

DCP Midstream's Super-System Strategy Paying Big Dividends

Full-service offerings, operational excellence keys to success

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

In last week's issue of *Midstream Monitor*, we released our annual midstream rankings with DCP Midstream coming out on top of both the natural gas processor and natural gas liquids (NGL) producer lists.

This week, we spoke with the company's chairman, president and chief executive, Wouter van Kempen, on how DCP Midstream was able to become the first company in the history of our rankings to top both lists.

In 2012, DCP Midstream processed 6.1 billion cubic feet per day of gas, representing more than 12% of gas processed in the continental U.S. DCP's liquids production in 2012 was 401,914 barrels (bbl.) per day, representing about 17% of NGL production in the continental U.S.

Although producers have bemoaned the fact that the explosion in production of gas and NGLs have kept prices relatively undervalued the past few years compared to the start of the shale gale, for midstream operators this hasn't been as much of an issue.



(Courtesy: DCP Midstream)

"We continue to see a need for additional capacity in the various regions in which we're operating," van Kempen tells *Midstream Monitor*. He noted that while gas-directed rig counts are down with more producers focusing on liquids and crude production, associated gas volumes are also high and are requiring new infrastructure in plays such as the Eagle Ford shale, the Permian basin and DJ basin. In addition, dry gas production remains high because of the continued improvements in drilling efficiencies.

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NGL PRICES & FRAC SPREAD | Week in Review

Propane Prices Hit Yearly Highs

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

Following the unofficial end of summer with the Labor Day holiday, the natural gas liquids (NGL) markets seemed to return to their usual order as Mont Belvieu prices, specifically isobutane, were greater than their Conway counterparts across the board for the first time in nearly three months.

Mont Belvieu isobutane gained strength on the back of news that Enterprise Products Partners took its 116,000 barrels (bbl.) per-day isomerization unit in the region down for maintenance. According to Energy En*Vantage Inc., the facility operated at a

CURRENT FRAC SPREAD (CENTS/GAL)				
September 9, 2013	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	23.00		26.29	
Shrink	23.93		24.73	
Margin	-0.93	9.60%	1.56	-24.81%
Propane	115.95		117.83	
Shrink	33.07		34.17	
Margin	82.88	5.61%	83.66	4.55%
Normal Butane	138.03		140.90	
Shrink	37.44		38.68	
Margin	100.59	0.59%	102.22	-1.17%
Isobutane	141.68		142.23	
Shrink	35.96		37.15	
Margin	105.72	-0.65%	105.08	-0.23%
Pentane+	218.08		226.33	
Shrink	40.03		41.37	
Margin	178.05	-0.41%	184.96	-0.58%
NGL \$/Bbl	43.40	2.60%	44.63	2.42%
Shrink	13.19		13.63	
Margin	30.21	1.74%	31.00	0.70%
Gas (\$/mmBtu)	3.61	4.64%	3.73	6.57%
Gross Bbl Margin (in cents/gal)	69.30	1.99%	71.59	0.94%
Gross Bbl Margin (in cents/gal)				
Ethane	1.27	5.31%	1.45	4.00%
Propane	4.03	5.33%	4.09	5.13%
Normal Butane	1.49	1.66%	1.52	0.84%
Isobutane	0.88	0.64%	0.89	1.46%
Pentane+	2.81	0.48%	2.92	0.65%
Total Barrel Value in \$/mmbtu	10.48	3.06%	10.86	2.84%
Margin	6.87	2.25%	7.13	0.99%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Aug. 28- Sept. 3, '13	26.29	117.83	140.90	142.23	226.33	\$44.63
Aug. 21- Aug. 27, '13	25.28	112.08	139.72	140.18	224.86	\$43.57
Aug. 14- Aug. 20, '13	24.70	106.72	136.30	136.28	218.03	\$42.10
Aug. 7- Aug. 13, '13	24.26	101.11	126.08	133.00	212.72	\$40.38
August '13	25.01	105.63	134.40	136.61	219.58	\$42.03
July '13	24.73	91.89	126.67	130.93	209.15	\$39.09
2nd Qtr '13	27.12	91.38	124.01	127.46	204.12	\$38.82
1st Qtr '13	25.68	86.42	157.72	166.41	222.63	\$42.07
4th Qtr '12	26.59	88.74	162.76	181.71	215.67	\$42.69
3rd Qtr '12	32.34	89.27	142.76	161.88	200.54	\$41.03
Aug. 29 - Sept. 4, '12	31.29	89.48	152.53	170.53	212.68	\$42.46
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Aug. 28- Sept. 3, '13	23.00	115.95	138.03	141.68	218.08	\$43.40
Aug. 21- Aug. 27, '13	21.84	110.08	135.78	140.78	217.04	\$42.30
Aug. 14- Aug. 20, '13	21.26	103.74	132.56	140.50	212.18	\$40.95
Aug. 7- Aug. 13, '13	20.46	98.54	129.22	141.33	209.50	\$39.86
August '13	21.29	102.79	132.20	139.92	212.37	\$40.82
July '13	20.54	87.20	123.28	150.40	207.71	\$38.34
2nd Qtr '13	20.71	85.37	116.50	123.91	204.86	\$36.89
1st Qtr '13	23.94	81.81	153.43	160.39	222.63	\$41.11
4th Qtr '12	18.45	79.24	164.46	174.39	209.16	\$39.94
3rd Qtr '12	14.60	70.25	124.35	165.61	195.68	\$34.99
Aug. 29 - Sept. 4, '12	20.98	80.33	142.55	195.50	208.00	\$39.83
August 15 - 21, '12	20.20	81.26	140.30	185.85	203.78	\$39.15

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

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

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

reduced rate of 97,000 bbl. per day in the second quarter and this outage should see prices rise as it is the largest commercial isomerization unit in the U.S.

As a result, isobutane prices along the Gulf Coast rose 1% to \$1.42 per gallon (gal), the highest price at the hub since it was \$1.47 per gal the week of March 27. The Conway price has been relatively static the past five weeks as ONEOK Inc.'s isomerization unit in the region started to come back online, which is helping to

NGL PRICES & FRAC SPREAD | Week in Review

balance supply and demand levels. The price rose 1% to \$1.42 per gal at a slightly lower level than the Mont Belvieu price.

Propane continued to experience the largest gains at both hubs as the market gears up for a strong winter and crop-drying season along with a more robust export market. Prices rose 5% at both hubs last week with the Mont Belvieu value rising to \$1.18 per gal, the highest it has been since the week of April 18, 2012 when it was \$1.19 per gal. The Conway price of \$1.16 per gal was the highest price at the hub since the week of December 21, 2011 when it was \$1.18 per gal.

Ethane prices posted similar gains as they rose 4% at Mont Belvieu and 5% at Conway as four of the six ethane crackers down for unplanned maintenance are in the process of being brought back online. The Mont Belvieu price of 26¢ per gal was the highest at the hub since it was 27¢ per gal the week of May 29. The Conway price of 23¢ per gal marked the largest value at the hub since it was 25¢ per gal the week of April 3. Ethane prices have also benefited from the gains posted by propane as it is more at-

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / September 5, 2013	
Gas Hub Name	Current Price
Carthage, TX	3.66
Katy Hub, TX	3.72
Waha Hub, TX	3.70
Henry Hub, LA	3.69
Perryville, LA	3.67
Houston Ship Channel	3.74
Agua Dulce, TX	3.59
Opal Hub, Wyo.	3.64
Blance Hub, NM	3.69
Cheyenne Hub, Wyo.	3.64
Chicago Hub	3.84
Ellisburg NE Hub	3.45
New York Hub	3.64
AECO, Alberta	2.16

Source: Bloomberg

should continue to be challenged based on gas price forecasts.

“Gas prices at the front of the forward curve are well-supported at the current level by the incrementally warmer weather forecast for the first two weeks of September, while the hurricane season is entering its historically most active period. We expect

tractive to crack ethane at current price levels, which is helping to work off the storage overhang throughout the country.

Despite these positives, the frac spread margin remains troubled at both hubs due to natural gas prices posting gains because of increased cooling demand in much of the country.

Gas prices rose 7% to \$3.73 per million Btu (MMBtu) at Mont Belvieu and 5% to \$3.61 per MMBtu at Conway. In the short-term, margins

RESIN PRICES – MARKET UPDATE –SEPTEMBER 5, 2013					
TOTAL OFFERS: 9,693,752 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
LLDPE - Film	1,640,300	0.67	0.77	0.655	0.695
HDPE - Blow Mold	1,631,128	0.68	0.77	0.655	0.695
LDPE - Film	1,595,656	0.67	0.825	0.745	0.785
PP Homopolymer - Inj	1,048,736	0.77	0.865	0.795	0.835
HDPE - Inj	884,736	0.695	0.76	0.675	0.715
PP Copolymer - Inj	654,000	0.805	0.89	0.805	0.845
HIPS	570,000	1.015	1.025	0.98	1.03
LLDPE - Inj	556,368	0.675	0.75	0.665	0.705
HMWPE - Film	396,828	0.75	0.77	0.715	0.755
GPPS	380,000	0.86	0.86	0.86	0.91
LDPE - Inj	336,000	0.74	0.76	0.695	0.735

Source: Plastics Exchange – www.theplasticsexchange.com

prices to stay around the \$3.50 per MMBtu to \$3.75 per MMBtu level for the rest of the third quarter, assuming normal weather,” Barclays Capital said in its *Gas and Power Kaleidoscope* for the week of September 3.

The remainder of the NGL barrels—butane and C₅₊—were relatively stable this week, posting modest increases, which fell in line with West Texas Intermediate crude prices that are already at a fairly high level just north of \$100 per barrels (bbl.) because of the geopolitical events occurring in the Middle East.

Consequently the theoretical NGL bbl. price rose 2% at Mont Belvieu to \$44.63 per bbl. with a 1% gain in margin to \$31 per bbl. The Conway NGL bbl. rose 3% to \$43.40 per bbl. with a 2% gain in margin to \$30.21 per bbl.

The most profitable NGL to make at both hubs was C₅₊ at \$1.85 per gal at Mont Belvieu and \$1.78 per gal at Conway. This was followed, in order, by isobutane at \$1.05 per gal. at Mont Belvieu and \$1.06 per gal at Conway; butane at \$1.02 per gal at Mont Belvieu and \$1.01 per gal at Conway; propane at 84¢ per gal at Mont Belvieu and 83¢ per gal at Conway; and ethane at 2¢ per gal at Mont Belvieu and negative 1¢ per gal at Conway.

Gas storage levels rose 58 billion cubic feet the week of August 30, according to the most recent data available from the U.S. Energy Information Administration, to 3.188 trillion cubic feet (Tcf) from 3.13 Tcf. This was 6% below the 3.398 Tcf figure posted the same time last year and 1% greater than the five-year average of 3.145 Tcf.

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Issues Cloud Australia's Bright Outlook For LNG Projects

CHRIS SHEEHAN, HART ENERGY

Australia may have captured the lion's share of new liquefied natural gas (LNG) projects approved since 2010, and be set to overtake Qatar as the world's top supplier of LNG. But the outlook for a further round of Australian LNG projects is clouded by increasing international competition and ongoing concerns over escalating costs.

This was the message that attendees of Hart Energy's DUG Australia conference heard in Brisbane last month from Tri-Zen Principal Consultant Tony Regan, who reminded the conference that the long-term development of shale gas in Australia would depend on the competitive ability of the country's LNG projects to access international LNG markets.

Regan recalled that in 2010 there were some 74 million metric tons per year (tpa) of new capacity in LNG projects that were planned to reach final investment decision (FID) that year.

But, in the wake of the 2008-2009 financial crisis, most of these projects "fell by the wayside," leaving Australia's three coal seam gas to LNG projects on Curtis Island—Gladstone LNG, Queensland Curtis and Australia Pacific—as the only projects to go ahead. Australia was "the only show in town," with the three projects collectively comprising some 25.3 million tpa of new capacity.

Today, LNG capacity under construction amounts to a "very impressive" total of just over 100 million tpa. The Australian contribution makes up 60% of all new capacity and—in addition to the three Curtis Island projects—comprises Gorgon, Wheatstone, Prelude and Ichthys. Elsewhere, there are projects underway in Algeria, Colombia, Malaysia, Papua New Guinea and the U.S.

These projects will result in "dramatic changes" in regional LNG productive capacity. Assuming the projects come online as scheduled, Australia will rise from a "mid-ranked" producer behind Indonesia and Malaysia to become the world's largest LNG producer, potentially overtaking Qatar, by 2017.

But what is the outlook for a further round of Australian LNG projects?

"We have probably just as much tonnage being offered in the next round in Australia as in the last round," said Regan. "The real issue is: Can any of that go ahead?"



Rough Forecast Ahead | Australia's LNG market may be slowed by new competition and increasing infrastructure costs.

With the domestic market for natural gas still limited in size, the development of shale gas remains dependent on international demand for LNG, noted Regan. Here he offered a "very rosy" forecast, with global LNG demand projected to double by 2020 to 464 million tpa.

On the positive side, Regan projects that, assuming global liquefaction capacity of 287 million tpa at August 2013, and liquefaction capacity under construction totaling 102 million tpa, some 126 million tpa of additional capacity is needed to meet a demand forecast of 464 million tpa in 2020 (assuming liquefaction plants have an average capacity utilization of 90%).

Reality Check

"We have a very big shortfall. We may have 100 million tpa under construction at the moment, but it's not nearly enough," said Regan. "We need another 126 million tpa to meet that demand forecast for 2020. That's 10 to perhaps 16 new projects that have to come on by 2020, depending on their size."

As a "big reality check," however, Regan said "Australia has a huge problem with cost inflation." He noted that Gorgon had seen costs go up by 40%, while Queensland Curtis had seen costs rise by 36% — cost increases that were "absolutely unprecedented." In addition, Ichthys was expected to come in at \$34 billion, he said.

"Australia has priced itself out of the market," said Regan, expressing skepticism "how any of the next round of LNG projects can go ahead in Australia."

Regan cited a "mixed bag" of projects making up some 57.6 million tpa in Australia's next round of LNG capacity. Of these, the

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Browse project “might” be able to reach FID, according to Regan, in the wake of Woodside’s decision to no longer pursue it as an on-shore project and instead develop it as a floating LNG (FLNG) project, which should reduce costs by some 30% or possibly more.

“But even if it is an FLNG project, it is not a slam dunk,” Regan said. “And if Browse does go to FLNG, almost everything in Western Australia will go to FLNG. It will be the way to go. We may not see any more deepwater offshore production coming on-shore for liquefaction.”

Another that “might” make it to FID is Arrow LNG if it were to “piggy back” off another existing LNG project, with Origin/ConocoPhillips’ LNG project being a likely candidate. “But I don’t think it can go ahead as a standalone project,” Regan said.

Even with brownfield projects at Gorgon and Wheatstone, project sponsors are now getting “rather cautious about talking about brownfield expansion there and the timing of it.”

In addition to the cost issue, the “big gorilla in the room” is the array of competing international projects, principally in the U.S. and Canada, but also in East Africa, Russia and elsewhere. Regan listed LNG projects totaling 210 million tpa in the U.S. and 68 million tpa in Canada.

The “reality check” for U.S. projects was the need to locate buyers.

“The biggest challenge is still going to be to get the buyers,” Regan said. “At the moment there are probably buyers for no more than 25% of that potential U.S. production.”

And what’s holding buyers back?

Traditionally, LNG supply from the U.S. Gulf Coast has served European markets, but “demand has crashed there,” Regan said. “The big LNG market is northeast Asia. That is a very long way from the U.S. Gulf Coast. The Canadian Pacific coast is a lot closer.”

Australian LNG v. the World

However, from a cost perspective, the U.S. situation is “dramatically different” from that of Australia.

For example, Regan cited Cheniere Energy’s trains No. 1 and No. 22 Sabine Pass as costing \$5.6 billion, and recently Cheniere reached FID for trains No. 3 and No. 4 at a projected cost of \$3.8 billion. By comparison, said Regan, analysts’ estimates for the Browse project at James Price Point were \$44-50 billion, so two trains at Sabine Point would come in at “about one-tenth of the price of Australia.”

Similarly, in Canada, the LNG Canada project sponsored by Royal Dutch Shell and PetroChina has the same design capacity—12 million tpa—as that of Browse. The budget estimate for LNG Canada is cited at \$20 billion—“half” that of Browse, based on analysts’ estimates.

“We’re not talking about a need for Australia to knock off 10 percent of its costs. Here we have this Canadian project looking as if it will cost half, with the same volume, as the cost of Browse. So there’s a huge problem facing Australia on costs.”

Regan described Canada as looking “pretty intimidating,” with almost 70 million tpa of potential production that is advantaged by British Columbia being “so much closer” to major Asian markets.

Outside North America, Regan cited Russia as having projects with a potential collective capacity of some 50 million tpa. In east Africa—viewed as “an extremely interesting area with very high potential”—Mozambique is estimated to have some 20 million tpa of capacity, while Tanzania has some 10 million tpa of capacity. In the eastern Mediterranean, LNG also has potentially attractive economics.

In sum, said Regan, Australia today faces “far more competition. Australia was the only show in town in 2010; it is definitely not in 2013.” Today, U.S. projects are “in with a vengeance that wasn’t mentioned in 2010.” And with new LNG projects arising in Canada, East Africa and elsewhere with attractive economics, “there is huge competition for Australia that didn’t exist in 2010.”

As for shale development, Regan advised participants “to be cautious about rushing to shale. Because if shale can be developed in a big way in Australia, the bulk of it is going to have to look for export markets as LNG. And someone has got to address the Australian cost issue to make sure it can come out as LNG.”

Plains Offers To Buy PAA Natural Gas Storage For \$738 Million

BY **DARREN BARBEE** | HART ENERGY

Plains All American Pipeline LP has put \$738 million on the table to buy all publically held units of PAA Natural Gas Storage LP.

The merger would complete what has essentially been a fairly binding engagement between the two. PAA owns 46% of PNG’s issued and outstanding common units, its series A and B subordi-

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Ready to merge | Plains is looking to fully acquire PAA Natural Gas Storage in order to avoid short-term headwinds in the storage industry.

nated units and also owns PNG's general partner and its incentive distribution rights.

A definitive agreement would need to be signed by Sept. 27.

Provided the transaction is approved by PAA's board of directors, a conflicts committee to be established by PNG's board, and PNG unit holders, PAA would expect to close prior to year-end, said Brian Gamble, director of research for Simmons & Co. International.

PAA management said that while it views the long-term outlook for natural gas storage constructively, the near-term market environment will be challenging for PNG as a stand-alone entity, Gamble said.

PNG would pay a November quarterly distribution.

PNG completed its initial public offering in May 2010 at a price of \$21.50 per unit.

"While the partnership has executed well, it has not increased its cash distribution since November of 2011 due to challenging market conditions and few attractive opportunities for accretive acquisitions," Gamble said. "While the premium is modest and PNG unit holders may experience a reduction in their distribution initially, PAA may offer a more favorable growth profile."

Gamble said the PNG acquisition would result in 14.4 million additional PAA units outstanding.

"Absorbing the remaining PNG interests could provide some benefit if management uses it as a platform for growth in the natural gas sector and looks beyond storage for growth opportunities and adopts a more integrated business model," he said.

Genesis Announces New Gulf Coast Rail Facility

BUSINESS WIRE

Genesis Energy LP is preparing to begin construction on a new Raceland, Louisiana facility capable of unloading up to two crude oil unit trains per day.

The Raceland rail facility, about 20 miles southeast of St. James, will initially be connected to existing midstream infrastructure that will provide direct pipeline access to both St. James and Baton Rouge area refineries.

In addition, Genesis is considering the construction of pipeline infrastructure for the rail barrels (bbl.) to move south, ultimately providing access to existing infrastructure at Clovelly, Louisiana, and connectivity via existing pipelines to the vast majority of refineries in southeastern Louisiana.

The facility will have joint access to the Burlington Northern Santa Fe Railway and Union Pacific Railroad facilitating direct hauls via both Class I railroads from multiple origination points. The facility is expected to be operational in the second-quarter 2014.

The project, which includes more than 400,000 bbl. of new crude oil storage and pipeline infrastructure, is expected to cost Genesis less than \$75 million. The company intends to finance the project with funds available under its committed revolving credit facility.

Magellan Midstream Acquires Houston-Area Crude Oil Pipeline

Magellan Midstream Partners LP acquired Shell Pipeline Co. LP's West Columbia 16-inch crude oil pipeline in the Houston area.

The pipeline is approximately 15 miles long and originates at Genoa Junction, Texas, and terminates at Magellan's crude oil and refined products distribution terminal in East Houston, Texas. The West Columbia Pipeline will provide an additional route for crude oil, particularly barrels (bbl.) from the Eagle Ford, to reach the East Houston terminal for storage or subsequent delivery into Shell's reversed Ho-Ho system.

The West Columbia Pipeline has a capacity of approximately 150,000 bbl. per day and is bi-directional.

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Crude-By-Rail Terminal Planned For Texas City

Galveston Bay Rail Terminal LLC, a private firm held by U.S. Development Group, plans to build a crude oil and condensate rail terminal in Texas City, Texas, according to Reuters.

The terminal will receive rail cars loaded with crude oil and condensates and transfer them to a nearby pipeline, according to permit applications filed with the Texas Commission on Environmental Quality. A completion date for the terminal was not included in the permit request.

The project will include tanks that can store up to 200,000 bbl. of oil and an ethanol rail car loading rack that will ship denatured ethanol on outbound rail cars.

ConocoPhillips Sells Trinidad, Tobago Asset

ConocoPhillips closed a transaction with the National Gas Co. of Trinidad and Tobago Ltd. (NGC) for the sale of its wholly owned subsidiary, Trinidad and Tobago Holdings LLC, for about \$600 million.

Trinidad and Tobago Holdings holds a 39% interest in Phoenix Park Gas Processors Ltd., which operates a gas processing and natural gas liquids fractionation facility located at Point Lisas, Trinidad.

According to a company release, ConocoPhillips expects to recognize an after-tax gain of approximately \$290 million for the sale.

Canadian Pacific Ordered To Interchange Traffic With MM&A

Canadian Pacific Railway Ltd. (CP) was ordered by the Canadian Transportation Agency (CTA) to interchange traffic with Montreal, Maine and Atlantic Railway Inc. (MM&A), effective immediately.

CP issued an embargo regulating the interchange of all traffic to and from the MM&A in response to the August 13 decision by the CTA to withdraw MM&A's certificate of fitness. The CTA's decision suspended MM&A's ability to operate a railway.

The CTA modified its decision on August 16 to permit MM&A to continue to operate until October 1, conditional upon MM&A proving adequate insurance.

CP expressed its concerns regarding the fitness of MM&A to safely handle hazardous substances, including the crude oil currently under investigation in the Lac Megantic, Quebec, derailment. The CTA dismissed CP's arguments and ordered CP to lift the embargo.

"While we disagree with this order, we have taken immediate steps to comply," said E. Hunter Harrison, Canadian Pacific chief executive. "The CTA, as federal regulator, has satisfied itself that MM&A is fit to operate and has adequate insurance to do so. We will review our legal options."

Dow Confirms Site Selections For Plastics Franchise Expansions

The Dow Chemical Co. confirmed the locations for expanding four of the company's performance plastics franchises in Freeport, Texas, and Plaquemine, Louisiana.

In Freeport, Dow will expand its High Melt Index (HMI) Affinity brand polymer franchise, which delivers bonding in hot-melt packaging adhesives, and its Elite polymer franchise, which serves markets such as food packaging, hygiene and medical, and industrial and consumer packaging markets. Both of these brands are powered by Dow's proprietary Insite catalyst technology.

In Plaquemine, Dow will expand its Nordel metallocene EPDM franchise, which is also powered by Insite and provides the infrastructure, automotive, consumer durables, appliance and electrical and telecommunications markets with heat and chemical resistant polymers. Also in Plaquemine, Dow will expand its low-density polyethylene family of high-performance polymers like Agility to deliver improved optics for applications in flexible food packaging.

The company said these actions are expected to drive strong revenue growth and generate approximately \$2.5 billion in EBITDA once fully operational.

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Genscape Expects Keystone Gulf Coast Pipeline Delay

Construction of the Keystone Gulf Coast Pipeline (KGCP) is slightly behind plan, according to Genscape's most recent flight on August 18.

On August 20, TransCanada Corp. said construction was more than 90% complete and that the pipe was expected to be in service by the end of this year. According to a company release, Genscape believes this estimate to be optimistic based on construction progress. Genscape now estimates first-quarter 2014 to be a more realistic in-service date. The bulk of work remaining on the project is centered on the Cushing, Oklahoma, pumping station and along the pipeline right of way.

At the Cushing terminal, four of the seven newly constructed tanks have hydrotested with a fifth tank currently hydrotesting. However, mixer installation and tank pipeline connections have yet to be completed for any of the seven new tanks. Genscape said it believes that completed tank capacity and associated connections are necessary for initial KGCP fill. The terminal, when complete, will contain 2.25 million bbl. of storage capacity.

Exposed pipe was observed near the Tupelo, Bryan, Delta and Lake Tyler facilities. Crews were observed working on pipeline connectivity along the right of way. The Cromwell, Bryan and Winnsboro pumping stations each have four pumps installed, and pipeline infrastructure looks to be nearing completion. Ground preparation continues at the Tupelo, Delta and Lake Tyler facilities.

KGCP is a 36-inch line that will flow 485 miles from Cushing to Nederland, Texas. It will have an initial capacity of 700,000 bbl. per day with the option to expand to 830,000 bbl. per day. Linefill for KGCP is approximately 3.2 million bbl. Genscape estimates it will take approximately 40 to 60 days to fill the line at near the 54,000 to 81,000 bbl. per day fill rate. The Keystone pipeline from Hardisty, Alabama, to Patoka, Illinois, took almost 180 days to fill in 2010 at a nearly 50,000 bbl. per day fill rate. Linefill for Keystone to Patoka was approximately 9.2 million bbl.

MarkWest To Pay EPA Penalty For Clean Air Violations

MarkWest Energy Partners LP will invest more than \$650,000 on improvements to its Javelina natural gas processing plant to reduce flaring events and improve communications. The company

will also pay a civil penalty of \$97,500 to settle violations of the Clean Air Act uncovered by the U.S. Environmental Protection Agency (EPA) from September 2012 to January 2013.

In addition to improving flare efficiency, the settlement requires that the plant improves operational reliability without increasing facility emissions and improves emission controls. The company will establish a 24-hour hotline to answer any community questions about flaring events at the facility.

The facility is required to pay the penalty within 30 days of filing the consent agreement.

Double Eagle Pipeline Brought Online

Double Eagle Pipeline LLC, a 50/50 joint venture between Magellan Midstream Partners and Kinder Morgan Energy Partners LP, commenced initial operations of the 85-mile western leg of its pipeline system moving condensate from La Salle County, Texas, to Three Rivers, Texas.

The Double Eagle Pipeline system, operated by Kinder Morgan, includes 140 miles of new 12-inch pipeline connecting to an existing 50-mile, 14- and 16-inch pipeline segment owned by Kinder Morgan extending from Three Rivers to Magellan's marine and storage terminal in Corpus Christi, Texas. The initial capacity of the pipeline is 100,000 bbl. per day, but can be expanded to 150,000 bbl. per day with additional pumps.

Epic Midstream Expands Rail Terminal

Epic Midstream LLC is constructing a \$2 million rail expansion project at its Savannah, Georgia, terminal, with a capacity of 870,000 bbl. of crude oil.

The terminal is adding a new rail spur with a 10-car loading and unloading capacity. The new rail spur will be served by the Golden Isles Short Line, which provides access to both the Norfolk Southern and CSX Corp. The new rail access will serve the east tank farm providing the optionality to import and export product through the Savannah port with the use of rail and the facility's recently renovated 38-foot draft ship berth.

NEWS & TRENDS | Up To Date

Kinder Morgan, Valero Complete Parkway Pipeline

BUSINESS WIRE

Kinder Morgan Energy Partners LP and Valero Energy Corp. completed construction on their 50/50 Parkway Pipeline joint venture. The system is approximately 141 miles long with a 16-inch diameter and will transport refined petroleum products from refineries in Norco, Louisiana, to an existing petroleum transportation hub in Collins, Mississippi, owned by Plantation Pipe Line Co. (Kinder Morgan owns 51% of Plantation Pipe Line Company and operates the system.).

From this hub the products will be transported by multiple pipeline systems, including Plantation, that serve major markets in the eastern U.S. The approximately \$250 million pipeline system has an initial capacity of 110,000 bbl. per day with the ability to expand to more than 200,000 bbl. per day.

“This is an exciting project that provides greater connectivity between Gulf Coast refineries and East Coast markets with new pipeline infrastructure while also increasing local property tax revenues by almost \$6 million,” said Kinder Morgan Products Pipelines President Ron McClain.

Shell Gauging Interest In Potential Beaver County Cracker

Royal Dutch Shell Plc opened a two-month bidding period for a potential ethane cracker in Beaver County, Pennsylvania, to supplement commitments the company has already secured with Consol Energy Inc., Noble Energy Inc., Seneca Resources Corp. and Hilcorp Energy Co., according to the *Pittsburgh Post-Gazette*.

The bid process is open until October 4. Companies that are interested will be asked to sign a confidentiality agreement that will grant them access to Shell’s private plans, the *Post-Gazette* said.

Inspections Target Fraced Crude-By-Rail Shipments

BLOOMBERG

U.S. rail-safety regulators began a “Bakken blitz” of inspections of crude oil tank cars this week as they seek to prevent a railroad disaster in the U.S. similar to July’s fatal inferno in Quebec.

Inspectors from the U.S. Federal Railroad Administration and the Pipeline and Hazardous Materials Safety Administration (PHMSA) are examining rail cars moving crude from North Dakota’s Bakken region, PHMSA administrator Cynthia Quarterman told reporters during a break in a Washington meeting to discuss U.S. rail safety risks.



Enhanced Security | An increase in Bakken crude being shipped by rail is causing PHMSA to increase its inspections for hazardous materials.

Hazardous materials regulations require tank cars to carry placards telling railroads and emergency responders what’s inside.

Known internally as “Operation Classification,” regulators began planning the surprise inspections in March, before the Quebec accident, after employees in the field noticed “inconsistencies with crude oil classification,” PHMSA told *Bloomberg*.

The inspection blitz will continue as long as regulators deem it necessary, Quarterman said. Examinations are occurring where crude is loaded and at its destinations, she said.

“Our big concern is that what is in the tank car is what they say is in the tank car,” she said.

SNAPSHOT | Industry Insight

Gauging Potential Outages

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

Despite the best efforts of midstream companies, accidents happen that can cause not only severe injuries to workers and citizens, but cost millions of dollars in both repairs and lost income. In the past several years there have been various pipeline spills and accidents, including the San Bruno, California, explosion, as well as the higher profile incidents like the recent derailment of a crude tanker train in Lac-Mégantic, Quebec. While natural gas processing plants and petrochemical crackers haven't had any major explosions recently, we've seen a series of unplanned outages the past two years that have negatively affected prices and left a storage overhang in the case of many natural gas liquids (NGLs).

Although it is not always the culprit, one aspect that has been overlooked as being at least partially responsible for unplanned downtime has been ineffectual gauges. According to Tony Maupin, senior instrumentation engineer at WIKA Instrument LP, approximately 25% of the gauges that the company inspected as part of its Full Audit Service Team (FAST) program for refineries and chemical plants failed or were in the process of failing. According to the company, this figure can be expanded to 60% to 65% of gauges when counting those found to be just below the failure level. In this case, these gauges are providing accurate readings but will start to fail soon.

WIKA is a manufacturer of pressure gauges and does informal audits for plants and make recommendations for improvements based on these free audits. "What we found was that a high number of these gauges were in trouble to some degree. They have either failed completely, are destroyed or are exhibiting signs that are going to lead to failure very soon," Maupin tells *Midstream Monitor*.

Part of this problem is that gauges receive very little attention from operators, who are focused on more expensive equipment such as pumps and compressors. But this oversight has led to larger failures related to more expensive equipment when the gauges have provided incorrect readings or failed entirely.

He noted that many times these incidents were the impetus for companies calling WIKA requesting an audit, which involves sending in a team of engineers to do an extensive analysis of the pressure gauge population.



Overlooked | Pressure gauge failures are a large part of the cause for unplanned plant outages, according to WIKA Instrument.

These errors aren't just related to gauge failures, but misapplied gauges or ones not meant for the application or pressure for which they're being used. "A lot of gauges may have started out being correctly applied, but there was a failure, and someone on another shift grabs a gauge that has a different pressure range and install it anyway," Maupin said.

He also noted that there instances of gauges being damaged gauges by high temperature vibrations or pulsations without the proper dampening components being installed. "This is the main source of failure that we see—gauges that have been vibrated to the point where the internals have disintegrated or gauges vibrating or pulsing so violently that you can't read them.

According to WIKA, one of the big reasons for such failures occurring is because of the large amount of turnover taking place in the industry as experienced workers retire and are replaced with lesser experienced workers.

"These workers will be well-versed on how to operate the pumps or compressors or the different valve technologies that they have to deal with on a day-to-day basis, but pressure gauges are just not seen as important in many cases as companies view mechanical gauges as providing back-up readings to those on a transmitter," he said.

Because gauges are somewhat of an afterthought, when a failure is noted they are often replaced with incorrect technologies similar to replacing a light bulb with the wrong wattage, which can lead to power outages or fires.

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LEAD STORY | From The Front

Continued from
 **Page 1**

“Prices have come down because production of gas and NGLs continues to increase in the U.S. We think NGL production will be north of 3 million bbl. per day sometime in the next several years,” he said.

While short-term prices remain a large focus for every company in the industry, van Kempen said they shouldn't completely dictate decision making by midstream companies. “You have to look at the macro view when building long-lived assets that are going to be around for 30 to 50 years. At the same time, you do need to think of how to protect your downside on the short-term for prices so you have opportunities to mitigate this downside while keeping the upside open. It really comes down to a question of whether you believe in the basin and industry.”

The company has executed on a lot of growth projects, and that is paying off even as the industry recovers from a pricing slump. As a result of production increases, the DCP Midstream enterprise installed a 200 million cubic feet (MMcf) per-day processing plant in the Eagle Ford earlier this year, with another 200 MMcf per-day plant under construction in the play. In addition, the enterprise is building a 110 MMcf per-day plant in Weld County that will be expanded to 160 MMcf per day immediately upon completion of construction. The company's 75 MMcf per-day Rawhide Plant in Glasscock County, Texas, began commercial operation during the third quarter. The company is also set to build the 200 MMcf per-day Lucerne II Plant in Weld County, Colorado, which is expected to be in service in 2015.

These facilities are being built to handle not only current production levels, but also increased end-user demands as the petrochemical industry completes its own infrastructure build-out over the next few years. The company has a super-system strategy in place, where it seeks to achieve critical mass through intercon-

nected infrastructure in various plays throughout the country, allowing it to provide producers with a full complement of mid-stream services.

DCP Midstream had its largest organic capital deployment in its history in 2012 when it was more than \$2.5 billion, with the largest investment being the \$1 billion Southern Hills and \$1 billion Sand Hills NGL pipeline projects, which are one-third owned by DCP Midstream and its joint venture owners Phillips 66 and Spectra Energy. Combined, these pipelines have the capacity to transport more than 375,000 bbl. per day, which helped make the company the third largest operator of NGL pipelines in the country, van Kempen said.

While large infrastructure projects get the headlines, he told *Midstream Monitor* that the real focus for the company is on what it calls operational excellence. “It takes an amazing amount of work to build the NGL pipelines and our new processing plants. And, when you go through a huge growth period in your company it is very exciting, but at times people don't focus as much on the day-to-day aspects. These day-to-day operations are what earn us the right to grow our company. You always have to wake up and think about what is best for the customer.”

The company is also proud of its safety record, which is part of its focus on operational excellence. “We had record safety performance in 2012. ... If you compare our safety record with that of our peer companies, ours really stands out,” van Kempen said. “In the end, it's all about making sure that 3,200 people make it back home safe to their families every night, and our employees have done a really good job.”

With a footprint that spans 18 states, the company has primarily focused on organic growth projects to expand its scope in the regions it currently operates.

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