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Aug. 22 - 28 '12	19.04	75.88	144.24	196.45	209.46	\$39.19
Aug. 15 - 21 '12	20.20	81.26	140.30	185.85	203.78	\$39.15
Aug. 8 - 14 '12	18.95	74.81	122.01	160.28	200.44	\$36.31
Aug. 1 - 7 '12	15.56	61.84	107.82	155.02	190.78	\$32.67
July '12	7.80	57.01	103.02	145.79	183.28	\$29.81
June '12	7.20	53.58	106.56	131.70	173.06	\$28.42
2nd Qtr '12	11.18	72.63	135.80	161.38	203.31	\$35.72
1st Qtr '12	26.93	103.34	168.65	184.75	227.16	\$45.92
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
Aug. 24 - 30, '11	36.32	144.76	161.44	190.00	204.20	\$50.59

(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

mand for exports. The Conway price had the second largest decrease of any NGL this week as it was down 7% from the previous week. The 76¢/gal price was the second highest at the hub in nearly four months.

Ethane price also dipped this week as the market was negatively affected by unscheduled maintenance at Chevron Phillips' Sweeney #33 ethylene plant. The facility was estimated to be cracking more than 30,000 barrels (bbl.) per day of ethane at the time it went down. The price fell 6% at both hubs

Continued on  
 Page 4



## NGL PRICES & FRAC SPREAD | Week in Review

Continued from  
Page 3

this week. The Mont Belvieu price of 31¢/gal was the lowest at the hub since the week of July 4 when it was 28¢/gal. However, the Conway price was the second highest at the hub in more than five months.

Light NGL margins took a downturn with prices, but it could have been worse as natural gas feedstock prices fell 3% at both hubs as the market had been prepared for a bigger storm and Hurricane Isaac was downgraded to a tropical storm when it made landfall earlier this week.

In addition, the natural gas storage injection was larger than in recent weeks as it increased 66 billion cubic feet to 3.374 trillion cubic feet (Tcf) from 3.308 Tcf according to the Energy Information Administration. This was 15% greater than the storage level of 2.945 Tcf reported last year at the same time and 12% greater than the five-year average of 3.013 Tcf.

“Last week’s much greater than expected storage injection has indicated to us that the market is looser than most market watchers believed, while recent coal displacement has not been large enough to lower weekly injection numbers sufficiently to put the market on a trajec-

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / August 30, 2012	
Gas Hub Name	Current Price
Carthage, TX	2.60
Katy Hub, TX	2.73
Waha Hub, TX	2.65
Henry Hub, LA	2.72
Perryville, LA	2.64
Houston Ship Channel	2.69
Agua Dulce TX	1.88
Opal Hub, Wyo.	2.60
Blance Hub, NM	2.58
Cheyenne Hub, Wyo.	2.54
Chicago Hub	2.72
Ellisburg NE Hub	2.92
New York Hub	2.78
AECO , Alberta	2.24

Source: Bloomberg

This was the highest price since it was also \$1.97/gal the week of March 7. The Mont Belvieu price increased 2% to \$1.70/gal from last week, its highest price since the week of May 23 when it was also \$1.70/gal.

The differential between butane and isobutane prices continued to widen despite increased demand for butane as refiners begin

tory for the sub-4 Tcf finish at the end of the injection season,” Barclays Capital said in their Gas and Power Kaleidoscope this week.

Heavy NGL prices were much more stable this week at both hubs despite a downward trend for crude prices. The biggest mover was Conway isobutane as it appears there is a supply shortage in the market that has caught traders short. The Conway price rose 6% to \$1.97/gal, significantly higher than the Mont Belvieu price.

RESIN PRICES – MARKET UPDATE – AUGUST 30, 2012					
TOTAL OFFERS: 11,400,456 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Blow Mold	1,955,668	0.65	0.68	0.65	0.69
LLDPE - Film	1,834,116	0.64	0.72	0.65	0.69
PP Copolymer - Inj	1,655,472	0.62	0.75	0.65	0.69
LDPE - Film	1,514,576	0.68	0.75	0.7	0.74
HMWPE - Film	1,071,840	0.68	0.7	0.67	0.71
LDPE - Inj	881,840	0.7	0.705	0.7	0.74
PP Homopolymer - Inj	749,564	0.66	0.68	0.63	0.67
HDPE - Inj	703,380	0.68	0.7	0.65	0.69
GPPS	380,000	0.93	0.93	0.87	0.92
HIPS	380,000	1.04	1.04	0.99	1.04
LLDPE - Inj	274,000	0.67	0.71	0.67	0.71

Source: Plastics Exchange – www.theplasticsexchange.com

to make winter-grade gasoline. In fact, the Mont Belvieu price dropped very slightly to \$1.52/gal. The Conway price moved in the opposite direction as it increased 3% to \$1.44/gal.

Pentanes-plus (C<sub>5+</sub>) prices also moved in opposite directions at the two hubs as the Mont Belvieu price decreased 1% to \$2.18/gal as it followed the same path as crude prices this week. The Conway price increased for the fourth straight week as it rose 3% to \$2.10/gal, its highest price since the first week of May when it was the same price.

The theoretical NGL barrel price increased very slightly at Conway to \$39.19 per barrel (/bbl) with a 1% gain in margin to \$29.62/ bbl despite a 25% drop in margin for ethane and an 8% drop in margin for propane. The Mont Belvieu theoretical barrel price dropped 3% to \$42.11/bbl with a 3% drop in margin to \$32.40/bbl.

The most profitable NGL to make at both hubs was C<sub>5+</sub> at \$1.80/gal at Conway and \$1.88/gal at Mont Belvieu. This was followed, in order, by isobutane at \$1.70/gal at Conway and \$1.43/gal at Mont Belvieu; butane at \$1.17/gal at Conway and \$1.24/gal at Mont Belvieu; propane at 52¢/gal at Conway and 60¢/gal at Mont Belvieu; and ethane at 2¢/gal at Conway and 14¢/gal at Mont Belvieu.

Cooling demand should remain strong in much of the country according to next week’s forecast from the National Weather Service. The forecast anticipates much hotter temperatures in much of the Western U.S., the Gulf Coast, Southeast and parts of the Northeast. Cooler than normal temperatures are expected in much of the Midwest and parts of the Tri-State region.

## PROCESSING TRENDS | An Inside Look

### Regency Energy Announces Expansion of Processing Facility

#### BUSINESS WIRE

Regency Energy Partners LP plans to expand its Dubach processing facility in North Louisiana, the company announced August 27. The Dubach Expansion will increase the processing capacity of the facility to 210 million cubic feet (MMcf) per day by adding an incremental 70 MMcf per day of cryogenic processing capacity and 20 MMcf per day of JT capacity.

“We have seen volumes at our Dubach facility continue to grow throughout the first half of 2012 due to increased drilling around our facilities,” Jim Holotik, Regency’s chief commercial officer, said in a company release. “This expansion will allow us to process new production from the area and provide more efficient liquids recovery across the facility.”

The \$75 million Dubach Expansion will also include the construction of high-pressure gathering lines to bring production to the facility. The project, which is expected to come online in the second quarter of 2013, is backed by fee-based contracts and an acreage dedication.

### Crestwood Completes Acquisition of Devon Assets

Crestwood Midstream Partners LP has completed the previously announced acquisition of gathering and processing assets from Devon Energy Corp. Total cash paid to Devon for the assets was \$87.1 million, which reflects a \$2.9 million reduction to the originally announced acquisition.

According to an August 27 company release, the acquired assets are located in the liquids-rich southwestern area of the Barnett Shale and include a 74-mile low-pressure rich natural gas gathering system, a cryogenic processing facility with capacity of 100 million cubic feet per day and 23,100 horsepower of compression equipment. As a part of the transaction, Crestwood and Devon entered into a 20-year fixed-fee gathering, processing and compression agreement covering existing and future production from an approximate 20,500-acre dedication.

### Gas-Directed Rig Count Shows Signs Of Bottoming Out

BY RICHARD MASON | HART ENERGY



**RIG COUNT** | Since 2009, the gas-directed rig count has decreased nearly 60%

The limb is a short one as far as predictions go, but the gas-directed rig count appears to have bottomed out.

Finally.

If so, it will mark the end of a yearlong trend that witnessed a 459-unit decline in rigs drilling for natural gas. The drop turns out to be 57% overall, which is close to the 60% decline in rig count in early 2009 on the heels of the financial crisis.

During that decline, rigs classified as drilling horizontally—consider these shale gas rigs—fell 315 units, or 56%. Conventional vertical gas rigs also experienced a 56% decline, shedding 64 rigs.

This time last year, rig count was on its way to the November 2011 peak. Since then, the trend line has been downward, thanks mostly to natural gas. The decline in gas-directed drilling reduced onshore rig count 9% over the last year.

The argument for the drop-off is deceptively simple: The number of rigs drilling for gas has been flat over the last five weeks.

A look at eight gas-weighted basins shows the type of difference a year makes. The Haynesville shale leads all others in shedding rigs, having dropped 56 units over the last year to 14 active currently.

Close behind is the Marcellus, which shed 43 rigs, and the Eagle Ford, which lost 41 rigs drilling gas-directed

Continued on  
Page 6

## PROCESSING TRENDS | An Inside Look

Continued from  
Page 5

targets. However, oil-directed and/or liquids rich drilling boosted overall Eagle Ford shale rig counts during the same period. The Barnett shale is also down 33 units targeting gas in the last year.

### Liquids Not-So Rich?

Over the past two years we've heard the building mantra of "liquids rich" as natural gas producers hawk the wet (and higher valued) by-products saturating their gas streams. This as the price of oil steadied above \$100 a barrel before slipping into the \$80s, and the price of natural gas sunk into the \$2 range, with gas liquids solidly in the middle.

Grinding gears, gas-weighted E&P companies redirected capex and acquisitions to these liquids-rich plays.

The liquids might include oil, condensate or natural gas liquids. However, it is the NGLs produced from an otherwise uneconomic gas well that lift that well over the bar. With a glut of shale gas flooding the market and dampening prices, natural gas liquids rose to the economic rescue.

That liquids-rich portfolio may be trending middle class.

Historically, these liquids plucked out of the methane gas stream priced at 55% to 70% of a barrel of black crude, providing nice value uplift to gas production. Not so much today: NGL prices have tumbled since the first of the year, dropping 11% in first-quarter 2012, and another 14% in the second quarter—to 43% of West Texas Intermediate. Such a price move sharply trims returns and cash flows of NGL-dependent producers, not to mention acquisition metrics.

"The NGL content of a well previously added \$2 to \$2.50 per thousand cubic feet (Mcf) realization, lowering the needed (methane) gas price to break even," according to Bob Brackett, senior analyst for Bernstein Research out of New York. However, "depressed NGL prices have since eroded this uplift by up to \$1." Brackett studied the trend in a June 20 report titled, "The Flood of NGLs from Wet Shale Gas."

Being liquids rich is all about the uplift.

The NGL basket is primarily comprised of ethane and propane, with ethane typically about half of the stream. As companies shift gas drilling to wetter fields, however, current downstream cracking capacity—i.e. demand—is not keeping up with production.

Ethane production alone grew 6% year-over-year in second-half 2011, and a full 10% in recent months. "NGL realizations relative to

crude are likely to stay depressed or fall further as oversupply threatens ethane prices," says Brackett.

An ethane barrel currently trades at around 14% of crude, down from a relative high of 50% toward the beginning of 2010.

Brackett sees NGL pricing relative to crude waning over the medium term, yet continuing to be a value-add. "Decreased ethane and propane prices make NGL economics 'less good,' but the gas-to-oil price differential still makes liquids-rich drilling much preferred to gas."

He warns investors, though, to distinguish between NGLs and oil. "To be sure, NGL-rich production is much preferred to dry gas, but likely a growing distinction between an E&P's 'black oil' vs. NGL volumes will continue to emerge."

The same logic applies to acquisitions. Deal metrics are definitely being impacted by both the decline in current NGL pricing and the uncertainty around future pricing, according to Rob Bilger, vice chairman, Macquarie Capital (USA) Inc.

"The combination of most buyers being reluctant to hedge non-producing volumes in an acquisition, and NGLs being more difficult to hedge long-term, increases the risk on future cash flows of these low-percentage PDP (proved developed producing) liquids-rich deals."

But a polar shift has not yet occurred in the acquisitions market, says Bilger. "Most of the core area 'liquids-rich' plays are still economically attractive and, thus, are still in high demand from buyers attempting to diversify their gas-dominated portfolios."

Going forward, Brackett says the NGL value addition can make or break a marginal liquids-rich well in areas such as the Barnett combo, Marcellus and non-oil portions of the Eagle Ford. "NGL realizations can swing gas break-even costs meaningfully." Likewise, as ethane and propane prices trend downward, barrels of NGLs begin to appear more and more gassy. "The loss of a meaningful portion of NGL uplift could make strained gassy financial statements look even worse."

On the upside, Brackett anticipates falling NGLs could revive gas. "While dry-gas activity is uneconomic at current prices, wet-gas plays are now proving to be the ones with marginal returns. Further downside in natural gas liquids pricing could push these wells below the economic threshold—and take associated gas production out of the market."

But for now, while natural gas liquids might have taken a haircut, liquids-rich gas still trumps liquids-poor.

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**PIPELINES & TECHNOLOGY** | Developments
 

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## Kinder Morgan, Phillips 66 Agree to Deliver Eagle Ford Crude

### BUSINESS WIRE

Kinder Morgan Energy Partners LP and Phillips 66 have entered into an agreement for Kinder Morgan to transport Eagle Ford crude and condensate to Phillips' Sweeny Refinery in Brazoria County, Texas, the company announced August 23.

Under the agreement, KMP plans to build a 27-mile, 12-inch diameter lateral pipeline to extend its Kinder Morgan Crude Condensate pipeline. Kinder Morgan will provide Phillips with a significant portion of the lateral pipeline's initial 30,000 barrels (bbl) per day of capacity, which is expandable to 100,000 bbl. per day.

According to a company announcement, KMP will invest approximately \$90 million in the project, which also involves adding associated receipt facilities by constructing a five-bay truck offloading facility and three new storage tanks with approximately 360,000 bbl. of crude/condensate capacity at Kinder Morgan's DeWitt Station in DeWitt County, Texas, and Wharton Pump Station in Wharton County, Texas. Construction is scheduled to begin in the fourth quarter of 2012.

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## Enbridge Repays Federal Infrastructure Loan On MATL Project

Enbridge Inc. announced the repayment of the \$151 million principal outstanding balance under the \$161 million Transmission Infrastructure Program (TIP) loan granted in 2009 by the Western Area Power Administration (WAPA), to help kick start construction of the Montana-Alberta Tie-Line (MATL).

According to an August 27 company release, the MATL is a 215-mile, 230 kv transmission line from Great Falls, Montana to Lethbridge, Alberta, designed to support the electric transmission needs of new wind power facilities in north-central Montana and buoyant power demand in Alberta. Subject to certain remaining regulatory approvals, MATL is expected to be in service in the fourth quarter of 2012.

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## Sebree Named VP, GM Of CECO Pipeline Services

David W. Sebree was named vice president and general manager of CECO Pipeline Services Inc, a manufacturer of products and provider of services to the gas transmission, gas processing and petrochemical industries.

"David is the ideal leader for this very important role," David Hotze, president of CECO Pipeline, said in a release. "With over 15 years of experience in the oil and gas industries, David has a strong knowledge and commitment to our market. His proven track record for safety and quality, make him the perfect fit for this position."

As CECO Pipeline's general manager, Sebree worked to expand CECO Pipeline operations throughout the South and Southwest. Prior to joining CECO, Sebree was the business unit director for Exterran in California and the southern Rockies, and the field services manager at Red Cedar Gathering Company in Colorado.

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## Global Infrastructure Partners Brings Aboard Former El Paso Executives

Global Infrastructure Partners (GIP) announced that James Cleary, former president of El Paso Corporation's Western Pipeline Group, has joined GIP and will focus on identifying and managing investments involving natural gas, crude oil and other liquids pipeline assets.

Cleary, an executive with 25 years of experience in the interstate pipeline industry will be joined by Thomas Price and Pat Johnson, both of whom had been part of the pipeline executive team at El Paso, and Derek Wedel who had been a senior engineering and construction manager at El Paso. These senior professionals possess a broad skill set in pipeline management and strategy, marketing, business development, customer service, and pipeline construction, engineering and operations. Together, this team's proven knowledge and experience bases will bring a unique capability to GIP.

Jim Cleary noted, "With North America's pressing need for energy to enhance productivity, economic growth and security, this is a very exciting time to be in the energy infrastructure business."



## NEWS &amp; TRENDS | Up To Date

## Savage, BNSF To Provide Petroleum Transport In Williston Basin

### BUSINESS WIRE

Savage announced the completion of its terminal located near Trenton, N.D., with direct connection to BNSF Railway's main line track, the company announced August 28. The terminal is strategically located to gather crude oil from the Williston Basin and Bakken Shale and facilitate the transport of crude to key refinery markets. The terminal provides the oil industry with inbound gathering access through truck receiving stations, pipeline connections and crude oil tankage. Outbound delivery of crude oil is served by a double loop track capable of holding two 118 car unit trains.

"The terminal adds crude by rail transportation to the area's existing pipeline capacity, to maximize the options producers have to get crude to refineries. We are excited to provide a unique open terminal that will meet a critical need in the oil industry," Nathan Savage, senior vice president, business development for Savage said in a company release.

The terminal has been transloading crude, from truck to rail, on a manifest basis since December 2011. Now, with the construction complete, this terminal has the capacity to handle unit trains and will operate 24 hours per day. The Savage Bakken Petroleum Services Hub is served by BNSF, which enables the flexibility to deliver crude to East Coast, West Coast and Gulf Coast markets.

"Rail provides a more flexible, long-term, economical option to ship crude oil to destination markets throughout the East, West and Gulf coasts and along the Mississippi River," Dave Garin, BNSF group vice president, industrial products, said in the release.

The location and design of the terminal is such that Savage is planning future expansion of trackage and capacity. The Trenton terminal will grow to accommodate continued Williston Basin expansions and the increasing need for oilfield material and crude oil receiving and handling.

## Morgan Stanley Becomes Sole Owner of Southern Star

Morgan Stanley Infrastructure, the dedicated infrastructure-investing platform of Morgan Stanley Investment Management, announced that Morgan Stanley Infrastructure Partners (MSIP) is now the sole owner of Southern Star Central Corp., parent company of Southern Star Central Gas Pipeline (Southern Star) and a primary gas transmission and natural gas storage facility provider. MSIP, a \$4 billion global infrastructure fund, originally acquired a 40% economic stake with 50% governance rights in Southern Star in March 2010.

According to an August 23 release, the Southern Star system has 23 interconnections with other major interstate and intrastate pipelines, and consists of approximately 6,000 miles of mainline and branch transmission pipelines, with 2.4 billion cubic feet (Bcf) per day of mainline delivery capacity. In addition, the company's storage network of eight underground storage fields contains total working capacity of approximately 47 Bcf, with aggregate delivery capacity of approximately 1.3 Bcf per day.

"Opportunities to invest in the U.S. natural gas pipeline sector are scarce, and we are very pleased to acquire full ownership of another regulated core infrastructure asset," John Veech, Head of Americas Investing for Morgan Stanley Infrastructure, said in the release.

Over the past two years, Southern Star has made significant capital expenditures, including extensive maintenance and pipeline integrity projects, and steps to enhance public safety. In addition, a number of growth projects have been completed or are under way, including the Elk City Storage Field Expansion, which was placed into service in April 2011 and now provides an additional 4 Bcf of storage capacity to the system.



**JIM STANLEY** | On October 1, Jim Stanley will join NiSource as EVP, CEO for NIPSCO (Courtesy: NiSource)



## NEWS &amp; TRENDS | Up To Date

## Santrol Adds Proppant Rail Terminals In Eagle Ford Shale

Santrol, a Fairmount Minerals company, now has five Eagle Ford shale terminals aimed at lowering operators' proppant transportation cost. These terminals are strategically located in an effort to provide a greater proppant supply closer to the formation's well-sites so operators can work even more efficiently.

"We have more terminals with more available railcar capacity than any other frac sand supplier in the region," Tom Bonno, Santrol's terminal field service manager, said in a news release. "Our proppant is available at the right place at the right time."

By expanding to five Eagle Ford terminals, Santrol can easily ship more than one million tons of proppant per year throughout the formation. The terminals are supplying Santrol's Northern White frac sand and high-performance, resin-coated proppants for hydraulic fracturing.

The five rail terminals are located in:

Alice, Texas—two rail terminals, capable of handling bulk material and 4,000-lb bulk bags, serving the Eagle Ford formation's southern end with access to US 281 and State Highway 44, in addition to Interstate 37

Gardendale, Texas—rail terminal facility serving the formation's western end with access to Interstate 35

Gonzales, Texas—rail terminal facility serving the formation's eastern end with access to US 90, US 183, and State Highway 97

San Antonio, Texas—terminal facility serving the formation's northern end with access to Interstate 37 and Interstate 35.

## Sempra Adds Gas Storage Capacity In Mississippi

Sempra U.S. Gas & Power LLC, a subsidiary of Sempra Energy, received authorization from the Federal Energy Regulatory Commission (FERC) to place a second underground natural gas storage cavern into service at its Mississippi Hub Storage facility located in Simpson County, Miss. The additional 7.5 billion cubic



**SANTROL** | The addition of a fifth rail terminal in the Eagle Ford will allow Santrol to move more than 1 million tons of proppant annually throughout the play (Courtesy: Santrol)

feet (Bcf) cavern expands the facility's total working gas storage capacity to 15 Bcf.

Mississippi Hub Storage is located in the heart of the rapidly growing Southeast natural gas market with operational interconnections to three major interstate gas pipelines: SONAT, Transco, and Southeast Supply Header (SESH). These pipelines provide bi-directional access to diverse major markets throughout the Southeast and mid-Atlantic regions.

"The additional capacity at Mississippi Hub Storage represents the next step in our strategy to expand our footprint in the rapidly evolving natural gas market in the Southeast," Michael Gallagher, regional president of natural gas for Sempra U.S. Gas & Power, said in a news release. "As more natural gas supply comes online and liquefaction terminals move forward, customer demand for additional underground storage at strategic pipeline hubs like Mississippi Hub Storage will continue to grow."

The injection capacity currently available at Mississippi Hub Storage is fully contracted. Additional injection capacity at the facility will become available for customers once the dewatering process at the new cavern is

Continued on  
Page 10

## NEWS &amp; TRENDS | Up To Date

Continued from  
Page 9

complete. The facility has injection capability of 450 million cubic feet per day (MMcf/d) and a withdrawal capability of 1,200 MMcf/d.

In 2013, the company expects to complete construction on a third 7.5 Bcf cavern, further expanding the site's storage capacity to 22.5 Bcf.

Sempra U.S. Gas & Power also owns and operates an additional 15.5 Bcf of underground natural gas storage at Bay Gas Storage near Mobile, Ala., along with two natural gas distribution utilities and long-distance gas pipelines.

## Gibson Energy, GTL Announce Joint Venture Discussions

Gibson Energy Inc. and GT Logistics LLC are currently in discussions regarding the formation of a joint venture to develop, construct and operate a storage terminal. The terminal could be combined with GTL's recently completed rail transloading facility with barge loading capability, for natural gas liquids, crude oil and other related products, the companies announced August 29.

The 200-acre Port Arthur, Texas, site upon which the storage terminal would be built is part of a larger, approximately 1,100 acre parcel held by an affiliate of GTL for multimodal logistical development, and is attractive due to its close proximity to the refining industry and pipeline network. GTL has recently commissioned a state-of-the-art unit train-to-barge transloading facility on the site, serviced by Union Pacific. The next phase of the development would be to construct crude oil tank storage and pipeline connections. GTL has begun initial engineering, design and permitting studies, and anticipates that the proposed joint venture would commence construction of the storage terminal in 2013. The existing crude rail-to-barge transloading assets and business are expected to be contributed to the proposed joint venture by GTL.

Gibson expects to immediately initiate discussions with potential customers and subscribers for services at the storage terminal, which would feature a multi-barge receiving dock on Taylor's Bayou, convenient highway access and planned connectivity to the extensive network of pipelines serving the region.

"The strategic location of the storage terminal near the proposed terminus of TransCanada's Keystone XL pipeline, combined with a unit train capable crude receipt facility, would provide an excellent opportunity to expand Gibson's integrated services in the United States," Michael McGowan, vice president business development of Gibson, said in a release. "If the proposed Joint Venture proceeds and the storage terminal were to be completed, it would enable us to connect our access to crude and infrastructure at Gibson's Hardisty, Alberta, hub with consumer markets in the Gulf Coast refinery complex."

While the discussions between Gibson and GTL are still in the preliminary, non-binding stage, GTL has granted Gibson a period of exclusivity to allow Gibson to conduct due diligence with regard to the proposed Joint Venture and the storage terminal.

## NiSource Names Executive VP, CEO For NIPSCO

NiSource Inc. announced August 29 that Jim L. Stanley will join the company on October 1 as executive vice president and group CEO for Northern Indiana Public Service Co. (NIPSCO), a NiSource-owned utility serving more than 786,000 natural gas customers and 457,000 electric customers across the northern third of Indiana.

Stanley succeeds Jimmy D. Staton, who has led both NIPSCO and NiSource's gas transmission and storage (NGT&S) operations. With Stanley's appointment, Staton will serve exclusively as executive vice president and group CEO for NGT&S.

Stanley comes to NiSource after serving in a variety of senior executive positions in the utility industry, most recently as senior vice president and chief distribution officer for Duke Energy's U.S. electric business. Previously, he served as president of Duke Energy Indiana, the state's largest electric service provider. His 35-year career with PSI Energy, Cinergy and Duke Energy includes assignments in a variety of departments from accounting to human resources to operations management.

## SNAPSHOT | Industry Insight

# Wood Mackenzie: Energy Demand Growth Slowing, But Gas Will Increase Market Share

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

The economic difficulties that have afflicted much of the world since 2008 will result in electric power demand growth slowing by approximately half of its normal growth rate in the next 20 years, according to a recent Wood Mackenzie study.

The report, *A Lost Decade of Demand Growth*, stated that demand levels for energy sources that were previously forecasted to be reached in 2019, would not occur until 2030 due to a combination of the poor economy as well as initiatives aimed at improving energy efficiency.

Prajit Ghosh, senior analyst for North American power research at Wood Mackenzie and the report's author, said that natural gas will be the energy source hit the least in this forecast, as it is plentiful and produces less greenhouse gas emissions than most other fuel sources.

He told *Midstream Monitor* that natural gas is the fuel of the future, but the slower growth in power demand will also decrease the previously forecasted growth for natural gas. While the power generation pie is smaller than expected, natural gas has been increasing its share of the pie and will continue to do so because of lower prices, increased supply and more stringent environmental policies.

According to the report, only 20 states and provinces in North America have reached their pre-recession levels of energy demand at this time. The U.S. is not expected to return to these levels until late 2013.

"The last decade of demand growth effectively reduces the size of the future power generation pie. If one were to isolate the impacts of reduced load growth, other things being equal, natural gas burn would have been lower than previous forecasts by about 5 billion cubic feet (Bcf) per day in 2013 and 15 Bcf per day by 2030. This would translate to almost a quarter of reduction in expected natural gas demand from the power sector going forward," he said in the report.

While overall power demand is slowing, natural gas continues to make large gains as more coal-fired power generation is retired in order to meet new carbon emission targets. In addition, more plants are switching from coal to gas due to gas being cheaper. Coal will remain an important energy source, because its demand will continue to retreat as gas and renewables make gains in the coming decade.



**POWER DEMAND** | Growth has slowed due to the recession, but natural gas will continue to grow in demand according to Wood Mackenzie.

"Most of the upside for gas, in terms of market share, comes in taking market share from coal. Coal is approximately 37-38% of total power generation at this point. By the end of the study period we expect the percentage of coal-fired power generation will fall to almost 25% of total power generation," he told *Midstream Monitor*. "Much of coal's market share will be taken by natural gas, particularly in the Southeast.

"The Southeast region is one of the fastest-growing regions in the country in terms of population growth, which implies an increase in power demand as well. In addition, a large portion of the coal-fired power generation that we're forecasting is in the Southeast and Midwest.

The Southeast has been the biggest driver of coal-to-gas switching because the coal plants there utilized more expensive coal from the Central Appalachian region that were unable to compete with lower gas prices. Ghosh said that gas prices would have to rise above \$4.00 per million Btu in order for this switching phenomenon to end.

He added that there are efforts in the region to switch from Central Appalachian coal to Illinois basin coal, which is cheaper, but also dirtier. "Because a lot of these power plants are being retrofitted with clean-up equipment some of these facilities can switch coal sources. Should these facilities be successful in these efforts, it would limit the amount of coal-gas switching," he said.

The report factored in approximately 6-7 Bcf per day of LNG exports by 2020. Gas prices are expected to flatten out by 2015 with slight increases due to coal-gas switching, industrial demand and LNG exports.



**LEAD STORY** | From The FrontContinued from  
**Page 1**

Propane growth out of the East Coast isn't expected to grow at such a rapid pace as ethane, but CERI anticipates production to increase to 82,000 bbl. per day by 2015 and 143,000 bbl. per day by 2035. These supplies are expected to displace imports and volumes transported to the region from PADD II (Midwest) and PADD III (Gulf Coast) and won't require new infrastructure to be built in the region.

Like the Marcellus, the Bakken shale is also experiencing rapid liquids production growth with the play expected to grow from 160,000 bbl. per day to 216,000 bbl. per day during this forecast period as associated gas from the play's oil production. After this peak, this ethane production will begin a slow decline.

However, the Midwest market does not have the ethane demand nor the transportation capacity of the Northeast market. This situation is further exacerbated by the fact that the region is home to the Aux Sable Channahon facility, which extracts NGLs from the Alliance Pipeline out of Canada.

On the propane side, the Midwest is a huge market for the product during the winter, when it peaks at approximately 600,000 bbl. per day before dropping below 200,000 bbl. per day in the summer. The market is seasonally balanced through a combination of Canadian imports and transfers from PADD IV (Rockies) and PADD III.

"At this time, the increased PADD II supply plus transfers received from PADD IV exceed available pipeline capacity from PADD II to the Gulf Coast. Until pipeline expansions currently under development are complete, the Conway area is facing a supply glut with heavily discounted ethane and propane prices when compared with Mont Belvieu. Pricing pressures are expected to ease by 2014 after completion of the various pipeline developments," the report said.

PADD III has been best able to handle the change in the North American NGL market, as the Gulf Coast has been able to absorb not

just its own increased production, but also supplies throughout the continent. However, the market has reached an oversupply situation. In the past five years, PADD III has expanded its ethane supply by 197,000 bbl. per day to 872,000 bbl. per day in 2011.

"These supplies have been absorbed by preferentially cracking ethane over heavier hydrocarbons and retrofitting of heavier hydrocarbon crackers to run on ethane. The combination of transfers of excess ethane from PADDs I, II, and IV along with growth in local supply are expected to increase total available supply to 1.145 million bbl. per day by 2017, representing a 256,000 bbl. per day increase in available ethane," according to the report.

This increase in available ethane will not be able to be absorbed in the market until 2017 when new ethane cracking capacity is brought online. "In the meantime, surplus ethane has depressed prices to the point that ethane is being re-injected to reduce supply to meet available demand. Ethane prices are expected to recover as this incremental cracking capacity comes on line," Murillo said.

The Gulf Coast is also experiencing a surplus in propane supplies, as demand has remained stable while production has increased and created the need for additional export capacity out of the region. Since 2007, propane exports have increased from 32,000 bbl. per day to 110,000 bbl. per day in 2011. In 2012, propane exports out of the Gulf Coast have increased to 160,000 bbl. per day, which is at or near physical export capacity.

Once the midstream has caught up to the increase in NGL production, the report forecasted a market that will experience consistent ups and downs throughout the early portion of this outlook. However, once this infrastructure is brought online it is expected that the North American NGL market will be able to reap the full benefits of its vast resource base.

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