

MIDSTREAM Monitor

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Kinder: Environmentalist Strategy Blocks Midstream

By Joseph Markman, Hart Energy



A crew positions pipe for the Anchor Loop section of Kinder Morgan Inc.'s Trans Mountain Pipeline expansion. Completion of the system has been delayed by opposition from an environmental movement determined to stop the company from acquiring the necessary permits, Chairman and CEO Rich Kinder told industry executives at the recent IHS CERAWeek conference in Houston. *Source: Kinder Morgan Canada Inc.*

HOUSTON—An increasingly sophisticated environmental movement has exploited the pipeline permit approval process to hamstring energy companies, midstream titan Richard Kinder told attendees at the recent IHS CERAWeek conference in Houston, making clear that he wants the industry to fight back.

“It’s difficult to go up and shut down the oil sands,” he said of environmentalists during a discussion with Daniel Yergin, conference chairman and vice chairman of IHS. “It’s difficult to shut down the Eagle Ford or the Bakken or the Permian, but if you can stop pipelines from moving natural gas or crude oil or condensate, the theory is that you can put so much pressure on the upstream part of the business that you can have them quit drilling or slow down.”

Prime examples of slowdowns include TransCanada Corp.’s Keystone XL Pipeline and Kinder Morgan’s own Trans Mountain Pipeline System, which is awaiting permit approvals to expand its capacity from 300,000 barrels per day (Mbbbl/d) to 890 Mbbbl/d of Canadian crude oil from Alberta to the Port of Vancouver, British Columbia. In the U.S., a lack of pipeline infrastructure to carry gas from the Marcellus and Utica shale plays has contributed to consumers in New England paying the highest rates in the country for natural gas and electricity.

“To me, it’s a very spurious argument in the sense that I don’t know what the hell they’re going to replace all this fossil fuel with,” Kinder said. “We can talk all we want about renewables and I’m a believer that we should do all of the above, but there’s no way, for example, to replace the impact of fossil fuels.”

The energy sector needs to promote its role as an important segment of the industrial sector, he urged.

“We have done more as an industry to advance the cause of raising living standards across the globe than any other industry I can think of,” Kinder said. “We need to do a better job of selling how important what we do really is. Sometimes I think we hide behind it like we’re selling cigarettes.”

Kinder later confessed to reporters that his company was taken aback by the ferocity of the campaign against Trans Mountain.

“Yes, I was surprised by the pushback,” he said. “I’m not asking to build a new line. This is a 300,000 barrel per day line and it has been around for 50 years. I’ve been astounded by all of the opposition, but almost all of it has been concentrated in the last 30 miles, which is the lower mainland. I think that a lot of this is just seeing the pipelines as a choke point to get at production in the oil sands. There are people in Canada and the United States who just want to strangle that altogether.”

The wide-ranging discussion also touched on crude by rail. Kinder, whose company operates 84,000 miles of pipelines, admitted to having adjusted his perspective and strategy.

“Rail has its place,” said Kinder, who added that the company’s 250 Mbbbl/d-capacity Edmonton, Alberta, rail terminal is about to come online. “I used to not think that as a pipeliner. I thought, well, rail is an interim step and as soon as you can pipe something up, rail goes away.”

The volatility in crude prices cements rail’s place in the process, though Kinder maintains his view that pipelines are the safest and cheapest way to move hydrocarbons.

“I think you’re going to see, both on the supply side and the demand side, a preference for having part of the supply move out by rail,” he said. “I don’t know what that is—10% or 20%—but with rail, you

don't have to make as long a commitment and you have more optionality to take into account the volatility of pricing. If one day you want to move it to Baton Rouge and the next day to L.A. [to capture arbitrage], you can do that.”

The Ideal Opportunity

By Brian Mothersole, Hart Energy



HOUSTON—Midway through CERAWeek, four diverse panelists convened to discuss LNG in the context of the lower oil price environment, and their perspectives provide an interesting perspective of where the industry is heading.

Rich Coleman

Rich Coleman, the deputy premier and minister of natural gas development in British Columbia, maintained the long view of oil prices and focused on the structural role he thought governments should provide for a stable and attractive investing environment.

“We recognize that lower oil prices can be a constraint, but we’re of the view that in the long term, it is not going to affect our ability to go ahead.”

He feels “optimistic” about LNG development after several recent meetings with prospective proponents.

“What we’ve spent the last three to four years doing is building every piece of the puzzle, whether that be the LNG tax, the royalty regime or long-term royalty curves.” He also confirmed that Canada increased its capital cost allowance, which would give greater tax benefits, and that Canada has extended natural gas export permits from the traditional 25 years to 40, hoping to provide a more attractive environment.

“We see our job as certainty, clear rules, being globally competitive and being a jurisdiction where people want to invest.”

He said during the question and answer session that he expects one of the projects to take FID this summer.

“The reality is, they think long term, and that’s why they’re successful. So we’re thinking long term, and that’s how we’ll be successful.”

Rokas Masiulis

Rokas Masiulis, the minister of energy of the Republic of Lithuania, was coming fresh off the initiation of his country’s first LNG import terminal, and he devoted much of his time to expounding the benefits of multiple sources of gas. The most important effect, he argued, was the dissolution of a tainting connection between economics and politics.

“So politics really work in energy in our part of the world, with Russia clearly using energy as a political tool. So, in our mind, when we talk about energy, we talk about politics at the same time because it comes together. It is clearly inseparable in our part of the world.”

Commissioning the floating storage and regasification unit *Independence* at the close of last year symbolized an economic and political independence, in addition to simply securing gas supplies that couldn’t be used as a political weapon.

“From now on, we can be sure that we will receive gas when it is needed.” He said that his ministry’s mindset is energy security first, and price is a secondary priority.

With more sources of LNG, including from the U.S. and Canada, and more interconnections between once isolated and dependent gas markets, especially in Eastern Europe, Lithuania hopes to cut down on its natural gas costs, which were once higher than Japan’s. Since building its LNG terminal, Masiulis said his country has already received a discount of 23% from Gazprom. Additionally, the minister believes the country can finally de-couple politics and economics.

“This is where the U.S. can play a role. You all are businessmen. You just send gas, you receive money, and everybody’s happy. You’re not thinking of how you can”—and here he rotated his hand, as if twisting a dial—“influence gas supplies. You don’t have a political agenda.”

All of those years of influence from Gazprom gave gas a bad name in Eastern Europe, he said.

“Please, Americans, send gas, and give gas a better name.”

Martin Houston

Long-time advocate, commentator and innovator in the LNG industry Martin Houston, CEO of Parallax Energy, said that lower oil prices are both a challenge and an opportunity.

“It’s an opportunity for us to rebase ourselves from a long period where we have been, quite frankly, fat and happy.”

He championed mid-scale development of LNG, by which he meant a starting proposal of about 2.5 million tonnes per annum, as a way to offer buyer choice and reform costs. He said they have a simple goal at his company, Parallax Energy: “to resolve for only one variable, and that variable is cost. And the cost needs to be at or below \$500 per installed tonne.”

LNG may be cheap for the moment, but once the excess is soaked up with the new markets that are opening over the next couple of years, supply will tighten and volatility will rise.

“So in this low price environment,” he said, “the fundamentals are increasingly going to decide the outcomes. It isn’t going to be a matter of force-fitting projects into politically charged relationships. This is about lower cost products going into markets that want competitively priced energy. The weaker projects may well lose their nerve in this.”

In addition to cost, Houston proclaimed that the new delivered ex-ship ceiling cost for LNG to Tokyo would be about \$11 per million Btu. Proponents have to consider cost above all else and, once they do, then perhaps they could even take on coal.

Also, proponents will want to keep projects simple, in line with this idea of tackling costs. Megaprojects will be displeasing to buyers and cause “indigestion” in the market.

“It’s morsels,” he said. “The industry’s growing by morsels.” Offer smaller morsels with shorter contracts, he said.

On the whole, though, Houston is excited.

“Well, look, I don’t think there’s ever been a better time to be in this business. It’s fragmenting; it’s no longer homogeneous. Anyone can play, and there’s great opportunity.”

Gordon Shearer

Gordon Shearer, CEO of Shearer LNG, bemoaned the lack of translation between lower prices and higher demand in LNG end-user markets. Especially in Asian markets, “there’s no way to stimulate a demand for that incremental cargo in the end-user market. Utilities don’t use natural gas; they sell natural gas to customers who use gas. And in a market where basically the interface is between the end customer who is going to be really stimulated into burning or buying more energy product as a result of lower prices, that interface essentially obscures the price signal that low prices could send to the marketplace.”

Few markets could react as quickly to a change in supply and demand as the U.S. market did in the shale boom, and that market rigidity may prove a problem in a low-price environment.

“You know, I often say, we sitting here in North America often look at these things with a North American lens on, but as Dorothy said to Toto at the beginning of ‘The Wizard of Oz,’ ‘We’re not in Kansas anymore.’”

“When you leave and get on a plane and fly across the Pacific or Atlantic, you’re entering into a totally different frame of reference, and I think one of the challenges of the industry is, how do we get through that maze that’s distorting those price signals to the market?”

Shearer, on the whole, left the crowd feeling rather optimistic in his concluding remarks.

“It [the industry] is going to get a good sweating; that’s what OPEC used to do to the oil market, and it’s what low prices are going to do to the LNG industry. And it’s good; it’s going to force a lot of the crazy ideas out; those are the ones that really don’t make any commercial or economic sense. It’s going to create opportunities for people to innovate. It’s going to reward experience and fast thinking and light-footedness. And interest rates are low; it’s a heck of a time to be out there financing things, and people are looking for places to invest capital. This industry has a tremendous future in front of it; I look at it as an ideal opportunity.”

Compressor Manufacturer Starts Up First US Site Near Houston

By Caryn Livingston, Hart Energy



MCO-I began operations at its manufacturing and service facility in Pearland, Texas, outside Houston. All photos courtesy of Mitsubishi Heavy Industries Compressor International Corp.

Mitsubishi Heavy Industries Compressor International Corp. (MCO-I) began operations at its manufacturing and service facility in Pearland, Texas, outside Houston, the company said in an April 23 statement. The new Pearland Works complex handles packaging, shipping, storage, service and maintenance of compressors and mechanical drive steam turbines.

MCO-I was established in the U.S. in October 2012, the company's president Gampa Bhat told Hart Energy. The Pearland Works facility is the first U.S.-based industrial facility for the Japan-owned company, which currently holds all of its manufacturing capabilities in Hiroshima. The company's move to the Houston area was driven by the demand growth for compressors as shale gas production increases. "Our footprint in the U.S.A. in the last two or three years has been increased tremendously," Bhat said.

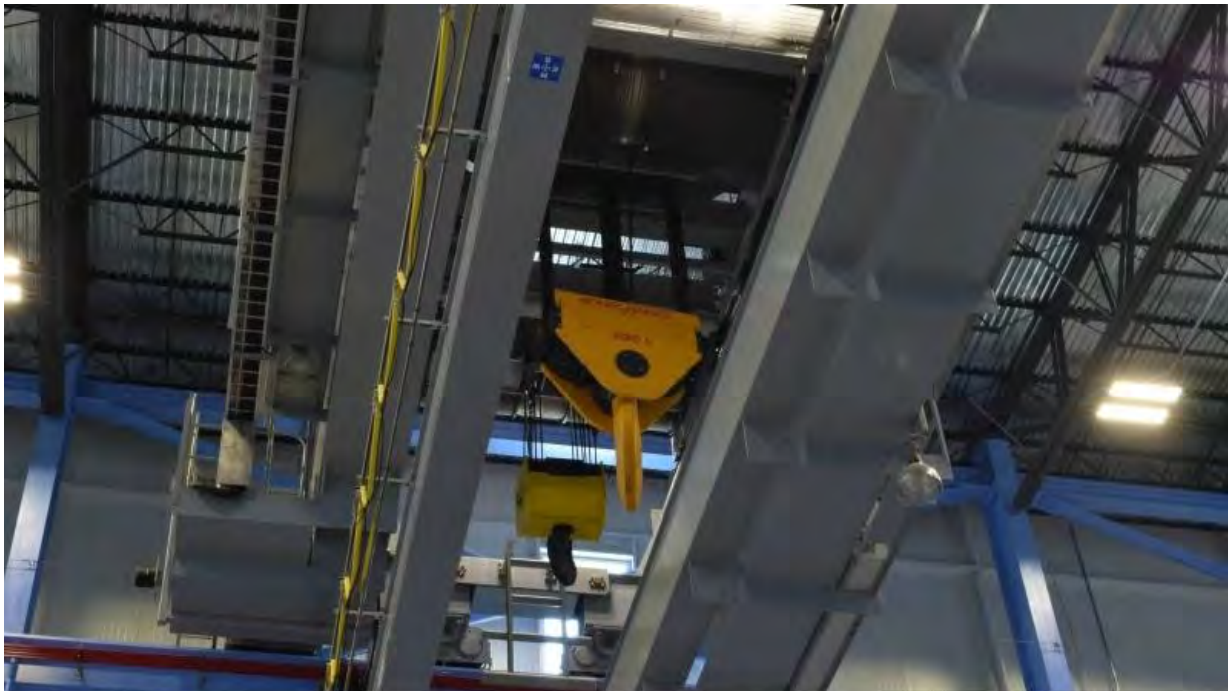
"What we are trying to do in America is bring a manufacturing, service maintenance and repair facility which we have been providing our customers over the years from Japan," Bhat said. As MCO-I's global market share for compressors grows, the decision to build a Houston-area facility was the best way for the company to serve its American customers, Bhat said. The Pearland facility will be a huge advantage to North American customers, he said, as it "decreases lead time ... We are closer to the customers [for all steps of the compressor purchasing process] including the installation, start-up, maintenance support, [and] the storage, and then in future, [we will be able to] provide parts manufacturing capabilities."

Regarding the general slowdown in the energy industry due to lower oil prices, Bhat said MCO-I was largely unaffected.

“What we have seen in the oil market is that always, it fluctuates,” he said. “When the oil price is lower, it’s historically the petrochemical side, gas side—their business booms because the cost of energy’s a little lower.” And a boom for the petrochemical industry gives an edge to MCO-I, Bhat said.

“We are the primary compressor supplier for the petrochemical industry.”

Additionally, while some of the mega-projects may be delayed while prices remain low, many of the projects moving forward are smaller. That, Bhat said, gives MCO-I an advantage because “our technology allows us to maintain the compressor trains suitable for the smaller petrochemical industry, smaller pipeline industry type.”



MCO-I purchased \$26 million of new manufacturing equipment, as well as the 300-ton overhead crane pictured here, to allow for accommodation of various-sized machines.

Manufacturing capabilities at the facility will allow for “anywhere from 10,000 horsepower (hp) smaller types of trains all the way to LNG,” Bhat said. For particularly large compressors, he said the company would continue to manufacture compressors with up to about 100,000 hp in Hiroshima, “but bring them over here and package it and test it and send it to a customer.”

Bhat said that MCO-I already invested more than \$75 million in the Pearland Works facility for its first phase. The 180,000 square foot facility currently offers capabilities for packaging and assembly, vertical and horizontal rotor storage, repair and maintenance services, administrative offices and training. According to a statement from the company, \$26 million of new manufacturing equipment has also been purchased as well as a 300-ton overhead crane to allow for accommodation of various-sized machines.

While this grand opening marks the completion of phase one for the Pearland site, the company anticipates implementing a second phase at the facility to allow for testing and full manufacturing capabilities, according to the company's statement. Once both stages are complete, Bhat said that Pearland Works will employ more than 200 people. Most employees would be in engineering and machining positions. Though he didn't commit to a definite start-up date for the facility's second phase, Bhat said, "The timeline we're anticipating [for phase two implementation is] within the first quarter of 2017."

Parallax Takes On Second Gulf Coast LNG Project With Louisiana Deal

By Darren Barbee, Hart Energy



Houston's Parallax Energy has purchased Louisiana LNG Energy LLC, a private company working toward exports of billions of cubic feet (Bcf) of LNG annually.

Louisiana LNG had intended to transfer controlling interest to financial backer ArLight Capital Partners LLC. Instead, Parallax has taken on its second Louisiana mid-scale natural gas liquefaction and export project.

Terms of the deal were not disclosed. In Parallax's other LNG project, Live Oak LNG, the company has pledged \$2 billion in investment to develop a liquefaction facility and LNG export terminal near Lake Charles, La.

Louisiana LNG, also based in Houston, is being developed in Plaquemines Parish, La., on the east bank of the Mississippi River between New Orleans and Venice, La.

The company applied to the Office of Fossil Energy (FE) of the Department of Energy (DOE) on Feb. 18, 2014, to export about 97 Bcf per year or about two million metric tons (MMtpa) of LNG. Permits were filed to export LNG to Free Trade Agreement (FTA) and non-FTA countries.

The start-up date is anticipated for late 2019, said Martin J. Houston, Parallax chairman and founding partner. Houston is former COO and executive director of BG Group Plc, where he led efforts to create that company's world-leading LNG business.

"The addition of Louisiana LNG to our company sets the Parallax strategy firmly into motion," he said. "We have an innovative, efficient and cost effective way to safely produce what customers want—smaller amounts of LNG that they can purchase incrementally."

Houston said one of Parallax's core tenets is to design once and build many times.

"Louisiana LNG has a great head start and we are fortunate they selected the same technology and world class partners," Martin said. "We will be working with Bechtel on pre-engineering design and Chart for process design for both Louisiana LNG and Live Oak LNG. In addition, both projects have great locations with excellent pipeline supply and deep water access."

In its application, Louisiana LNG said its liquefaction facility would consist of four 74,380 Mcf/d liquefaction trains with an annual capacity of about 100 Bcf of LNG.

Two amine and dehydration units would be added upstream of the four liquefaction trains to remove residual moisture, CO₂ and NGL. The liquefaction facility was to be built in a modular fashion and assembled on-site.

The company requested authorization to export 97 Bcf per year of domestically-produced LNG for a 25-year period.

The company also planned to construct a 2.3-mile, 24-inch pipeline to connect with the High Point Gas Transmission interstate pipeline system, its application said.

Parallax is developing global LNG projects and said it has expertise in every aspect of the LNG chain from upstream gas supply, trading, liquefaction to shipping and marketing. The company is based in Houston.

ArcLight, which said it would fund Louisiana LNG in May 2014, did not respond to a request for comment.

LNG Exports

Louisiana LNG won approval for exports to FTA countries in August. It is awaiting DOE approval for non-FTA exports.

The U.S. has FTA agreements with Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Oman, Panama, Peru, South Korea and Singapore.

About 54 companies have applied for applications to export LNG to FTA and non-FTA countries. Out of all applicants, only eight companies have applied to export more than 2 Bcf/d. The DOE has approved nine companies for exports to non-FTA countries.

If all applications were granted, roughly 47.05 Bcf/d would be exported to FTA countries and 40.31 Bcf/d to non-FTA countries.

| Long Term LNG Export Application Status | | | |
|--|--------------|------------|----------------|
| Company | Bcf/d | FTA | Non-FTA |
| Sabine Pass Liquefaction | 2.2 | Approved | Approved |
| Freeport LNG Expansion and FLNG Liquefaction | 1.4 | Approved | Approved |
| Lake Charles Exports | 2 | Approved | Approved |
| Carib Energy (USA) | 0.03 | Approved | Approved |
| Dominion Cove Point LNG | 1 | Approved | Approved |
| Jordan Cove Energy Project | 1.2 | Approved | Approved |
| Cameron LNG | 1.7 | Approved | Approved |
| Freeport LNG Expansion and FLNG Liquefaction | 1.4 | Approved | Approved |
| Gulf Coast LNG Export | 2.8 | Approved | Under review |
| Gulf LNG Liquefaction Co. | 1.5 | Approved | Under review |
| LNG Development Co. (d/b/a Oregon LNG) | 1.25 | Approved | Approved |
| SB Power Solutions Inc. | 0.07 | Approved | N/A |
| Southern LNG Co. | 0.5 | Approved | Under review |
| Excelerate Liquefaction Solutions I | 1.38 | Approved | Under review |
| Golden Pass Products | 2 | Approved | Under review |
| Cheniere Marketing | 2.1 | Approved | Under review |

| | | | |
|-------------------------------|-------|----------|--------------|
| Main Pass Energy Hub | 3.22 | Approved | N/A |
| CE FLNG | 1.07 | Approved | Under review |
| Waller LNG Services | 0.16 | Approved | Under review |
| Next Decade Partners | 1.09 | Approved | Under review |
| Magnolia LNG | 0.54 | Approved | N/A |
| Lake Charles LNG Export Co. | 2 | Approved | Under review |
| Gasfin Development USA | 0.2 | Approved | Under review |
| Freeport-McMoRan Energy | 3.22 | Approved | Under review |
| Sabine Pass Liquefaction | 0.28 | Approved | Under review |
| Sabine Pass Liquefaction | 0.24 | Approved | Under review |
| Venture Global Calcasieu Pass | 0.67 | Approved | Under review |
| Advanced Energy Solutions | 0.02 | Approved | N/A |
| Argent Marine Management Inc. | 0.003 | Approved | N/A |
| Eos LNG | 1.6 | Approved | Under review |
| Barca LNG | 1.6 | Approved | Under review |
| Sabine Pass Liquefaction | 0.86 | Approved | Under review |
| Delfin LNG | 1.8 | Approved | Under review |
| Magnolia LNG | 0.54 | Approved | Under review |

| | | | |
|-----------------------------------|-------|----------|--------------|
| Annova LNG Common Infrastructure | 0.94 | Approved | N/A |
| Texas LNG | 0.27 | Approved | Under review |
| Louisiana LNG Energy | 0.28 | Approved | Under review |
| Alturas | 0.2 | Pending | N/A |
| Strom Inc. | 0.08 | Approved | N/A |
| Strom Inc. | 0.02 | n/a | Under review |
| Strom Inc. | 0.02 | n/a | Under review |
| SCT&E LNG | 1.6 | Approved | Under review |
| Venture Global Calcasieu Pass | 0.67 | Approved | Under review |
| Sabine Pass Liquefaction | 0.56 | Approved | N/A |
| Downeast LNG | 0.46 | Approved | Under review |
| Cameron LNG | 0.42 | Approved | N/A |
| Air Flow North America Corp. | 0.002 | n/a | Under review |
| American LNG Marketing | 0.008 | Approved | Under review |
| Venture Global Calcasieu Pass | 0.36 | Pending | Under review |
| American LNG Marketing | 0.08 | Pending | N/A |
| Cameron LNG | 1.41 | Pending | N/A |
| Floridian Natural Gas Storage Co. | 0.04 | Pending | Under review |

| | | | |
|--|------|--------------|--------------|
| G2 LNG | 1.84 | Pending | Under review |
| Port Arthur LNG | 1.42 | Pending | N/A |
| Total FTA/Non-FTA exports (Bcf/d) | | 47.05 | 40.31 |

**Company names, export quantities may have changed.*

Source: Department of Energy, Hart Energy

Frac Spread: WTI Prices Reach Yearly High, NGL Prices Don't Follow

By Frank Nieto, Hart Energy



West Texas Intermediate (WTI) crude oil continued to improve the week of April 22 as its price was just under \$60 per barrel (bbl). This was a result of storage declining at the Cushing, Okla., hub with increasing refinery runs that hit 95% last week.

This situation is expected to continue according to Global Hunter Securities. "Assuming refinery outages remain low and assuming Bakken and Canadian inflows are moderately lower, then Cushing should continue to signal gradually lower oil inventories," the investment firm said in an April 30 research note.

Since Cushing plays such an important role in the U.S. crude market, working the big storage off at the hub would have a very positive impact on the market. However, there are still weak fundamentals at play that make a price recovery difficult.

Barclays Capital noted that given record high storage levels, low spare capacity won't be able to have as positive an impact on prices as it did in 2007. Though Barclays is maintaining a more bearish outlook, the firm did raise its price deck by \$8 based on unrest in the Middle East, new outages that are on par with levels last May when prices were \$109/bbl and lower U.S. gas prices.

While prices aren't far from meeting the level needed to hit Barclays' demand scenario, volatility is still expected. "WTI must average in the mid-\$60s next year in order for U.S. tight oil to show net growth sufficient to meet our demand forecast. In the meantime, we think the market is set to fluctuate between two poles: \$75 and \$55 Brent. In this environment, we expect the oil price to remain volatile

and eventually gravitate towards \$75/bbl by late 2016,” the investment firm said in an April 28 research note.

Surprisingly the uptick in WTI crude didn't have a correlative effect on liquids prices as heavy NGL prices were down at both hubs as the market is well balanced after the large gains posted the previous week. Frac spread margins for heavy NGL was also down this week as gas prices posted gains while power generation demand is up this year with lower prices. The Conway price for natural gas rose 2% to \$2.41 per million Btu (MMBtu) and the Mont Belvieu price improved 3% to \$2.58/MMBtu.

Propane prices followed the lead of heavy NGL prices as they fell at both hubs due to storage levels remaining extremely high and growing as stocks rose by just under 2 MMbbl last week. According to PIRA Energy Group, propane storage levels are 57.5 MMbbl, or 31 MMbbl higher than last year at the same time.

Ethane was the lone bright spot for NGL prices this week as the product posted gains at both hubs. The Mont Belvieu price was up 3% to 18 cents per gallon (gal), its highest price since the week of March 18 when it was also 18 cents/gal. The Conway price rose 10% to 17 cents/gal, the hub's highest price since it was 18 cents/gal the final week of March.

The theoretical NGL bbl price was down very slightly at Conway to \$21.62/bbl with a 2% decline in margin to \$12.82/bbl while the Mont Belvieu price fell 1% to \$23.54/bbl with a 4% drop in margin to \$14.11/bbl.

The most profitable NGL to make at both hubs was C₅₊ at 97 cents/gal at Conway and \$1.03/gal at Mont Belvieu. This was followed, in order, by isobutane at 38 cents/gal at Conway and 42 cents/gal at Mont Belvieu; butane at 34 cents/gal at Conway and 39 cents/gal at Mont Belvieu; propane at 26 cents/gal at Conway and 32 cents/gal at Mont Belvieu; and ethane at 1 cent/gal at both hubs.

The U.S. Energy Information Administration reported that natural gas storage injections were 81 billion cubic feet (Bcf) to 1.71 trillion cubic feet (Tcf) the week of April 24 from 1.629 Tcf the previous week. This was 77% higher than the 969 Bcf posted last year at the same time and 4% lower than the five-year average of 1.785 Tcf.

Cooling demand should increase the first week of May as the National Weather Service is forecasting warmer-than-normal temperatures along both the East and West coasts as well as much of the Midwest and the Gulf Coast.

| NGL PRICES | | | | | | |
|--------------------------|------------|------------|-------------|------------|-------------|----------------|
| Mont Belvieu | Eth | Pro | Norm | Iso | Pen+ | NGL Bbl |
| April 22 - 28, '15 | 17.62 | 56.02 | 65.30 | 67.42 | 131.48 | \$23.54 |
| April 15 - 21, '15 | 17.03 | 56.70 | 65.66 | 68.16 | 134.28 | \$23.76 |
| April 8 - 14, '15 | 16.40 | 53.08 | 62.42 | 64.60 | 119.88 | \$21.98 |
| April 1 - 7, '15 | 16.65 | 52.95 | 63.33 | 64.58 | 122.73 | \$22.25 |
| March '15 | 18.15 | 54.72 | 64.30 | 65.48 | 119.85 | \$22.57 |
| February '15 | 18.19 | 57.06 | 68.02 | 69.98 | 116.61 | \$22.95 |
| 4th Qtr '14 | 20.22 | 76.90 | 96.73 | 98.28 | 149.25 | \$30.10 |
| 3rd Qtr '14 | 23.19 | 103.92 | 123.69 | 128.39 | 212.20 | \$40.27 |
| 2nd Qtr '14 | 29.26 | 106.55 | 124.12 | 130.23 | 222.81 | \$42.31 |
| 1st Qtr '14 | 34.50 | 129.51 | 137.62 | 141.49 | 212.60 | \$46.16 |
| April 23 - 29, '14 | 29.98 | 111.02 | 126.58 | 129.86 | 226.50 | \$43.32 |
| Conway, Group 140 | Eth | Pro | Norm | Iso | Pen+ | NGL Bbl |
| April 22 - 28, '15 | 16.60 | 48.36 | 58.88 | 62.42 | 123.48 | \$21.62 |
| April 15 - 21, '15 | 15.15 | 49.56 | 60.26 | 64.42 | 123.60 | \$21.66 |
| April 8 - 14, '15 | 14.98 | 47.54 | 58.52 | 63.48 | 115.00 | \$20.69 |
| April 1 - 7, '15 | 16.55 | 47.28 | 59.60 | 66.10 | 114.55 | \$21.01 |
| March '15 | 17.81 | 49.99 | 61.09 | 72.97 | 110.31 | \$21.52 |
| February '15 | 17.56 | 53.62 | 67.06 | 82.14 | 113.63 | \$22.69 |
| 4th Qtr '14 | 18.69 | 78.64 | 102.72 | 113.19 | 146.37 | \$30.77 |
| 3rd Qtr '14 | 20.38 | 104.99 | 123.51 | 140.07 | 207.90 | \$40.18 |
| 2nd Qtr '14 | 26.26 | 105.44 | 121.26 | 163.00 | 221.62 | \$42.62 |
| 1st Qtr '14 | 25.46 | 169.48 | 132.08 | 147.10 | 216.86 | \$49.93 |
| April 23 - 29, '14 | 25.56 | 108.80 | 123.06 | 185.80 | 226.46 | \$43.95 |

| CURRENT FRAC SPREAD (CENTS/GAL) | | | | |
|---|---------------|----------------------------------|---------------------|------------------|
| May 1, 2015 | Conway | Change from Start of Week | Mont Belvieu | Last Week |
| Ethane | 16.60 | | 17.62 | |
| Shrink | 15.98 | | 17.11 | |
| Margin | 0.62 | 210.41% | 0.51 | 13.10% |
| Propane | 48.36 | | 56.02 | |
| Shrink | 22.08 | | 23.63 | |
| Margin | 26.28 | -5.62% | 32.39 | -4.18% |
| Normal Butane | 58.88 | | 65.30 | |
| Shrink | 24.99 | | 26.75 | |
| Margin | 33.89 | -5.03% | 38.55 | -2.99% |
| Isobutane | 62.42 | | 67.42 | |
| Shrink | 24.00 | | 25.70 | |
| Margin | 38.42 | -5.88% | 41.72 | -3.55% |
| Pentane+ | 123.48 | | 131.48 | |
| Shrink | 26.73 | | 28.61 | |
| Margin | 96.75 | -0.58% | 102.87 | -3.46% |
| NGL \$/Bbl | 21.62 | -0.18% | 23.54 | -0.92% |
| Shrink | 8.80 | | 9.42 | |
| Margin | 12.82 | -1.42% | 14.11 | -3.50% |
| | | | | |
| Gas (\$/mmBtu) | 2.41 | 1.69% | 2.58 | 3.20% |
| Gross Bbl Margin (in cents/gal) | 28.60 | -1.70% | 32.10 | -3.56% |
| NGL Value in \$/mmBtu (Basket Value) | | | | |
| Ethane | 0.91 | 9.57% | 0.97 | 3.46% |
| Propane | 1.68 | -2.42% | 1.94 | -1.20% |
| Normal Butane | 0.64 | -2.29% | 0.71 | -0.55% |
| Isobutane | 0.39 | -3.10% | 0.42 | -1.09% |
| Pentane+ | 1.59 | -0.10% | 1.70 | -2.09% |
| Total Barrel Value in \$/mmbtu | 5.21 | 0.18% | 5.74 | -0.62% |
| Margin | 2.80 | -1.09% | 3.16 | -3.54% |

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 Shio Channel.

| RESIN PRICES – MARKET UPDATE – MAY 1, 2015 | | | | | |
|--|-----------|-------|-------|----------|-------|
| TOTAL OFFERS: 16,572,876 lbs | | SPOT | | CONTRACT | |
| Resin | Total lbs | Low | High | Bid | Offer |
| HDPE - Blow Mold | 2,920,600 | 0.595 | 0.67 | 0.595 | 0.635 |
| HDPE - Inj | 2,689,612 | 0.6 | 0.675 | 0.605 | 0.645 |
| LDPE - Film | 2,628,692 | 0.61 | 0.725 | 0.63 | 0.67 |
| PP Homopolymer - Inj | 2,127,956 | 0.61 | 0.76 | 0.62 | 0.66 |
| LLDPE - Film | 2,118,484 | 0.565 | 0.68 | 0.61 | 0.65 |
| LDPE - Inj | 1,190,484 | 0.575 | 0.68 | 0.655 | 0.695 |
| HMWPE - Film | 1,146,392 | 0.59 | 0.68 | 0.625 | 0.665 |
| PP Copolymer - Inj | 1,009,460 | 0.65 | 0.77 | 0.64 | 0.68 |
| LLDPE - Inj | 741,196 | 0.59 | 0.675 | 0.635 | 0.675 |

Source: Plastics Exchange – www.theplasticsexchange.com

PBF Energy In Talks With Affiliate For Midstream Dropdown

PBF Energy Inc. (NYSE: PBF) is in discussions with its affiliated MLP to drop down assets to increase the partnerships EBITDA, the company said April 30.

Tom Nimbley, PBF Energy's CEO, said, the company is in discussions with PBF Logistics LP (NYSE: PBFX) about the potential contribution of a pipeline and loading rack “as part of our ongoing effort to unlock value in our logistics infrastructure.”

PBF Energy's Delaware City Products Pipeline and Truck Rack are located at the company's Delaware City Refinery and supply refined petroleum products into the Northeast market.

The pipeline, with 125,000 barrels per day capacity, connects the Delaware City refinery to critical distribution facilities in Pennsylvania and New York. The Truck Rack is a 15-lane loading rack with a capacity of 76,000 barrels per day.

“We expect that the potential acquisition of the Delaware City Products Pipeline and Truck Rack by PBF Logistics LP would be supported by proposed 10-year term agreements with subsidiaries of PBF Energy containing minimum volume throughput commitments,” the company said.

The potential transaction is currently being reviewed by the MLPs conflicts committee and their advisers, Nimbley said.

“We have also identified additional assets which we believe could increase our backlog of MLP-qualifying EBITDA to approximately \$200 million.” Nimbley said. Any transaction would be subject to negotiation and execution of a definitive contribution agreement.

PBF Energy's financial results reflect the consolidation of the financial results of the PBF MLP. PBF indirectly owns the MLP's general partner and about 52.1% of the limited partner interests as of the end of first-quarter 2015.

Canadian Pipeline Builders Sign No-Crude Commitments

Bloomberg

Canada's energy industry may have figured out how to build a pipeline without the uproar that stalled Keystone XL: promise it will never carry oil.

Plans to transport natural gas to multibillion-dollar shipping terminals proposed by the likes of Royal Dutch Shell Plc are winning favor in British Columbia as TransCanada Corp. and other pipeline builders sign no-crude commitments. The terms are helping allay fears about future oil spills from lines designed to carry gas.

The pledges for a crude-free route to Canada's Pacific Coast are being made as TransCanada faces mounting opposition to its plan to convert a gas pipe to send oil to the Atlantic. The C\$12 billion (\$10 billion) Energy East would be North America's largest oil pipeline and would provide an alternative to the Keystone link to the Gulf of Mexico.

In British Columbia, TransCanada's Prince Rupert Gas Transmission line won't carry oil, according to a compensation agreement the company announced last week with the 600-member Kitselas First Nation. The aboriginal community has rights to hunt and fish along the path of the 900-kilometer (559-mile) line, which would feed a liquefied natural gas terminal proposed by Petroliam Nasional Bhd.

“It was the game-changer we all needed to hear,” Kitselas Chief Councillor Joe Bevan said in a phone interview. “If a gas line breaks, it's going to add to greenhouse gases, let's not kid ourselves, but it's less intrusive than oil.”

The Kitselas first asked TransCanada to vow it won't transport oil back in 2012, when the project's opponents were stoking fears on social media about the threat of spills, Bevan said. The company, which was under siege from environmental groups opposing Keystone XL, quickly agreed.

British Columbia, where Greenpeace was born, has become a battleground for groups seeking to stop oil-sands development over environmental impacts including carbon emissions. Plans by Enbridge Inc. and Kinder Morgan Inc. to carry crude from Alberta to coastal waters for export are being delayed after facing scrutiny for the risk of pipeline and tanker spills.

For TransCanada, it's been important to keep talks with aboriginal groups and the provincial government focused on gas, Chief Executive Officer Russ Girling said this month in an interview at Bloomberg's Toronto office.

In January, after concerns raised by aboriginal groups, the provincial government introduced regulation barring conversions for six lines proposed to supply gas export projects, including two that would be built by TransCanada.

Other proponents of gas pipelines in Canada's westernmost province include Spectra Energy Corp., Chevron Corp., Fortis Inc. and Pacific Northern Gas Ltd.

"In our discussions with local communities including aboriginal communities, we've had to commit that we would never convert our gas pipeline to an oil pipeline," Girling said. "My guess is down the road there will be a rational discussion around oil, too."

Energy Transfer Partners, Regency Successfully Complete Merger

Business Wire

Energy Transfer Partners LP (NYSE: ETP) and Regency Energy Partners LP announced the completion of their previously announced merger of an indirect subsidiary of ETP, with and into Regency. Regency survived the merger as a wholly owned subsidiary of ETP.

Effective with the opening of the market on April 30, Regency ceased to be a publicly traded partnership, and its common units discontinued trading on the New York Stock Exchange.

Under the terms of the merger, each Regency common unit and Class F unit will be converted into the right to receive 0.4124 ETP common units. Based on the RGP units outstanding, ETP issued about 172.154 million ETP common units to RGP unitholders, including about 15.526 million units issued to

ETP subsidiaries. About 1.913 million outstanding Regency Series A preferred units were converted into corresponding new ETP Series A preferred units.

In connection with the transaction, Energy Transfer Equity LP (NYSE: ETE), which owns the general partner and 100% of the incentive distribution rights (IDRs) of ETP, will reduce the incentive distributions it receives from ETP by \$320 million over five years. The IDR subsidy will be \$80 million in the first year post-closing and \$60 million per year for the following four years.

Enterprise, Occidental Form Delaware Basin Gas Processing JV

Business Wire

Enterprise Products Partners LP (NYSE: EPD) announced April 30 it has entered into an agreement with an Occidental Petroleum Corp. (NYSE: OXY) affiliate to jointly develop a new 150 million cubic feet per day (MMcf/d) cryogenic natural gas processing plant.

The plant will accommodate the growing production of NGL-rich natural gas in the Delaware Basin. The 50:50 joint venture developing the plant is Delaware Basin Gas Processing LLC. The plant, which is supported by long-term, firm contracts, is expected to begin operations in mid-2016. Enterprise will serve as the construction manager and operator of the plant.

In addition to the processing plant, Enterprise will construct, own and operate a 12-inch diameter pipeline that will transport NGL from the new facility to one of Enterprise's NGL pipelines, which will provide customers with access to Enterprise's NGL fractionation and storage complex in Mont Belvieu, Texas. The partnership's Texas Intrastate Pipeline system will provide natural gas at the tailgate of the plant with access to multiple markets.

"This new facility, combined with Enterprise's recently announced 200 MMcf/d cryogenic processing plant being built in Eddy County, N.M., reflects the company's commitment to providing producers in the Permian Basin with flow assurance and market choices," said A.J. "Jim" Teague, COO of Enterprise's general partner. "When completed, the two plants will increase Enterprise's net natural gas processing capacity in the Permian Basin to more than 600 MMcf/d."

Williams Partners' Louisiana Ethylene Plant Resumes Operations

Business Wire

Williams Partners LP said April 24 that its olefins plant in Geismar, La., resumed operations in late March and will produce ethylene at the base plant's production rate through May.

The process to achieve its full expanded production rate—1.95 billion pounds per year—will be ongoing through June. The plant currently produces 1.35 billion pounds per year. The company said that its share of the total capacity is about 1.7 billion pounds per year.

The expanded plant was ramping up when a new transformer supplying power to an expansion compressor failed. The transformer is being repaired at the original manufacturer's facility.

The olefin plant's production rates are improving because equipment installed during its expansion is being used, Williams said. The expanded production rate is expected to be reached shortly after the repaired transformer is reinstalled.

An update on the operations' status will be given in an April 30 investor conference call, the company said.

Williams Partners LP is a natural gas-focused midstream MLP operating in the U.S. and Canada.

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