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Storm Aftermath Will Pressure Refined Oil Products

Some refineries struggle without power but most escape damage

BY **DARREN BARBEE** | HART ENERGY

The centers of power and fuel in the East Coast—including several refineries, ports and pipelines—were brought to a standstill October 30 as Hurricane Sandy whipped through the region, slashing New York and New Jersey with 90 mph gusts.

IHS Global Insight U.S. Economist Gregory Daco estimated total economic losses of around $30-$50 billion, including $25 billion in infrastructure, while 70% of refining has been idled.

"This does not bode well for the supply of refined oil products as capacity was already quite tight prior to the shutdowns," Daco said. "We are likely to see an accumulation of crude supply and a shortage of refined products in the coming days, which will inevitably put upward pressure on gasoline prices. Already, on Monday [October 29] the November reformulated gasoline blendstock for oxygenate blending gasoline futures price had increased."

Still, initial assessments by government and industry indicated refineries appeared to have escaped serious damage. Another concern: With 8.2 million people without power, workers could be delayed from returning to plants.

Many refineries were slowed or at a dead stop October 30. Hess' 70,000 barrels (bbl.) per day Port Reading, New Jersey, refinery about 10 miles from New York City was without power. It processes residual fuel oil and vacuum gas oil.

Phillips 66 said that its 238,000 bbl. per day Bayway Refinery in Linden, New Jersey, is without power and had experienced flooding in low-lying areas. The company's three storage terminals in New Jersey and New York, shut down prior to the landfall, remained offline.

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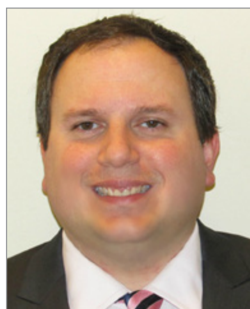
HIGHLIGHTS FROM TODAY'S EDITION



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NGL PRICES & FRAC
Sandy has limited effect on NGL prices
The storm had a devastating effect on parts of the Northeast, but thus far has had minimal impact on prices. **PAGE 3**

SNAPSHOT
Shales leading to jobs
According to an IHS report, unconventional plays will support up to 3 million jobs by 2020. **PAGE 11**

PIPELINES
Merger reaping benefits
The merger with El Paso has created multiple business opportunities for Kinder Morgan. **PAGE 8**

PROCESSING TRENDS
Overabundance of NGLs pushes back prices
Ernst & Young report that NGL production is outpacing demand and negatively impacting profits. **PAGE 5**

Processing capacity added in Marcellus
MarkWest, Antero Resources brought 200 MMcf per day of processing capacity online. **PAGE 5**

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NGL Prices Largely Unaffected By Storm

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

The effect of Hurricane Sandy on natural gas liquids (NGL) prices was negligible as the storm had minor effects on the petrochemical markets. The storm did cause heating demand to increase in the Northeast, but this was offset by power outages caused by the storm.

Natural gas prices posted their strongest gains at Conway, improving 5% to $3.48 per million Btu (/MMBtu) as heating demand rose in the Midcontinent. Mont Belvieu rose 3% to $3.38/MMBtu.

CURRENT FRAC SPREAD (CENTS/GAL)

November 5, 2012	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	18.40		30.97	
Shrink	23.07		22.41	
Margin	-4.67	-218.87%	8.56	-14.03%
Propane	86.20		98.60	
Shrink	31.88		30.96	
Margin	54.32	-2.26%	67.64	2.82%
Normal Butane	159.32		159.34	
Shrink	36.09		35.05	
Margin	123.23	7.65%	124.29	5.56%
Iso-Butane	173.84		186.34	
Shrink	34.66		33.66	
Margin	139.18	-2.42%	152.68	3.87%
Pentane+	207.80		221.16	
Shrink	38.59		37.48	
Margin	169.21	-3.23%	183.68	2.75%
NGL $/Bbl	40.38	-0.15%	44.85	2.67%
Shrink	12.71		12.35	
Margin	27.67	-2.40%	32.51	2.64%
Gas ($/mmBtu)	3.48	5.14%	3.38	2.74%
Gross Bbl Margin (in cents/gal)	62.20	-2.52%	74.29	2.58%
NGL Value in $/mmBtu				
Ethane	1.01	-10.16%	1.70	-2.52%
Propane	2.99	0.35%	3.42	2.79%
Normal Butane	1.72	7.07%	1.72	4.93%
Iso-Butane	1.08	-1.00%	1.16	3.66%
Pentane+	2.68	-1.78%	2.85	2.75%
Total Barrel Valuein $/mmbtu	9.49	-0.52%	10.86	2.33%
Margin	6.01	-3.53%	7.48	2.14%

NGL PRICES

Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Oct. 24 - 30 '12	30.97	98.60	159.34	186.34	221.16	$44.85
Oct. 17 - 23 '12	31.77	95.92	151.86	179.76	215.24	$43.69
Oct. 10 - 16 '12	28.73	94.68	148.18	175.04	208.28	$42.28
Oct. 3 - 9 '12	29.70	95.66	145.02	171.70	199.25	$41.68
September '12	30.06	90.96	151.48	173.05	208.33	$42.17
August '12	33.52	89.68	145.60	162.29	209.65	$42.04
3rd Qtr '12	32.34	89.27	142.76	161.88	200.54	$41.03
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
Oct. 26 - Nov. 1, '11	91.68	146.90	180.34	207.48	227.06	$62.02
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
Oct. 24 - 30 '12	18.40	86.20	159.32	173.84	207.80	$40.38
Oct. 17 - 23 '12	20.48	85.90	148.80	175.60	211.56	$40.44
Oct. 10 - 16 '12	19.04	86.02	145.45	176.80	205.10	$39.64
Oct. 3 - 9 '12	16.52	83.00	142.20	174.94	196.02	$38.03
September '12	16.72	79.32	138.29	181.99	202.61	$38.06
August '12	18.77	74.27	130.46	169.74	201.94	$37.01
3rd Qtr '12	14.60	70.25	124.35	165.61	195.68	$34.99
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
Oct. 26 - Nov. 1, '11	35.58	133.28	154.64	186.95	192.40	$47.86

(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

These prices were a further boon to frac spread margins in the Gulf Coast compared to the Midcontinent.

Unlike storms in the Gulf Coast, this storm largely left the heart of the NGL industry untouched. In short, it was a zero-sum effect on the market, for the most part. That is not to say that the market didn't move the final week of October, as there were gains posted for butane at both hubs.

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NGL PRICES & FRAC SPREAD | Week in Review

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These gains were a result of the seasonal demand increase for butane in winter-grade gasoline with the price increasing to $1.59 per gallon (/gal) at both hubs. The 5% increase at Mont Belvieu was the highest the price had been since the week of May 16 when it was $1.61/gal. The 7% gain at Conway represented the highest price at the hub since it was $1.62/gal the week of April 11.

The increased demand for butane also resulted in it being the lone NGL to experience improved frac-spread margins at both hubs the week of October 24 as the Mont Belvieu margin rose 6% and the Conway margin increased 8%.

Butane's sister product, isobutane, was more of a mixed bag this week as the Mont Belvieu price increased to its highest level since the first week of May, but the Conway price dropped to its lowest level in a month. The Mont Belvieu price rose 4% to $1.86/gal while the Conway price was down 1% to $1.74/gal. The 12¢/gal price differential between the hubs was the largest since the week of September 12 when it was 17¢/gal in favor of the Conway price.

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / November 2, 2012	
Gas Hub Name	Current Price
Carthage, TX	3.44
Katy Hub, TX	3.48
Waha Hub, TX	3.45
Henry Hub, LA	3.49
Perryville, LA	3.46
Houston Ship Channel	3.46
Agua Dulce, TX	1.88
Opal Hub, Wyo.	3.50
Blance Hub, NM	3.42
Cheyenne Hub, Wyo.	3.47
Chicago Hub	3.96
Ellisburg NE Hub	3.30
New York Hub	3.67
AECO, Alberta	3.37

Source: Bloomberg

Despite a drop in crude prices, C_{5+} prices improved 3% to $2.21/gal at Mont Belvieu, the highest price at the hub since it was $2.35/gal the week of April 25 as the short squeeze that impacted prices the previous week ended. However, the Conway price fell 2% to $2.08/gal, but it was the second-highest price at the hub in six weeks.

Once again, Conway ethane had the largest movement as the price fell 10% to 18¢/gal as the market continues to face multiple headwinds related to demand and transportation. This price decrease and the increase in natural gas prices at the hub caused the frac spread margin to plummet more than 200% and remain firmly negative.

RESIN PRICES – MARKET UPDATE – NOVEMBER 2, 2012					
TOTAL OFFERS: 18,395,320 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
PP Homopolymer - Inj	3,917,680	0.59	0.7	0.62	0.66
LDPE - Film	3,192,300	0.62	0.71	0.65	0.69
HDPE - Blow Mold	3,054,600	0.62	0.67	0.6	0.64
LLDPE - Film	2,320,048	0.645	0.71	0.62	0.66
LDPE - Inj	1,526,392	0.62	0.71	0.67	0.71
PP Copolymer - Inj	1,446,000	0.635	0.74	0.635	0.675
HDPE - Inj	1,099,104	0.64	0.68	0.61	0.65
HMWPE - Film	675,012	0.63	0.7	0.64	0.68
HIPS	506,000	1.02	1.04	0.98	1.03
LLDPE - Inj	468,184	0.66	0.69	0.64	0.68
GPPS	190,000	0.92	0.92	0.87	0.92

Source: Plastics Exchange – www.theplasticsexchange.com

The Mont Belvieu market for ethane is stronger, but it is also facing challenges as the margin is still positive. The price fell 3% to 31¢/gal, which resulted in a 14% drop in margin to 9¢/gal.

Propane prices increased at both hubs due to the increase in heating demand, which saw Mont Belvieu prices rise to their highest levels since May. The price increased 3% to 99¢/gal and closed the week above $1.00/gal. The Conway price improved slightly to 86¢/gal.

The most profitable NGL to make at both hubs was C_{5+} at $1.69/gal at Conway and $1.84/gal at Mont Belvieu. This was followed, in order, by isobutane at $1.39/gal at Conway and $1.53/gal at Mont Belvieu; butane at $1.23/gal at Conway and $1.24/gal at Mont Belvieu; propane at 54¢/gal at Conway and 68¢/gal at Conway; and ethane at negative 5¢/gal and 9¢/gal at Mont Belvieu.

The theoretical NGL barrel price moved in opposite directions between Mont Belvieu and Conway as October ended with the Texas price up 3% from the previous week and the Kansas price down slightly from the prior week. The Mont Belvieu price was $44.85 per barrel (/bbl.) with a 3% gain in margin to $32.51/bbl. The Conway price was $40.38/bbl. with a 3% drop in margin to $27.67/bbl.

Natural gas in storage for the week of October 26 rose 65 billion cubic feet to 3.908 trillion cubic feet (Tcf) from 3.843 Tcf according to the Energy Information Administration.

According to the National Weather Service's forecast for next week, heating demand should be normalized in the Northeast. Temperatures are expected to be cooler than normal in the Southeast. The Midwest, Gulf Coast and Southwest are likely to see increased cooling demand.

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MarkWest, Antero Resources Start-Up Sherwood Gas Processing Complex

BUSINESS WIRE

MarkWest Energy Partners and Antero Resources announced that MarkWest recently commenced operation of its Sherwood I processing facility and the initial phase of its high pressure gas gathering system located in Harrison and Doddridge Counties of West Virginia. The 200 million cubic feet (MMcf) per day Sherwood I facility is the first phase of its planned processing facilities at the Sherwood complex. MarkWest is currently constructing the 200 MMcf per day Sherwood II processing facility which is expected to be in service during the second quarter of 2013. MarkWest and Antero have entered into agreements for the potential development of a third processing facility at the same site, Sherwood III, to support additional rich gas production. If installed, the third facility would bring total processing capacity of the Sherwood complex to 600 MMcf per day. Sherwood is located near the center of Antero's rapidly-growing, rich gas production in northern West Virginia and the complex's associated volumes will be gathered by MarkWest, Antero and other providers. MarkWest and Antero estimate that future capacity at the Sherwood complex could exceed 1 billion cubic feet (Bcf) per day with the continued development by Antero of its rich gas acreage in the area.

Antero has over 200,000 net acres of leasehold in northern West Virginia that holds rich gas reserves. Antero is currently flowing approximately 90 MMcf per day through the Sherwood I processing plant from a portion of its 104 horizontal Marcellus wells that are producing over 400 MMcf per day of gross operated production in West Virginia. Antero plans to significantly increase Sherwood I throughput over the next several months.

Antero will have access to the full suite of MarkWest's midstream services in the Marcellus Shale and all of the announced ethane and propane pipeline projects. Natural gas liquids (NGL) recovered at the Sherwood complex will be delivered via MarkWest's NGL pipeline network that also connects MarkWest's Mobley and Majorsville complexes to its Houston fractionation and marketing complex. Pending the completion of MarkWest's previously announced fractionation projects, including the 100,000 barrels (bbl.) per day fractionation complex that is being developed in Harrison County Ohio with its partner, The Energy and Minerals Group, MarkWest's total announced NGL fractionation capacity serving the Marcellus and Utica Shales will be approximately 275,000 bbl. per day. This fractionation capacity includes nearly 155,000 bbl. per day of purity ethane facilities and 120,000 bbl. per day of propane and heavier NGL fractionation. Antero's NGLs produced at Sherwood will also benefit from MarkWest's extensive marketing operations, which include truck, rail and pipeline logistics; storage, and wholesale distribution.

The development of the hydrocarbon-rich area of northern West Virginia is critical to the growth of MarkWest's Liberty segment and the expansion of its processing complexes in the Marcellus shale. By the end of 2014, MarkWest will have over 2.5 Bcf per day of processing capacity in Pennsylvania and West Virginia and the ability to continue offering its Marcellus producer customers like Antero premier midstream solutions. The natural gas production and associated NGL production in MarkWest's Liberty segment are supported by largely fee-based, long-term agreements.

As Supplies of NGLs Balloon, Ernst & Young Sees Profits Deflating

BY **DARREN BARBEE** | HART ENERGY

A mounting supply of NGLs has created a steep discount this year, weakening the profitability of a key driver of U.S. shale development, according to an October 22 Ernst & Young Oil & Gas Center quarterly analyses.

Supply has outpaced demand, particularly from chemical plants that use NGLs as feedstock for plastics. The market for NGLs appears to be leveling out, the analysis says.

While not as robust, NGLs are still "more attractive" than producing dry natural gas.

"Companies still have plenty of incentive to produce NGLs," said Marcela Donadio, Americas

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LEVELING OUT | NGL prices remain attractive, but have lost some luster this year.

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Oil and Gas Leader, Ernst & Young. "Prices remain significantly higher than natural gas. But we're seeing a marked shift in demand."

Nonetheless, a new report by IHS Global Insight sees prospects for natural gas beyond the domestic market and says increasing NGL production will be a boon to the petrochemical industry.

"The greater availability of NGLs can be expected to support the expansion of U.S. petrochemical manufacturing, which uses NGLs as feedstock," according to the report, America's New Energy Future: The Unconventional Oil and Gas Revolution and the U.S. Economy.

In a broader sense, an abundant supply of natural gas and its impact on market prices is prompting a national discussion about wider markets, and the question may well be, "not how much the U.S. imports, but rather how much it should export," according to the report. The American Petroleum Institute, the American Chemistry Council and other associations, sponsored it.

NGL production from shale-gas and tight-gas plays and other sources could potentially reach 4.8 million barrels of oil equivalent (BOE) per day by 2035 from 1.8 million BOE per day this year, IHS reported.

Since 2008, overall NGL production in the U.S. has grown more than 500,000 barrels (bbl.) per day, a 29% increase largely tied to unconventional sources, IHS reported. Production of NGLs from unconventional activity is anticipated to more than double to 3.8 million bbl. per day by 2020 from 1.8 million bbl. per day this year.

The frac spread is shrinking, according to Ernst & Young.

Natural gas prices, on the other hand, are being driven up by slowing production growth, increasing demand and reductions in the massive storage overhang. For instance, year-to-date gas consumption is up 30% in the power sector.

Spot natural gas prices have climbed to more than $3.25 per million Btu (MMBtu). While about 50% higher than in the second quarter, the price is still low by historical standards, the analyses said.

Domestic natural gas storage levels are nearing more average ranges, a good sign for natural gas producers since a cold, early winter and lower storage levels could strengthen prices.

NGL composite spot prices, on the other hand, began the year at $13.81 per MMBtu, a slight increase from last year. By July, prices had plunged 30% to $9.66 per MMBtu, according to statistics from the Energy Information Administration. In July 2011, NGL composite spot prices commanded $15.79 per MMBtu. Composite spot prices are based on NGLs weighted by gas processing plant production volumes.

PwC: Liquids-Rich Asset Transactions Dominate Total M&A Deals Volume

With natural gas prices hitting a 10-year low this year, U.S. oil and gas companies have shifted their focus to adding more profitable liquid-rich shale plays to their portfolios, leading to a dramatic increase in the number and total value of asset transactions in the third quarter of 2012, according to PwC US. There were 34 asset deals during the third quarter with a total deal value of $31.4 billion, a 131% increase in total value over the same time period last year and representing 93% of total deal value during the third quarter of 2012. In fact, asset transactions represented nine of the top 10

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'mega' deals (deals with values of $1 billion or more) in third-quarter 2012.

For the three-month period ending September 30, 2012, there were a total of 39 oil and gas deals with values greater than $50 million, accounting for $33.7 billion in deal value, a slight dip from the 44 deals during the third quarter of 2011, and a decline in total deal value from $41.1 billion.

On a sequential basis, while deal volume dropped from the 51 transactions in the second quarter of 2012, total deal value increased by $4.1 billion, with average deal size jumping almost 50% to $864 million during the third quarter of 2012.

"The third quarter had 10 'mega' deals, which were dominated by upstream asset transactions as oil and gas companies pursued oily plays due to natural gas prices continuing to remain depressed," Rick Roberge, principal in PwC's energy M&A practice, said in a release. "What we saw in the third quarter are companies hunting for more profitable pure oil assets to satisfy the demand of all stakeholders involved. Asset transactions offer the opportunity to specifically target those types of properties."

> "Another trend that we see developing is M&A activity in the Gulf of Mexico, which has seen the highest total deal value during the third quarter than has been recorded in at least two and a half years."
>
> - Rick Roberge, principal in PwC's energy M&A practice

For deals valued at over $50 million, upstream deals made up 54% of activity in the third quarter of 2012 with 21 transactions, accounting for $18.7 billion, or 55% of total third quarter deal value. Nine midstream deals contributed $11.1 billion. According to PwC, there has been a rise in processing deals in the midstream sector during 2012 due to the oil and gas liquids being extracted from the shale plays and as companies think through the various scenarios that may play out with exports.

"We've seen an upward trajectory with MLP deal activity in the energy industry over the past two years, and while MLPs have traditionally been active in the midstream sector, we believe that there will be more activity with upstream assets as the number of upstream MLPs is increasing and more are expected when capital markets are more receptive," added Roberge. "Another trend that we see developing is M&A activity in the Gulf of Mexico, which has seen the highest total deal value during the third quarter than has been recorded in at least two and a half years. Now that the Gulf is clearly back in business for M&A, we believe oil and gas companies will increasingly look there for deal opportunities going forward."

ANGA-API Study Shows Methane Emissions 53% Below EPA Estimates

An updated survey by URS prepared for America's Natural Gas Alliance (ANGA) and the American Petroleum Institute (API) has found further reductions in greenhouse gas emissions from natural gas production.

The survey is an updated version of data first released in June. It shows that venting of methane into the atmosphere during liquids unloading is 93% lower than Environmental Protection Agency (EPA) estimates and that methane emissions from well refracturing are 72% lower. Taken as a whole, methane emissions from natural gas production are at least 53% below EPA's estimates. This is the most comprehensive look to date at the issue, analyzing data from nearly 20% of all U.S. natural gas-producing wells—a sample size more than 10 times larger than the EPA's.

The survey is based on emissions from 91,000 wells operated by 20 companies distributed over a broad area of the United States. By contrast, EPA's data was derived from only 8,800 wells confined to specific areas not representative of the entire country. Recently the U.S. Energy Information Administration concluded that use of more natural gas in power generation has helped lead to the lowest level of greenhouse gas emissions since 1992.

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Kinder Morgan Seeing Early Benefits From El Paso Merger

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

The Kinder Morgan-El Paso merger is starting to pay off for the companies. In the second quarter of 2012, Kinder Morgan Inc. dropped down two assets to the Kinder Morgan Energy Partners (KMP) and El Paso Pipeline Partners master limited partnerships (MLP).

The Tennessee Gas Pipeline agreement consisted of Kinder Morgan dropping down its full 100% ownership in the system to KMP along with a 50% interest in El Paso Natural Gas Pipeline for $6.22 billion.

The company anticipates completing the sale of KMP's Rocky Mountain assets to close next month. The sale was required by the Federal Trade Commission in order to complete the merger.

These assets include Kinder Morgan Interstate Gas Transmission, Trailblazer Pipeline Co., the Casper Douglas natural gas processing plant in Wyoming, the West Frenchie Draw gas treating plant in Wyoming and its 50% interest in the Rockies Express Pipeline.

Despite this divestiture, Kinder Morgan and its subsidiaries are in line to complete more than $11 billion of expansion projects. The bulk of these projects are at KMP, according to Rich Kinder, the company's chairman and chief executive. "These are projects that have customer commitments on them, and they are in various stages of preparation and construction," he said during the company's recent conference call to discuss earnings for the third quarter of 2012.

Expansion into new markets

A positive trend throughout Kinder Morgan and its companies was an increase in natural gas usage by electric utilities. The company reported a 13% increase in the quarter and a 44% year-on-year increase in natural gas power demand related to the Colorado Interstate Pipeline. The Southern Natural Gas system had even larger increases as gas demand was up 26% for the quarter and 47% on a year-on-year basis.

The 13,900-mile Tennessee Gas Pipeline is expected to continue to play an important part in meeting the growing demand for natural gas from electric utilities, as it will transport the increased gas production out of the Marcellus and Utica shales.

"We are seeing all kinds of opportunities for expansions [and] are seeing very good demand on the Eastern part, or downstream, part of that system," Kinder said. These opportunities will include the $86 million Marcellus Pooling Project, which will provide 240,000 dekatherms (Dth) per day of transportation capacity out of the Marcellus through an additional 7.9 miles of 30-inch diameter pipeline looping, modifications and upgrades for bi-directional flow at its four compressor stations in Pennsylvania. Construction is set to begin summer 2013 with an in-service date of November 2013.

The proposed $426 million Northeast Upgrade Project is still being reviewed by Pennsylvania officials, but if approved would increase capacity on the system's 300 Line by roughly 636,000 Dth per day via pipeline looping and system upgrades. The project has been approved by the Federal Energy Regulatory Commission (FERC), is fully subscribed, and has a projected in-service date of November 1, 2013. Construction is expected to begin this quarter.

In addition, the company filed a permit with FERC to build the $84 million Rose Lake expansion on the system. This project would provide 230,000 Dth per day of long-term firm transportation capacity for two shippers on the system's Zone 4 in Pennsylvania. This capacity will be added through a combination of upgrades and replacements of older compressor units. The projected in-service date for the project is November 1, 2014.

The El Paso acquisition has opened up potential new revenue streams through the possible export of liquefied natural gas (LNG) from its LNG terminals

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in Elba Island, Georgia as well as the Gulf LNG terminal in Pascagoula, Mississippi.

"We believe that both of these terminals have great potential to be utilized for LNG export. In both cases, we have a Department of Energy approval on the Free Trade Agreement [countries] volumes. No one knows for sure what is going to happen on the non-FTA [permits]. We believe that we will be able to put together a project at Elba Island that will be FTA, and then it will have some optionality to expand, if and when we got non-FTA. On the Gulf, we think much the same thing," Kinder said.

In order to maximize profits, the company is securing binding commitments for LNG exports to FTA countries from Elba Island. Kinder said that if the company were to secure approval to export LNG to non-FTA countries that it would provide the facilities with more upside, but that the export projects are designed to stand on their own through approvals for FTA exports.

The El Paso merger may also provide Kinder Morgan with additional avenues for growth. As crude oil production out of the Permian basin grows, Kinder said that it could lead to further growth opportunities. While noting that this plan is in the preliminary stages, he said that the El Paso Natural Gas/Mojave Pipeline might be converted in parts from transporting natural gas to crude oil out of the Permian.

"It is very early in the game, but we would be able to service all of our gas customers at the present level of demand, or whatever throughput they want to sign up for and still convert [to crude oil]," he said.

Kinder added that with the company's multiple lines in the region they could ship up to 400,000 barrels per day of crude from the Permian into Southern California at a projected cost of $2 billion to complete. However, given the dichotomy in prices between California and Texas oil prices the project could reap strong financial benefits.

TransCanada, Phoenix Form JV To Develop Grand Rapids Pipeline

TransCanada Corp. announced that it has entered into binding agreements with Phoenix Energy Holdings Limited to develop the Grand Rapids Pipeline project in Northern Alberta.

TransCanada and Phoenix will each own 50% of the proposed $3-billion pipeline project that includes both a crude oil and a diluents line to transport volumes approximately 300 miles between the producing area northwest of Fort McMurray and the Edmonton/Heartland region. The Grand Rapids Pipeline system is expected to be in-service by early 2017, subject to regulatory approvals, with capital spent between 2014 and 2017. The system will have the capacity to move up to 900,000 barrels (bbl.) per day of crude oil and 330,000 bbl. per day of diluent. TransCanada will operate the system and Phoenix has entered a long-term commitment to ship crude oil and diluent on it.

"As Alberta crude oil production continues to grow, it's critical to have the infrastructure in place to move oil to market from emerging developments west of the Athabasca River. This is the first major pipeline project to meet the needs of this fast-growing area," Russ Girling, TransCanada's president and chief executive, said in a release. "With over 60 years' experience in Alberta and North America, TransCanada is a leader in providing safe, efficient and reliable operation of energy infrastructure. We are pleased Phoenix is joining us on the Grand Rapids Pipeline project to transport this growing, long-term supply of Canadian crude oil in a manner that respects the communities and environment where the pipeline will operate."

The final Grand Rapids Pipeline route and design will be determined with Aboriginal and stakeholder input, as well as consideration for environmental, archaeological and cultural values, land use compatibility, safety, constructability and economics. TransCanada expects to apply for regulatory approval for the project in 2013. As a member of the world Dow Jones Sustainability Index, TransCanada is an industry leader that is committed to minimizing the impact of its operations.

The Grand Rapids Pipeline system will further expand TransCanada's liquids transportation capabilities and complement TransCanada's extensive operating experience in Alberta. TransCanada recently announced the Northern Courier Pipeline project, a 56-mile pipeline system to transport bitumen and diluent between the Fort Hills mine site and the Voyageur Upgrader located north of Fort McMurray, Alberta.

The project will be constructed, owned and operated by the Grand Rapids Pipeline Limited Partnership, which is jointly owned by Phoenix and a wholly owned subsidiary of TransCanada.

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Bear Tracker Energy To Provide Crude Oil Gathering For SM Energy

Bear Tracker Energy LLC (BTE), a midstream energy company, announced the signing of a definitive agreement with SM Energy Company, an independent oil and gas exploration and production company. BTE will construct, own and operate a crude oil gathering system in Divide and Williams Counties, North Dakota. Under the terms of the agreement, crude oil from SM Energy's operated wells in Divide County will be dedicated to BTE's gathering facilities. BTE will gather and deliver SM Energy's crude oil to Rangeland Energy's existing COLT Hub Terminal near Epping, North Dakota, providing SM Energy with access to multiple downstream crude oil markets via pipeline and unit train take-away capacity. Construction of the gathering system will begin in the first quarter of 2013 with an estimated in-service date of July 1, 2013.

"Bear Tracker's Divide gathering system will provide a valuable and reliable outlet for SM Energy's growing crude oil production in Divide County while also reducing truck traffic in the area. This system also complements Bear Tracker's Williams County crude gathering system currently under construction and will provide rail and pipeline market alternatives for a growing Williston basin oil producing corridor extending from the Missouri River to the Canadian border," Robert J. Clark, chairman and chief executive of Bear Tracker Energy LLC, said in a release.

Prometheus Energy, Seneca Resources Sign LNG Services Agreement

Prometheus Energy Group Inc., a supplier of liquefied natural gas (LNG) to the industrial sector, announced it has entered into a long-term master agreement with Seneca Resources Corporation, the wholly owned exploration and production subsidiary of National Fuel Gas Company, to supply LNG and related equipment and services for Seneca's initiative to utilize clean-burning natural gas in its drilling operations.

Under the agreement, Prometheus will be Seneca Resources' exclusive turnkey LNG solutions provider, supplying LNG fuel through its established North American LNG network, providing onsite mobile LNG storage and vaporization equipment, and providing skilled local technician support to ensure operational reliability of LNG equipment. In addition, the agreement will provide Seneca with an immediate reduction in fuel costs and air emissions (CO2, SO2, NOX), coupled with the operational flexibility required in today's dynamic E&P market.

Enbridge To Transfer $1.164 Billion Of Assets To Enbridge Income Fund

Enbridge Inc. announced that it has entered into an agreement with Enbridge Income Fund to transfer a group of crude oil storage, wind power and solar power assets at a price of $1.164 billion to the fund. The transfer is subject to approval by the public shareholders of Enbridge Income Fund Holdings Inc. (ENF), at a meeting to be held December 7, 2012, and to the closing of a $222 million subscription receipt public offering by ENF.

Enbridge will receive cash proceeds from the transaction of $222 million and an additional $582 million in the form of term debt of the fund, which the Fund is expected to repay to Enbridge through issuance of public term debt. Enbridge will also subscribe for $305 million of additional Enbridge Commercial Trust preferred units and $55 million in common shares of ENF on a private placement basis at the same price per security as the subscription receipt offering, maintaining its interest in ENF at 19.9%. As a result of the transfer, Enbridge's economic interest in the fund as a whole, represented by its direct ownership of fund trust units and ECT preferred units, as well as its 19.9% interest in ENF, will be reduced from 69.2% to 67.8%.

"We are pleased to be moving forward with this second billion dollar plus drop down to the Enbridge Income Fund, consistent with the sponsored vehicle drop down strategy outlined at our recent Enbridge Day investor conference," J. Richard Bird, executive vice president, chief financial officer and corporate development, Enbridge Inc, said in a release.

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IHS: Unconventional Activity To Create Job Boom

BY **MICHAEL THOMPSON** | HART ENERGY

Booming unconventional oil and gas production will support 3 million jobs by 2020, according to a recently released IHS report.

The study, America's New Future: The Unconventional Oil and Gas Revolution and the Economy, explores how the thriving unconventional oil and gas industries are translating into more jobs.

Today, the unconventional oil and gas sectors provide jobs for about 1.7 million people, with 845,000 positions coming from unconventional oil and 900,000 from unconventional gas, according to the report. The study forecasts that by 2020, another 1.3 million jobs will be added. That figure is expected to swell to about 3.5 million by 2035, the study said.

These estimates include jobs related both directly and indirectly to unconventional oil and gas, as well as jobs induced by those direct and indirect positions.

"In terms of setting the context, this really is, internally within IHS, what we see as a game changer in energy production for the U.S.," said John Larson, IHS' vice president of public sector during a conference call. "It's a rapid rise and a dramatic shift. We think it's one of the most significant energy events in the past 100 years."

The economic effects of unconventional plays were calculated through a series of assessments and macroeconomic models.

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LEADING THE RECOVERY | Oil and gas production will support three million jobs by 2020, according to an IHS report.

The report is the first in a series of studies that will lay out the economic impacts of the country's unconventional oil and gas activity.

"Through the series, we hope to tell a fairly rich story about what this activity is doing in terms of its jobs contribution more directly as an industry and then also indirectly as a macroeconomic and manufacturing impact for the broader economy," said Larson.

Larson also spoke to the "remarkable rise" of unconventional gas and oil. "Shale is obviously leading the way," he said. "If you go back to around 2000, shale was just 2% of total production in the United States. Today it's about 37% of natural gas production."

He added that by 2012, natural gas production will reach 80 billion cubic feet per day; about 70% of that will be unconventional.

This shift in energy production will be supported by capital expenditures which will result in billions of dollars spent, said Larson. The study anticipates seeing about $5.1 trillion in capital expenditures between now and 2035. Of that, $2.1 trillion will be in unconventional oil, with the remaining $3 trillion spent on unconventional gas.

"This is not just a near-term thing," he said. "This is a long-term boom that is going to be taking place through 2035 and that's key to driving the job growth."

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Continued from Page 1

"We will be assessing the condition of our equipment at all of our facilities in the region throughout the day. Decisions regarding restarting these operations will be made once post-storm assessments have been completed," a Phillips statement said.

Philadelphia Energy Solutions' refinery, formerly owned by Sunoco, will probably attempt to restart some units at its 335,000 bbl. per day refinery, according to Genscape. The 85,000 bbl. per day Crude Distillation Unit (CDU) and 52,000 bbl. per day Vacuum Distillation Unit (VDU) are restarting. A 55,000 bbl. per day CDU and associated VDU remain offline.

PBF Energy's 190,000 bbl. per day Delaware refinery and180,000 bbl. per day Paulsboro, New Jersey, refinery reduced output, according to the Department of Energy (DOE).

The debate over the future of oil and gasoline prices narrowed to the extent of damage Sandy has caused, and how much demand the region would see in the aftermath of the storm.

Roger D. Read, Wells Fargo Securities senior analyst, refiners and integrateds, said predicting how markets will respond is tricky, but that it appears that in the New York/New Jersey area, only one refinery, Bayway, would be at risk.

"One unit usually is not enough to upset the price situation," Read said. "The vast majority of East Coast refining capacity should be OK."

The flow of oil and also workers into refineries will be something to watch in the next several days."

Mark Hoekzema, chief meteorologist for Earth Networks, said massive power outages, downed power lines and trees could affect refinery production in a variety of ways, including preventing people from getting to their jobs "or even the ability to open them," he said. "That is something that is an outcome of damage."

In order to work, the ports will have to resume operations. Port areas may have been damaged by the storm surge. The East Coast imports almost its entire product from Europe and the Gulf Coast, a pattern that should resume as ports reopen."

The U.S. Coast Guard reported closed October 30 ports in Sector Delaware Bay, including Philadelphia; Sector Long Island Sound; Sector New York; Sector Southeastern New England (Providence, RI); and for ports along coastal waters in Virginia and Maryland.

As of early afternoon October 30, petroleum terminals owned by Hess, Kinder Morgan, Magellan Midstream Partners, Motiva, NuStar Energy and Phillips 66 were shut down. The terminals are located in New Jersey, Connecticut, New York, Rhode Island, Delaware and Virginia.

Global Hunter Securities LLC, viewed Hurricane Sandy as a negative for oil and gasoline prices "due to a massive contraction in demand for refined products across a gigantic area of the U.S. over the next two weeks." Overall, 1.17 million bbl. per day of capacity, about 26% of Northeast refining capacity, was affected.

East Coast refineries, designated as PADD 1, include locations in Florida, New York, Pennsylvania, Virginia and West Virginia. As of October 19, they were refining 154,000 bbl. per day of finished motor gasoline. That represents about 6% of U.S. motor gasoline refining. The Gulf Coast region makes up the bulk of nation's oil and natural gas industry, accounting for 44% of U.S. refining capacity in 2011.

Some pipelines were also out of commission, according to the DOE.

Kinder Morgan reported October 30 that their jet fuel line from Newington, Va., to Reagan National Airport is down due to a power failure. Restoration time was unknown, the DOE said.

Colonial Pipeline shut down its mainline serving the Philadelphia, New Jersey and New York harbor markets October 29.

VIEW THE FULL ARTICLE ONLINE

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