

Change The Public Conversation On ‘Unwanted’ Infrastructure

Lessons from the waste industry for shale players

BY MEGAN HARMON | SPECIAL TO HART ENERGY

Historically, waste management landfills have been the infrastructure everyone loves to hate. Today, the public has the same view concerning oil and gas drilling in the Marcellus and Utica shale formations.

Perceptions of waste are that no good can come from landfills, processing facilities, transfer stations or even recycling facilities. The thought of garbage and what happens to it after it leaves the curb makes most people cringe, if not worse. While these facilities are necessary for industrial, commercial and residential sustainability and growth, few people appreciate their technology, engineering and sophistication.

Although conventional oil and gas wells have been around for decades, the general public is in a frenzy over this so-called “new” technology of “fracing.” The technology is hardly new. The lack of understanding of the process, its risks and rewards and the claimed lack of transparency by the industry are among the causes of the anti-drilling sentiment. The oil and gas industry can learn from the trials and tribulations of the waste industry, which has faced and continues to face similar public opposition.



Past reflections | Oil and gas companies can take a page from the waste industry on how to deal with public perception problems for necessary facility buildout.

In 1991, the regulations issued under Subtitle D of the Resource Conservation and Recovery Act took effect, regulating the disposal of non-hazardous solid waste. Subtitle D became the defining legislation for the modern solid waste industry. It requires solid-waste operators to entomb the waste in an engineered formation; provide a liner for the bottom

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HIGHLIGHTS FROM TODAY'S EDITION



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NGL prices and frac spread margins have been recovering since hitting their bottom last month.

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Piped In

European countries are expected to be the largest investors in pipelines over the next five years.

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NGL PRICES & FRAC SPREAD | Week in Review

NGL Prices Up Off The Floor

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

Natural gas liquid (NGL) prices continued to improve the week of July 17 on the back of several macroeconomic issues. Although ethane prices continued to struggle at both Mont Belvieu and Conway, there is growing evidence that the NGL prices hit their floor in mid-June.

Prices have garnered support from improved West Texas Intermediate (WTI) crude prices along with small gains in the national economy in the past month. Additionally, price supports have come from an increase in fractionation and cracking capacity as facilities that were taken offline earlier this year returned to action.

CURRENT FRAC SPREAD (CENTS/GAL)				
July 29, 2013	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	21.14		24.93	
Shrink	24.07		24.40	
Margin	-2.93	24.86%	0.53	46.85%
Propane	90.82		95.18	
Shrink	33.25		33.71	
Margin	57.57	5.50%	61.47	3.31%
Normal Butane	127.54		129.68	
Shrink	37.64		38.16	
Margin	89.90	3.55%	91.52	0.67%
Isobutane	157.06		134.48	
Shrink	36.15		36.65	
Margin	120.91	3.81%	97.83	2.91%
Pentane+	208.96		213.77	
Shrink	40.26		40.81	
Margin	168.70	-1.47%	172.96	0.19%
NGL \$/Bbl	39.35	2.11%	40.08	1.73%
Shrink	13.26		13.44	
Margin	26.09	2.47%	26.63	1.49%
Gas (\$/mmBtu)	3.63	1.40%	3.68	2.22%
Gross Bbl Margin (in cents/gal)	58.93	2.73%	60.79	1.63%
Gross Bbl Margin (in cents/gal)				
Ethane	1.16	6.55%	1.37	2.89%
Propane	3.15	3.96%	3.30	2.92%
Normal Butane	1.38	2.90%	1.40	1.12%
Isobutane	0.98	3.24%	0.84	2.72%
Pentane+	2.69	-0.93%	2.76	0.57%
Total Barrel Value in \$/mmbtu	9.37	2.58%	9.67	1.96%
Margin	5.74	3.35%	5.99	1.79%

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
July 17 - 23, '13	24.93	95.18	129.68	134.48	213.77	\$40.08
July 10 - 16, '13	24.23	92.48	128.24	130.92	212.56	\$39.39
July 3 - 9, '13	24.27	88.43	123.10	126.57	206.38	\$38.11
June 26 - July 2, '13	24.17	84.96	117.90	120.53	197.74	\$36.66
June '13	24.81	86.20	116.29	117.82	201.62	\$37.02
May '13	28.11	93.48	123.95	125.86	204.66	\$39.21
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
July 19 - 25, '12	36.82	92.44	138.74	158.16	192.16	\$41.22
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
July 17 - 23, '13	21.14	90.82	127.54	157.06	208.96	\$39.35
July 10 - 16, '13	19.84	87.36	123.94	152.13	210.92	\$38.54
July 3 - 9, '13	19.10	84.28	118.10	139.05	205.32	\$37.02
June 26 - July 2, '13	19.08	80.36	112.20	137.98	194.60	\$35.48
June '13	18.83	81.18	109.78	124.94	196.00	\$35.16
May '13	21.07	87.53	116.00	117.09	204.19	\$36.95
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
July 19 - 25, '12	10.08	60.32	108.68	147.38	188.31	\$31.26

(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.

Ethane posted the largest price gains at both hubs this week, but margins were not good at either hub. The Conway price improved 7% to 21¢ per gallon (/gal), its highest price in nine weeks. This helped the margin improve 25% from the previous week, but the figured remained negative in the Midcontinent. The Mont Belvieu margin fared a little better as it improved 47%, but was only statistically positive. The actual price rose 3% to 25¢/gal, its highest price in five weeks.

It is unlikely that ethane margins will significantly improve any time before the end of 2013 as stock levels remain too high. The market should receive a boost in the beginning of 2014 when En-

NGL PRICES & FRAC SPREAD | Week in Review

terprise Product Partners' ATEX Pipeline is brought online and will transport up to 190,000 barrels (bbl.) per day of ethane from the Marcellus shale to the Gulf Coast.

The market has witnessed the positive impact that new mid-stream infrastructure can have on an NGL's price as propane has been supported through additional export capacity along the Gulf Coast in recent months. This boost will increase later this month when Targa Resources completes work on its propane export terminal expansion, which will add 2 million bbl. per month of capacity to the marketplace.

Mont Belvieu propane prices have improved 11% in the past month to 95¢/gal, which is the highest price since it was 96¢/gal the week of April 24. The Conway price has improved 14% in the past month to 91¢/gal, its highest price this year and the largest it has been since it was 93¢/gal the week of April 11, 2012.

Heavy NGL prices didn't experience the same level of improvements this week as their light counterparts, but remained far more profitable. Isobutane rose 3% at both hubs despite less gasoline

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / July 25, 2013	
Gas Hub Name	Current Price
Carthage, TX	3.62
Katy Hub, TX	3.68
Waha Hub, TX	3.66
Henry Hub, LA	3.68
Perryville, LA	3.64
Houston Ship Channel	3.70
Agua Dulce, TX	3.59
Opal Hub, Wyo.	3.57
Blance Hub, NM	3.59
Cheyenne Hub, Wyo.	3.57
Chicago Hub	3.78
Ellisburg NE Hub	3.38
New York Hub	3.62
AECO, Alberta	2.59

Source: Bloomberg

due to the downturn in gasoline demand combined with increased cracking capacity along the Gulf that has flooded the market, especially with the Conway outage.

Mont Belvieu butane was largely flat this week as ethane remains the preferred ethylene feedstock, but the product is benefit-

demand than normal this summer. Conway prices continue to outpace their Mont Belvieu counterparts due to decreased capacity in the Midcontinent as an isomerization unit is down in the region. This has caused prices to increase to \$1.57/gal, its highest price in nearly six months. The Mont Belvieu price rose to \$1.35/gal, its highest price in nearly four months.

Mont Belvieu prices have been somewhat stagnant

RESIN PRICES – MARKET UPDATE – JULY 25, 2013					
TOTAL OFFERS: 20,994,596 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Blow Mold	4,158,164	0.63	0.73	0.64	0.68
PP Copolymer - Inj	3,597,828	0.73	0.88	0.77	0.81
LDPE - Film	3,484,864	0.665	0.79	0.72	0.76
LLDPE - Film	3,321,380	0.66	0.76	0.64	0.68
LDPE - Inj	1,777,312	0.7	0.75	0.68	0.72
HDPE - Inj	1,553,656	0.675	0.85	0.66	0.7
PP Homopolymer - Inj	1,120,920	0.72	0.85	0.75	0.79
LLDPE - Inj	677,736	0.69	0.76	0.65	0.69
HIPS	570,000	1.015	1.025	0.98	1.03
GPPS	380,000	0.925	0.93	0.86	0.91
HMWPE - Film	352,736	0.75	0.76	0.7	0.74

Source: Plastics Exchange – www.theplasticsexchange.com

ing from propane exports as it is part of the liquefied petroleum gas (LPG) mix. This has left the price in a bit of a mixed bag situation where the price improved only 1% to \$1.30/gal, but this was the hub's highest price since it was \$1.31/gal the week of April 10. The Conway price rose 3% to \$1.28/gal, which represented a further narrowing of the price spread between the hubs as butane is gaining some support from isobutane price increases.

Pentanes-plus (C_{5+}) prices moved in opposite directions this week between the two hubs as the Mont Belvieu price rose 1% to \$2.14/gal and the Conway price fell 1% to \$2.09/gal. The listless market was largely due to stable WTI crude prices.

Despite this, C_{5+} remained the most profitable NGL to make at both hubs at \$1.69/gal at Conway and \$1.73/gal at Mont Belvieu. This was followed, in order, by isobutane at \$1.21/gal at Conway and 98¢/gal at Mont Belvieu; butane at 90¢/gal at Conway and 92¢/gal at Mont Belvieu; propane at 58¢/gal at Conway and 62¢/gal at Mont Belvieu; and ethane at negative 3¢/gal at Conway and 1¢/gal at Mont Belvieu.

Natural gas prices rose 2% at both hubs due to strong cooling demand that also caused a smaller-than-normal storage injection level of 41 billion cubic feet the week of July 19, the most recent data available from the Energy Information Administration. This increased the storage level to 2.786 trillion cubic feet (Tcf), which was 13% below the figure of 3.185 Tcf posted the same time last year and 2% below the five-year average of 2.832 Tcf.

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U.S. Senate Panel Pushing For More Transparency In Oil-Product Prices

BY JACK PECKHAM | HART ENERGY

The U.S. Senate Energy and Natural Resources Committee produced a witness panel including Valero Chief Executive Bill Klesse and U.S. Energy Information Administration (EIA) administrator Adam Sieminski to take new steps to implement an industry-wide, instant-reporting system for refinery shutdowns.

Such instant reporting could bring more transparency to oil markets and thus probably help ameliorate some fuel price spikes, according to Energy Committee Chairman Ron Wyden (D-Oregon).

At the hearing, Wyden pointed out that planned and unplanned refinery shutdowns have been blamed for several U.S. regional gasoline price spikes in recent months. But in some cases, the reporting on unplanned refinery shutdowns amounted to “misinformation,” Wyden said.

Wyden further urged Sieminski to find some relatively low-cost way to expand and restore public reporting of refinery shutdowns—both planned and unplanned.

Immediate, accurate reporting might help oil markets avoid some of the large price spikes in several major U.S. gasoline markets in recent months, he said.

However, Sieminski responded that the EIA recently has stopped reporting planned refinery shutdowns because of recent U.S. federal budget cuts. Restoring and expanding such EIA reporting would require “millions of dollars” of new federal funding, Sieminski estimated.

Wyden argued that the EIA probably could come up with some relatively low-cost reporting system, and he promised further discussions with the EIA about how that might be accomplished.

Meanwhile, in his testimony, Valero’s Klesse pointed out that Valero already makes public its planned refinery shutdowns for routine maintenance—although that’s a practice not universally copied by other U.S. refiners.

As for other factors affecting fuel prices, Klesse pointed out that crude oil markets are the main factor, followed by refining costs, taxes and marketing costs.



SEEKING CLARIFICATION | A U.S. Senate committee pushed energy officials and executives to institute changes to make oil price fluctuations understandable to the public.

U.S. federal regulations also affect fuel-production costs and consumer prices, he added.

“Valero has estimated that its costs alone for compliance with the [U.S. Environmental Protection Agency] proposed Tier 3 [ultra-low sulfur gasoline] standards will be between \$300 million and \$400 million and will raise the cost of manufacturing gasoline a couple of cents per gallon,” Klesse said.

The EPA Tier-3 gasoline regulation “will also increase our greenhouse-gas emissions because of the additional processing. That said, we support clean burning fuels,” Klesse added.

Middle-distillate market changes coming

In separate testimony to the Energy Committee, Citi Research oil market analyst Faisal Khan pointed to numerous factors causing both short- and long-term changes to oil and product prices, including massive growth of U.S. and Canadian unconventional oil production.

A current glut of U.S. natural gas production is also likely to have a big impact on U.S. middle-distillate markets, Khan explained.

“We are seeing a substantial amount of heating oil (distillate) demand destruction in the [U.S.] Northeast and Mid-Atlantic where homeowners are switching from heating oil to natural gas,” Khan said.

“This momentum has the potential to substantially reduce the almost 500,000-b/d [barrels per day] heating oil market that exists in the U.S. today.

“The other clear threat to the refining industry is the substitution of natural gas and electricity in the transportation sector.

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“We are starting to see heavy-duty vehicles move to natural gas. Citi estimates 50% of all refuse trucks sales are now CNG [compressed natural gas] vehicles.

“And while the long-haul trucking fleet has seen very little penetration by natural gas vehicles, Citi estimates up to 50% of heavy-duty vehicle sales could be LNG [liquefied natural gas] and/or CNG by 2025. This assumes the current [U.S.] price difference between natural gas and oil carries forward into the next decade. Under this scenario, up to 1.8 million bbl. per day of [U.S.] distillate [diesel] demand could be displaced.

“We view the market penetration of natural gas into the light-duty vehicle fleet to be somewhat limited.

“However, we do see an opportunity for electric vehicles to make up 3% of global vehicle sales by the end of this decade. Plug-in vehicles could make up another 3% to 4% of vehicles sales by 2020. Next-generation electric vehicles could raise this market share,” mainly at the expense of gasoline vehicles, he explained.

In his testimony, Sieminski pointed out that “short-term fluctuations in regional product supply chains can cause prices in a particular region of the country to become temporarily disconnected from world and national market forces.

“This spring, two unplanned refinery outages in the Midwest along with delayed restarts at several others caused average retail gasoline prices to increase by 26¢ per gallon between the end of April and the middle of June.

“The price increase was more dramatic in parts of North Dakota and Minnesota but by the end of June, prices had returned to a more normal level.

“Similar price increases occurred in 2012 on the West Coast after a series of unplanned outages. While we recognize the burden these price increases place on the [U.S. fuel-consuming] public, these occurrences are relatively short-lived and are the result of largely unforeseeable circumstances.”

Meanwhile, U.S. gasoline demand has been declining since 2007, while U.S. diesel demand also dipped in 2012, following years of growth, Sieminski pointed out.

“Imports of gasoline blending components [to the U.S.] have declined by almost 500,000 barrels (bbl.) per day, or 43%, and exports primarily from the Gulf Coast, have increased by almost 400,000 bbl. per day,” Sieminski added.

“In 2012, 84% of the [U.S.] gasoline exports went to countries in Latin America. In addition, diesel demand in the U.S. declined by 450,000 bbl. per day in the same time period, or by 11%, leading to a drop in diesel imports of 200,000 bbl. per day and increased exports of over 700,000 bbl. per day.

“Again, in 2012, 61% of the diesel exports went to Latin America and 35% to Europe,” Sieminski said.

Marlin Midstream Launches IPO

Marlin Midstream Partners LP launched its initial public offering of 6.25 million common units representing limited partner (LP) interests. The common units will trade on the NASDAQ Global Market under the ticker symbol “FISH.” The underwriters of the offering will have a 30-day option to purchase up to an additional 937,500 common units from Marlin to cover over-allotments, if any.

The offering represents a 35.1% LP interest in Marlin, or a 40.4% LP interest if the underwriters exercise in full their option to purchase additional common units.

Inter Pipeline To Provide Bitumen Blend Transportation To Canexus Facility

Inter Pipeline Fund entered into a binding agreement with Canexus Corp. to transport bitumen blend to Canexus’ unit train rail-loading operations near Bruderheim, Alberta. Under the terms of the 10-year agreement, Inter Pipeline will provide Canexus with 100,000 barrels (bbl.) per day of firm capacity on a new pipeline lateral from the Cold Lake pipeline system, according to the company release.

Canexus is undertaking a major expansion of its rail operations to enable loading of crude oil unit trains that will access both the Canadian Pacific and Canadian National Railway systems. Inter Pipeline will construct a 13-kilometer, 24-inch diameter pipeline lateral from the Cold Lake pipeline system to Inter Pipeline’s Polaris pumping station near Lamont, Alberta. Bitumen blend will then be transferred to a Canexus-owned pipeline for delivery to its Bruderheim rail-loading facility. Total cost for the pipeline

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lateral and associated metering facility is approximately \$50 million. The new lateral will have an ultimate throughput capacity of 320,000 bbl. per day, enabling Inter Pipeline to pursue additional third-party bitumen blend-delivery opportunities in the region.

Construction of the new pipeline lateral and metering facility will commence in August, with an expected in-service date of mid-2014. This accretive investment will generate approximately \$10 million per year in EBITDA over the life of the contract. The agreement with Canexus involves a take-or-pay volume commitment and all operating costs will be recovered on a flow through basis.

Chevron Phillips Flares Gas After Shutting Unit At Sweeny Plant

BLOOMBERG

Chevron Phillips Chemical Co. reported that it released emissions after a unit was shut at its Sweeny chemical plant in Texas, according to a filing with state regulators.

The ethylene unit was shut down after it lost a gas-fired turbine compressor, the company said in a filing with the Texas Commission on Environmental Quality. Further information was not available at press time.

Crestwood Completes Niobrara Shale Acquisition

Crestwood Midstream Partners LP and the owner of its general partner, Inergy LP, announced that Crestwood's subsidiary, Crestwood Niobrara LLC, has completed the acquisition of a 50% interest in Jackalope Gas Gathering Services LLC from RKI Exploration & Production LLC for a total cash consideration of \$107.5 million.

The other 50% interest in Jackalope is owned by Access Midstream Partners LP. Access will continue to provide field operations and construction management for Jackalope, and Crestwood will assume the commercial development role for the joint venture.

GE Energy Financial Services provided \$80.6 million of preferred equity to Crestwood Niobrara, with the remaining \$26.9 million of the acquisition funded under Crestwood's revolving credit

facility. GE Energy Financial Services has agreed to provide 75% of the future capital contributions for Crestwood Niobrara's 50% interest in Jackalope, up to an aggregate contribution of \$150 million.

The Jackalope gathering and processing system is located in Converse County, Wyoming, in the emerging Powder River basin Niobrara shale play and is currently composed of approximately 100 miles of gathering pipelines and 9,400 horsepower of compression equipment. The Jackalope system is being developed to gather and process rich natural gas produced from a 311,000-acre area of dedication from Chesapeake Energy Corp. and RKI. The existing assets and future development are supported by a 20-year gathering and processing agreement with Chesapeake and RKI under which Jackalope receives cost-of-service based fees with annual redeterminations that provide for an attractive rate of return on invested capital.

State Department Approves Vantage Pipeline To Alberta

The U.S. State Department approved construction of an 80-mile pipeline segment from Hess Corp.'s Tioga, North Dakota, natural gas plant into Alberta, according to The Huffington Post.

The proposed \$300-million, 430-mile Vantage Pipeline is slated to supply up to 60,000 barrels of ethane per day, and construction of the pipeline's Canada portion is under way, the report said. The North Dakota portion is expected to be complete later this year, and Nova Chemicals Corp. has already signed a long-term agreement to purchase all of the ethane produced at the Tioga plant.

U.S. Shale Output Causes Angst For African Oil Producers

BY **OBAFEMI OREDEIN** | SPECIAL TO HART ENERGY

The U.S. shale oil revolution has increased production and helped keep oil prices from rising sharply, despite supply disruptions from other parts of the world.

But the North American shale success story isn't good news for some African members of the Organization of Petroleum Export-

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WORRY | African OPEC member countries are seeing diminished demand for their hydrocarbons as U.S. shale production pushes it out of the market.

ing Countries (OPEC), especially Nigeria, Angola and Algeria, and non-OPEC members such as Ghana and South Sudan.

The U.S., which a few years ago was the largest oil importer in the world, has drastically reduced its oil imports. The U.S. posted the biggest increase in oil production in the world and the largest in

U.S. history in 2012 when production reached 8.9 million barrels (bbl.) per day, up 13.9% from 2011, according to the *BP Statistical Review of World Energy*.

U.S. output, adding to the world's oil supply, has contributed to keeping oil prices from rising sharply in spite of supply disruptions from Nigeria, Iraq, Libya, South Sudan and other key producers.

But Nigeria and Algeria, which produce light, sweet crudes that are low in sulfur content and simple to refine, are already feeling the impact of the U.S. oil boom. They are the most impacted in terms of reduced oil exports to the U.S. and lower oil prices in the past year. These and other countries need high oil prices to support local spending.

U.S. imports from Nigeria were more than halved to 403,000 bbl. per day in March 2013, from 913,000 in March 2011, according to U.S. Energy Information Administration (EIA). Also, the EIA said exports from Angola to the U.S. from April 2011 to April 2012 dropped 38% to 4.8 million bbl.

OPEC said in its annual report released in the first week of July 2013 that the price benchmark oil from some OPEC members fell in the past year because of the unexpected energy boom in the U.S., which is causing a revolution in the global oil trade.

The average price of Algeria's Saharan Blend on the spot market fell by 1.3% in 2012 to \$111.49 per barrel, while Nigeria's Bonny Light slipped 0.4% to average \$113.66 per barrel, the report said.

"Shale oil has been identified as one of the most serious threats for African producers," said Nigeria's Minister of Petroleum Resources Diezani Alison-Madueke, adding that African producers

could lose 25% of their oil revenue as they are edged out of the U.S. market.

Nigeria and Algeria are suffering the worst effects from the North American oil boom since they produce a grade similar to shale oil, she said, stressing that shale oil is a "grave concern."

"We risk a situation where, in the first place, we lose our oil market in America. But beyond that, we also risk a situation where America, having satisfied itself with what it has, will also want to find a market outside. And that market may be a market that Nigeria is selling to," said Omar Farouk, general manager of media relations at the Nigerian National Petroleum Corp. (NNPC).

Commenting on U.S. shale oil on July 8 in Abuja, the Nigerian capital, Nigerian President Goodluck Jonathan said "Nigeria is known for oil. But today, many countries around the world have found oil. The recent discovery of shale oil and gas means that we can no longer depend solely on oil to drive the economy."

During a five-day state visit to China at the beginning of July, Jonathan met executives from Sinopec, which is China's largest refiner, according to a statement from his office in Abuja. But it was not clear whether the president succeeded in getting China to increase its oil imports from Nigeria.

Nigeria and other African producers that produce light, sweet crude may not have big market in Asia, because several Asian refiners process heavy crude produced by OPEC members in the Persian Gulf, said an oil expert in Lagos.

Angola, which produces around 1.72 million bbl. per day of oil, is already looking for new markets for oil, according to its Oil Minister Jose Maria Botelho de Vasconcelos. Rising hydrocarbons production in the U.S., Angola's second main export market after China, also poses a threat to Angola, where the oil sector accounts for 45% of GDP, 75% of government revenue and more than 90% of total exports.

Algeria produced about 1.87 million bbl. per day of oil in 2012 and the vast majority of Algerian oil exports, roughly 85%, are sent to North America and Europe. The U.S. is the single-largest destination; however, U.S. imports of Algerian crude have declined over the past five years.

The value of Algeria's oil and gas exports fell by 9% in the first four months of 2013 compared to the same period in 2012 due to lower global crude oil prices, according to government figures published in a report by the country's APS news agency.

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Algeria's Finance Minister Karim Djoudi said lower oil revenue, due to the U.S. shale oil revolution, could force the government to cut domestic spending and delay some projects if crude oil prices keep falling.

"Emerging markets like India and China have been growing, and they have absorbed a large part of Angolan exports," said Botelho de Vasconcelos.

Rising U.S. oil production would have negative impacts on several African countries, especially if oil prices keep falling. These countries include Liberia, Uganda and Kenya, which have discovered oil but have not started production. Oil investors in these countries may be discouraged. Exploration may slow down, pushing forward production time. Moreover, oil revenues expected by these countries may be lower than earlier expected, affecting their development programs.

Oil revenue earnings of OPEC and non-OPEC African oil producers and several other oil producers may be impacted further if China is successful in making the needed technological advances to tap its shale oil deposits, pumping more oil into the global market.

OPEC has promised to launch a study of the impact U.S. shale oil production is having on its members, OPEC's Secretary General Abdalla Salem El-Badri said.

But, ultimately, it is up to OPEC members affected by shale oil output to seek out new markets on their own, El-Badri added.

The EIA has predicted the U.S. will pump 11.1 million bbl. per day by 2020, surpassing Saudi Arabia, the world's top oil exporter.

85 in Choctaw County, Alabama, to interconnections with Florida Gas Transmission and Bay Gas Storage in Mobile County, Alabama. The project would deliver enough natural gas to provide service to approximately 1 million homes.

"Growing power-generation demand has dramatically increased utilization of Transco's Mobile Bay Lateral in recent years," said Frank Ferazzi, general manager of the Transco system, in a company release. "Our proposed Mobile Bay South III expansion is an efficient way to move additional supply from a well-positioned compressor station in Choctaw County, Alabama, to a number of regional storage facilities to growing Southeastern markets."

The proposed expansion would involve adding compression power at Transco Compressor Station 85 in Choctaw County, Alabama, along with upgrades at existing facilities in Washington and Mobile counties in Alabama. With FERC approval, construction could begin in the spring of 2014. The capital cost of the project is estimated to be approximately \$50 million.

The Transco pipeline is a 10,200-mile pipeline system that provides natural gas transportation and storage services for markets throughout the northeastern and southeastern U.S.. Major markets include New York City, Philadelphia, Washington D.C. and Atlanta. Transco's major customers are primarily power generators, local-distribution companies and producers. In the last decade, the company has placed into service 20 Transco growth projects in excess of \$1.8 billion of capital investment. The current system capacity is approximately 9.9 million dth per day.

Williams Partners Seeks FERC Approval To Expand Transco Capacity

Williams Partners LP's Transco natural gas pipeline filed an application with the Federal Energy Regulatory Commission (FERC) to expand a compressor station and provide additional firm natural gas transportation capacity to growing markets in the southeast U.S. by the spring of 2015.

The Mobile Bay South III Expansion Project is designed to provide 225,000 dekatherms (dth) per day of firm transportation service on the Transco Mobile Bay Lateral from the Station 85 4A Pooling Point and other receipt points located at Transco's Station

Consumer Watchdog Claims Keystone XL Would Raise Gasoline Prices

JACK PECKHAM, HART ENERGY

Advocacy group Consumer Watchdog issued a report claiming to find that approval of the proposed Keystone XL pipeline—which would bring billions of barrels of relatively low-cost Alberta oil-sands crude to U.S. Gulf Coast refiners—would only wind up raising U.S. gasoline prices.

Rationale: Surplus Alberta crude combined with surging U.S. shale-oil/tight-oil crudes today are depressing crude and gasoline prices in the U.S. Midwest, favoring gasoline consumers, according to the group.

NEWS & TRENDS | Up To Date

The Keystone XL pipeline instead would divert that surplus Alberta crude to the U.S. Gulf Coast for export-oriented U.S. refiners, hence tightening U.S. Midwest crude and products markets and spiking U.S. fuel prices, according to the group.

Ironically, on the same day that Consumer Watchdog issued its report, a U.S. Senate Energy Committee hearing on U.S. gasoline prices failed to raise any redflags about Keystone XL. Several U.S. senators also complained that the relatively cheap crude oil in the U.S. Midwest isn't translating into much-cheaper gasoline prices, but rather only seems to be fattening Midwest refiner profit margins.

Meanwhile, the U.S. Energy Information Administration, energy market analyst Citi Research and Valero Energy all testified at the Senate hearing that Keystone XL would boost total North American and global crude oil supplies, hence helping to boost U.S. energy supplies while simultaneously fattening OPEC spare capacity—the latter a crucial factor that (over time) depresses global crude and product prices.

But according to Consumer Watchdog, “drivers, especially in the [U.S.] Midwest, would pay 20¢ to 40¢ more at the pump if the disputed [Keystone XL] pipeline were built, as the current discount of up to \$30 per barrel for Canadian oil disappears.

“The true goal of multinational oil companies and Canadian politicians backing the pipeline is to reach export outlets outside the U.S. for tar-sands oil and refined fuels, which would drive up the [Alberta crude] oil's price,” according to the advocacy group.

Unexplained and unmentioned by the Consumer Watchdog report is the tendency of regional crude oil markets to equilibrate over time—meaning that relatively short-term, localized price depressions (as in the U.S. Midwest today) eventually are wiped-out by expansion of crude or products take-away capacity (as with new pipelines or crude-by-rail expansion), or by reduced output by oil producers suffering relatively low prices. A third factor: U.S. Gulf Coast refiners are already investing in expanded capacity to process the new shale-oil/tight-oil crudes, which eventually will boost Midwest crude prices.

According to a separate Consumer Watchdog report, “price hikes at the pump are likely to hit as far as California. Canada is the second-largest exporter of crude to the West Coast region, just behind Ecuador. California refiners are taking action to import and use more Canadian oil.

“Political leaders in the Canadian province of British Columbia have officially opposed plans for a major new tar-sands oil pipeline from Alberta through their province to the Pacific Coast. Two other similar proposals may meet the same fate, and are certainly years in the future. This Canadian opposition increases the motivation of tar-sands investors and developers and to get Keystone XL built as sure access to overseas markets.”

“Any reduction of deliveries to [U.S.] Midwest refineries would crimp gasoline supply, further driving up pump prices, and Keystone XL's backers want to move cheap oil out of the Midwest,” said report author Judy Dugan. “Many major Midwest refineries have also made expensive changes to maximize their use of the tar-sands oil and could not operate as efficiently using different grades of oil from other sources.”

EIA: Transportation By Rail, Truck, Barge Continues Increase



FLEXIBLE MARKET | Rail, truck and barge shipments of oil rose in 2012 due to their ability to meet market demand.

The delivery of crude oil to refineries by rail, truck and barge increased by 57% from 2011 to 2012, reaching 1 million barrels (bbl.) per day out of an estimate 15.2 million bbl. per day, according to the U.S. Energy Information's Today In Energy brief.

The Gulf Coast region accounts for most U.S. refinery receipts by rail, truck and barge, and its receipts nearly doubled in 2012. Until more pipelines are built in the area, the region is increasingly dependent on rail and truck to move crude production out of the Eagle Ford and Permian basins, the brief said.

Although East Coast rail, truck and barge receipts decreased in 2011 because of refinery closures, they increased by 18% in 2012 after refiners put in rail facilities to receive discounted crude from the Bakken shale and other tight oil formations, the brief said. In addition, domestic truck and pipeline imports of Canadian oil in the Rocky Mountain region continue to increase as domestic pipeline receipts have stayed flat.

SNAPSHOT | Industry Insight

Europe Could Lead Future Pipeline Capex Growth

BY VELDA ADDISON | HART ENERGY

Subsea developments offshore Norway and the U.K., along with major export pipeline projects, are expected to lead a future jump in global pipeline and control line capex, which Infield Systems believes will increase nearly 60% during the next five years.

In its latest report, *Global Perspectives Offshore Pipelines and Control Lines Market*, Infield said Europe is set to take up 25% of global pipeline capex, the largest share. The firm attributed the anticipated increase to two emerging trends, one of which was a rise in trunk/export line demand for long-distance export pipelines.

Plans for the South Stream, which Gazprom aims to have completed by 2015, for example include transporting gas from Russia's Izobilnoye under the Black Sea, reaching depths of more than 6,500 feet and moving through Turkey's water, according to the U.S. Energy Information Administration. Onshore, the pipeline will cross Bulgaria.

"Firstly, growth in trunk/export line demand is expected from a series of long-distance export pipelines in Eastern Europe (South Stream and North Stream expansion). While compelling in the short term, the vast lengths of pipe associated with these projects tend to mask perhaps a more pertinent long-term shift in the region toward SURF [subsea, umbilicals, risers, and flowlines] infrastructure," Infield says. "Through the development of remote fields, both the U.K. and Norway are set to characterize the majority of this demand."

Activity on the Norwegian Continental Shelf is robust, as Norwegian authorities have approved development plans for Skuld, Jette, Åsgard subsea compression, Martin Linge, Edvard Grieg, Bøyla and Svalin, according to the Norwegian Petroleum Directorate's website. Plans for development and operation for the Gina Krog, Ivar Aasen and Aasta Hansteen are awaiting approval, and development plans are expected this year for Zidane, Flyndre and Oseberg Delta 2.

In the U.K., activity also is expected to pick up. During the next two years, 30 new fields are anticipated to go onstream, producing about 1 billion barrels of oil equivalent (Bboe), according to *Oil & Gas UK*. Production could jump to at least 2 million barrels of oil equivalent (MMboe) per day by 2017 if plans progress accordingly.

Africa: Conventional pipeline systems in the shallow-water traditional markets in North Africa and West Africa will primarily drive pipe-



FRONTRUNNER | Europe will be the largest investor in new pipelines during the next five years, according to a new report.

line spending, Infield said; however, SURF activity is increasing, especially in deep water offshore West Africa. Infield sees the trend continuing. "Although this expected demand is set to be driven predominantly by the likes of Angola and Ghana in the short to medium term, the key theme is the reemergence of activity in Nigerian waters," Infield said.

Asia: Shallow and deepwater activity will steer pipeline and control line capex in Asia, where Infield says activity is split between SURF and conventional activity in Thailand, Malaysia and Indonesia. "Deepwater activity in the region is set to continue to evolve, however, and Infield Systems expects the development of floating platforms and related subsea infrastructure to further drive this segment of the market," Infield said.

Australia: Here, Gorgon, Ichthys and Wheatstone will lead in pipeline capex, but cost overruns for these liquefied natural gas (LNG) projects could generate concern and cause plans to change. "The current market is primarily shallow-water based; however, the implementation of secondary and tertiary stage developments is set to see the deepwater segment of the market grow," Infield said.

Latin America: Petrobras' active presalt development plans targeting Brazil's Santos and Campos basins and Pemex's plans to step up production from the Bay of Campeche will contribute to capex growth in the Latin American market. "Opportunities are diverse across SURF, conventional and trunk line infrastructure, and, as such, the development of the region will be key to overall industry appetite," according to Infield.

Middle East: Pipeline capex for gas projects in Egypt, Iran, Israel, Qatar and Saudi Arabia will dominate in the Middle East. Infield pointed to Azerbaijan's Shah Deniz, Kazakhstan's Kashagan, and Israel's Leviathan projects as main contributors. "Although these large projects involve levels of conventional, SURF, and trunk line activity, the region as a whole is characterized by conventional pipeline associated with shallow-water fixed infrastructure," Infield said.

LEAD STORY | From The FrontContinued from
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and top of a landfill; and provide a leachate (water impacted by garbage) collection and removal system. It also created owner and operator responsibility for the closure of landfills and a 30-year post-closure care-and-maintenance obligation. All new sites had to be constructed based on the new standards and so-called “grandfathered” facilities were phased out.

The waste industry has undergone a huge transformation in the past 30 years. Now instead of “garbage guys” or “junk yard dogs” those involved in waste processing, treatment, disposal and recycling include engineers, land-use planners, environmentalists and business developers. The evolution of the modern waste industry can serve as a guide for the oil and gas industry as it seeks public acceptance of its operations and facilities. With the exploration of the shale formations, the industry is taking on a much higher profile.

Grass roots objection to shale activity continues to gain momentum. The mainstream media constantly sensationalizes the dangers of fracking and the environmental harms and public health impacts claimed to be caused by oil and gas operations. Perpetrating the myth that fracking causes explosive gas flames to run from the kitchen sink helps sell newspapers. Well-funded opposition groups want to support more unconventional renewable energy sources and do not see natural gas as a solution to energy dependence. The tide will not change unless the industry does something. The oil and gas industry has to step up to the plate and counter all the negative press and public sentiment. Here are some ideas:

1. Understand the needs and concerns of the communities in which activities are planned.

First, the oil and gas industry must understand the needs and concerns of the communities in which they are active. Land-use planners know community education concerning a perceived undesirable operation is key to acceptance. Prior to making any pub-

lic announcement of operations, the oil and gas industry should get the lay of the land including:

- a) Do the legwork to determine the specific issues related to public opposition. This may include one-on-one meetings with public officials, industry leaders and even environmental groups.
- b) Talk to the local rotary and other business groups. Compile information regarding opposition and develop a strategy for overcoming the opposition.
- c) A well thought-out community education campaign, including a media presentation can usually counter grass roots attacks. Educate the public concerning the benefits of the proposed activity, whether it is a well pad, a compressor station, pipeline or an office complex.

Community concerns are not surprising and should be expected. They usually involve noise, truck traffic, environmental impacts and public health issues, property values and other “soft” quality of life issues. Not every community wants development and prosperity. Be creative and address the issues.

Historically the waste industry has addressed these issues in part by entering into host community or community-impact agreements. Such agreements are common practice in the waste industry. Under such agreements, the waste operators contract with either a host community or a community that may be negatively impacted by the proposed industrial activity.

These contracts can address the perceived impact of these facilities and strive to mitigate any negative impacts. By addressing individual concerns, these agreements can allay unsupported fears of industry spoiling or destroying the resources of local municipalities or its citizens. Not all local municipalities have the same issues and concerns. Find out what is key to your local community. Each agreement should address the issues specified during the community education process.

[READ FULL ARTICLE ONLINE](#)

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