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DUG Permian: Making A Case For US Oil And Gas Exports

Projections indicate that production will continue to rise, says Weinstein of the Maguire Energy Institute.

BY **EMILY MOSER** | HART ENERGY

The United States is leading the world in oil output and, according to the U.S. Energy Information Administration (EIA), is primed to increase production. The big question is what to do with all of this unprecedented growth in production.

Between finding a safe, inexpensive method to transport oil to market and rethinking the country's ban on oil exports, the industry has its work cut out for itself, said Bernard Weinstein, associate director at the Maguire Energy Institute.

"Building up the infrastructure to get our production to market is the biggest challenge facing the industry today, whether it's domestic, refinery or international markets," Weinstein said at Hart Energy's DUG Permian conference on May 20 in Fort Worth, Texas.

Weinstein, who is also an adjunct professor at Southern Methodist University in Dallas, said rising U.S. oil production is also spurring calls to lift a congressional restriction on oil exports.

Texas has a lot of recently completed pipelines—and others are currently under construction—to help move crude and NGL to refineries along the Gulf Coast. Perhaps in the not-too-distant future, he said, the pipelines would connect with export terminals.

The EIA is predicting that the U.S. will be the No. 1 oil-producing country by 2016. This is assuming that the government or environmentalist groups do not get in the way, Weinstein said.

While much of the newly found abundance is coming from unconventional plays, Weinstein said that "the unconventional is becoming conventional." Unconventional production in tight-oil formations, and even in some of the

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HIGHLIGHTS FROM TODAY'S EDITION

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Propane Prices Take Downturn As Demand Forecast Could Be Off

BY **FRANK NIETO** | SENIOR EDITOR, MIDSTREAM BUSINESS

Summer is fast approaching and should finally lead to increased cooling demand that will help improve gas prices. Thus far gas prices have held firm under $4.50 per million Btu (/MMBtu) as injection rates have increased despite warmer-than-normal spring temperatures and with more power generation switching to gas over coal this year.

For the week of May 14, gas prices were down 1% at Conway to $4.29/MMBtu and increased 2% to $4.43/MMBtu at Mont Belvieu. This compared to the price of $3.99/MMBtu at Conway and $4.09/MMBtu at Mont Belvieu last year at the same time.

While coal may be cheaper than natural gas, the coal industry faced its own supply shortage as there was increased winter demand along with transportation issues that limited inventory buildup. According to Barclays Capital, should coal supplies remain low then it would increase gas demand regardless of price.

However, it appears that coal is regaining its economic advantage and rebuilding inventories, according to Barclays Capital. "Although coal stock at the end of February were below the five-year average, according to the Energy Information Administration, coal shipments have started to recover from winter levels and are now above their year-ago levels," the firm said in a research note. "Furthermore, transportation issues during the winter were largely caused by congestions in the railway system due to extremely cold weather conditions and higher demand for coal and oil volumes owing to skyrocketing heat-

CURRENT FRAC SPREAD (CENTS/GAL)

May 27, 2014	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	26.70		28.85	
Shrink	28.44		29.37	
Margin	-1.74	13.48%	-0.52	357.74%
Propane	99.10		102.54	
Shrink	39.30		40.58	
Margin	59.80	-4.23%	61.96	-4.02%
Normal Butane	117.30		120.42	
Shrink	44.49		45.94	
Margin	72.81	0.72%	74.48	-1.45%
Isobutane	179.60		124.90	
Shrink	42.73		44.12	
Margin	136.87	8.31%	80.78	-1.29%
Pentane+	216.48		221.10	
Shrink	47.58		49.13	
Margin	168.90	1.83%	171.97	0.87%
NGL $/Bbl	41.83	0.14%	41.31	-0.09%
Shrink	15.67		16.18	
Margin	26.16	0.93%	25.13	-1.58%
Gas ($/mmBtu)	4.29	-1.15%	4.43	2.31%
Gross Bbl Margin (in cents/gal)	59.18	0.68%	57.46	-1.82%
NGL Value in $/mmBtu (Basket Value)				
Ethane	1.47	-0.22%	1.59	-0.21%
Propane	3.44	-3.03%	3.56	-1.61%
Normal Butane	1.27	0.00%	1.30	-0.05%
Isobutane	1.12	5.90%	0.78	-0.05%
Pentane+	2.79	1.16%	2.85	1.19%
Total Barrel Value in $/mmbtu	10.09	-0.17%	10.08	-0.29%
Margin	5.80	0.58%	5.65	-2.24%

NGL PRICES

Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
May 14 - 20, '14	28.85	102.54	120.42	124.90	221.10	$41.31
May 7 - 13, '14	28.91	104.22	120.48	124.96	218.50	$41.35
April 30 - May 6, '14	29.24	107.38	123.48	127.50	219.46	$42.07
April 23 - 29, '14	29.98	111.02	126.58	129.86	226.50	$43.32
April '14	29.66	110.44	125.32	130.16	226.07	$43.11
March '14	30.89	106.20	124.77	129.25	218.19	$42.21
1st Qtr '14	34.50	129.51	137.62	141.49	212.60	$46.16
4th Qtr '13	26.76	119.81	142.56	145.02	210.66	$44.03
3rd Qtr '13	24.87	102.65	132.06	134.86	215.56	$41.21
2nd Qtr '13	27.12	91.38	124.01	127.46	204.12	$38.82
May 15 - 21, '13	27.87	94.04	125.60	125.88	205.80	$39.41
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
May 14 - 20, '14	26.70	99.10	117.30	179.60	216.48	$41.83
May 7 - 13, '14	26.76	102.20	117.30	169.60	214.00	$41.77
April 30 - May 6, '14	26.40	105.46	119.66	165.20	218.96	$42.44
April 23 - 29, '14	25.56	108.80	123.06	185.80	226.46	$43.95
April '14	26.02	110.13	122.02	170.61	228.14	$43.83
March '14	32.20	107.10	119.02	136.50	225.70	$43.25
1st Qtr '14	25.46	169.48	132.08	147.10	216.86	$49.93
4th Qtr '13	20.19	122.54	144.49	147.58	205.01	$43.33
3rd Qtr '13	20.80	99.22	129.23	142.77	209.94	$40.07
2nd Qtr '13	20.71	85.37	116.50	123.91	204.86	$36.89
May 15 - 21, '13	20.92	88.14	115.74	117.45	203.40	$36.94

(Above) Data Provided by Bloomberg. Individual product prices in cents per gallon. NGL barrel in $/42 gallons | Source: Hart Energy

(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.

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NGL PRICES & FRAC SPREAD | Week in Review

ing demand. As weather conditions improve and coal shipments increase as congestion issues are alleviated, coal stocks should recover from current levels ahead of the peak cooling season."

NGL prices were flat compared to the previous week with only propane and Conway isobutane showing any noticeable movements. Propane inventories have been increasing at a faster-than-expected rate while prices have been quickly falling, which could be a sign that demand is lower than expected.

The first two weeks of May saw propane inventories increase by nearly 6 million barrels (bbl), which is more than double the 1.15 MMbbl per week average needed this spring and summer to return inventories to their five-year average, according to En*Vantage.

The market is taking notice of these high inventory build figures as the Conway price fell below the $1.00 per gallon (/gal) threshold for the first time since last August. The 3% decline put the price at 99 cents/gal. The Mont Belvieu price fell 2%, which left it just above this threshold at $1.03/gal. This was its lowest level since it was $1.01/gal the week of Aug. 7, 2013.

Ethane prices were nearly identical to the previous week's price at both hubs with the Mont Belvieu price remaining at 29 cents/gal and the Conway price staying at 27 cents/gal. The market should see an uptick as more ethane crackers are coming back online. Margins remain negative, but they are slowly creeping back to nominally positive levels.

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / May 22, 2014	
Gas Hub Name	Current Price
Carthage,TX	4.34
Katy Hub, TX	4.39
Waha Hub, TX	4.34
Henry Hub, LA	4.46
Perryville, LA	4.37
Houston Ship Channel	4.34
Opal Hub, Wyo.	4.30
Blance Hub, NM	4.25
Cheyenne Hub, Wyo.	4.29
Chicago Hub	4.50
Ellisburg NE Hub	3.13
New York Hub	3.17
AECO , Alberta	4.22

Source: Bloomberg

Heavy NGL prices retained their correlation to crude prices as both remained flat during the week. Crude continues to hover at just over $103/bbl. Butane and C_{5+} prices held firm along with Mont Belvieu isobutane. Conway isobutane experienced another large uptick as the price rose 6% to $1.80/gal.

"Since late March, Conway isobutane prices have been selling at a steep premium to Mont Belvieu isobutane. It is not unusual to see a Conway premium for isobutane since the Midcontinent market for isobutane can be tight during the summer months. However, the premium is especially high at over 50 cents/gal. We suspect that the only isomerization unit in the Midcontinent which is operated ONEOK is down, but we have no evidence to verify our suspicions other than it is very unusual to see a 50 cents/gal premium for iso at Conway. The ONEOK isomerization unit has a capacity at around 9,000 bbl/d," En*Vantage said. As we've noted in previous issues of *Midstream Monitor*, while there is a greater value to be had for isobutane at Conway compared to Mont Belvieu, there is far less volatility in trading for the product in the Midcontinent. This creates an interesting dynamic with a shortage of the product at the hub, but a shortage to a niche market.

The theoretical NGL bbl price was also flat at both hubs with the Conway price up very slightly to $41.83/bbl with a 1% gain in margin to $26.16/bbl. The Mont Belvieu price was down somewhat to $41.31/bbl with a 2% decrease in margin to $25.13/bbl.

The most profitable NGL to make at both hubs was C_{5+} at $1.69/gal at Mont Belvieu and $1.72/gal at Conway. This was followed, in order, by isobutane at $1.37/gal at Conway and 81 cents/gal at Mont Belvieu; butane at 73 cents/gal at Conway and 75 cents/gal at Mont Belvieu; propane at 60 cents/gal at Conway and 62 cents/gal at Mont Belvieu; and ethane at negative 2 cents/gal at Conway and negative 1 cent/gal at Mont Belvieu.

RESIN PRICES – MARKET UPDATE – MAY 22, 2014					
TOTAL OFFERS: 21,388,892 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Inj	4,576,648	0.73	0.78	0.69	0.73
HDPE - Blow Mold	3,900,992	0.7	0.79	0.695	0.735
PP Homopolymer - Inj	3,544,508	0.79	0.82	0.745	0.785
LDPE - Film	2,376,232	0.78	0.85	0.765	0.805
LLDPE - Film	1,767,312	0.72	0.775	0.71	0.75
PP Copolymer - Inj	1,675,496	0.81	0.81	0.755	0.795
LDPE - Inj	1,244,024	0.735	0.81	0.74	0.78
LLDPE - Inj	1,241,840	0.77	0.81	0.72	0.76
HMWPE - Film	1,061,840	0.775	0.815	0.725	0.765

Source: Plastics Exchange – www.theplasticsexchange.com

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Analyst: 'Incredible Uncertainty' In Marcellus Takeaway Problems

BY **STEVE TOON** | HART ENERGY

Takeaway capacity in the northeast region of the Marcellus Shale at present is "barely ahead" of production, and that tells you everything you need to know, according to Jefferies & Co. equity analyst Subash Chandra. "Very small changes in timing or weather could really swing basis differentials around. Local markets are pretty fickle," he told Hart Energy.

To wit, when the Henry Hub natural gas price in early March stood at $4.77 per thousand cubic feet, pricing in a relatively small geographic area in the Northeast ranged from as low as $1.80 in northern Pennsylvania to $16 in Connecticut, per Energy Information Administration data, depending on which end of the constrained pipelines sat the supply or demand.

Offtake for burgeoning Marcellus volumes is at a premium in the current environment, and spot markets discount deeply for excess stranded gas. Production from the rapidly growing basin is mounting at a breakneck pace, now some 14 billion cubic feet per day (Bcf/d) basinwide and climbing. Wells are huge, and find-and-develop costs are low. Yet infrastructure struggles to keep pace in moving those volumes; spot price differentials to Henry Hub are volatile.

Operators, meanwhile, assure they have their situations under control or signal they are confident of finding uncontracted third-party capacity and buyers in time. Maybe, just maybe, they might pace their development for a while, but at Street-pleasing growth levels all the same. Large volume percentages are hedged, if they can get it to market.

The analysts aren't so optimistic.

Bob Brackett, senior analyst for Bernstein Research, in a series of spring reports titled "Who's Afraid of Marcellus Differentials," stated that the bear case for northeast Marcellus producers centers around those price differentials to Henry Hub.

"The view is that rising Marcellus production—some 2 billion cubic feet a day year-over-year for 2014—vs. lack of incremental takeaway capacity—about 800 million cubic feet a day year-over-year for 2014—will result in another year of even worse basis differentials, with negative revenue implications for operators in the region."

This year will get more painful before the situation gets better. The bright light at the end of the tunnel for northeast Marcellus producers shines primarily from two big pipeline projects. Williams Cos.

Inc.'s Constitution Pipeline will carry 650 million cubic feet per day (MMcf/d) and is expected online in late 2015 or early 2016.

Transcontinental Gas Pipeline Co. LLC's Atlantic Sunrise will deliver 1.7 Bcf/d, anticipated in 2017. They can't come too soon. Until then, producers are hard pressed to find capacity.

"The improving average well of the northeast Marcellus indicates that even with only 26 active rigs, we would expect continuation of too much supply vs. pipeline capacity through at least 2015, and likely through 2017," Brackett said. "This will likely drive sustained depressed pricing at the Marcellus inlet of as low as $2 per MMBtu, our estimate of where the highest-cost producers are likely to shut in production."

Jefferies' Chandra reiterates this prognosis, warning that northeast Marcellus players are "on the brink" for at least two years. Economics here are "extremely fluid and getting incrementally more challenging. Operators are going to have to be very flexible with drilling plans," he said.

"Producers can't afford to be speculators where they produce more gas when prices are high, and don't produce when prices are low. They don't have that option." Unfortunately, the Northeast does not have the baseload demand needed to level differentials. Over time, the Gulf Coast will be the market for base loading excess Marcellus gas, he said, with projects already in the queue.

"But you'll pay more" to move the gas, he noted. "The whole notion is, 'Will my Henry Hub price compensate for my transport costs?' That, of course, is a developing situation. It's not like you can pay a dollar and change at $4 gas to get your gas to the Gulf Coast, and still make a lot of money."

Until the big pipes are built, the next two years offer "incredible uncertainty," and some operators will be less aggressive or will shut down entirely, he said.

In the northeast Marcellus, Chandra places the mantle at the feet of Cabot Oil & Gas Corp. "Cabot will decide marginal supply," he

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said. "They're the biggest source of growth. No one else really matters up there. They will either balance it or imbalance it."

While the next two years might be an uncomfortable period for impatient producers, the growing pains of a maturing play will subside in the long term. As infrastructure catches up and markets balance, the Marcellus Shale is poised to be the primary hub of U.S. natural gas supply into the future.

Midstream Scrambles To Keep Up With Permian Production

BY **JOSEPH MARKMAN** | HART ENERGY

They're drilling for hydrocarbons with the urgency of the 1920s, when Ira Yates sold leases from his front porch in Pecos County, Texas. This time, they're going at it horizontally, and for midstream operators this era of the Permian is a bonanza.

"We're seeing fantastic returns in the play—40% to 100% [internal rates of return]," said Tomas Ackerman, managing director of investment firm Natural Gas Partners. "It's one of the best plays in the world."

The Permian's EOR activities have driven demand for CO_2, which Kinder Morgan Energy Partners LP plans to meet by building the 213-mile, 300 million cubic feet per day (MMcf/d) Lobos Pipeline to move CO_2 from Arizona to the Cortez Pipeline in New Mexico. The $1 billion project is expected to be in service during 2016.

Drilling escalation is powering a surge in daily crude production, forcing midstream operators to scramble to avoid bottlenecks.

"We are excited about the growing production forecast in the Permian Basin," said Bruce Heine, Magellan Midstream Partners LP's director of government and media affairs. Tulsa, Okla.-based Magellan has two major pipeline systems originating in the Permian.

"Our Longhorn Pipeline, which has been safely transporting crude oil from the Permian to Houston since the second quarter of 2013, has a capacity of 225,000 bbl/d [barrels per day]," Heine said. "We are currently increasing the capacity of Longhorn to 275,000 bbl/d.

"Our second project is the BridgeTex Pipeline, which is a 50/50 joint venture with Occidental Petroleum," he says. "This system, which is currently under construction, will have a capacity of 300,000 bbl/d when it becomes operational in mid-2014."

Ackerman's Natural Gas Partners is backing PennTex Midstream Partners LLC's expansion in the Delaware Basin, the southwestern slice of the Permian. PennTex purchased a majority interest in Atlantic Midstream LLC in February and renamed it PennTex Permian. By the end of the first quarter PennTex Permian had put low- and intermediate-pressure gathering pipelines and associated compression into service. The company sees a July completion date for its 60 MMcf/d cryogenic natural gas processing plant in Reeves County, Texas, in the Wolfcamp play. Ackerman looks forward to being part of the Permian's ramping up, especially in terms of investment opportunity in the midstream space. Technological advances in drilling and completion give the Permian an economic edge over other plays.

"In the midstream business, the key is to be responsive to a producer's needs," he said. "That's the key to being competitive in a hot region like the Permian: You have to deliver on what you promise."

Pa. Governor Approves Marcellus Plant Construction

Pennsylvania Gov. Tom Corbett approved groundbreaking on the Panda Liberty power plant in Asylum Township, Bradford County, Pa. The 825-megawatt, natural gas-fueled plant is expected to power up to 1 million homes in the Northeast and to create as many as 600 jobs in the community, according to a news statement from the governor's office.

"Our all of the above—and below—energy strategy is putting Pennsylvania at the forefront of the American energy revolution," Corbett said. "It's a strategy that builds upon the idea that energy equals jobs."

Panda Power Funds said the plant is the first to be located in the Marcellus Shale specifically for the low natural gas prices and transportation costs. The plant is expected to be completely operational in 2016. Panda Power Funds estimates that the plant will contribute about $5.97 billion to the local economy within the first 10 years of operation.

McClendon Raises $8.5 Billion, Lines Up Permian/Marcellus Projects

BY **DARREN BARBEE** | HART ENERGY

On April 2, 2013, one day after stepping down as president and CEO of Chesapeake Energy Corp., Aubrey McClendon was already at work at his new company, American Energy Partners LP.

McClendon, who spoke to acquisition and divestiture professionals at the ADAM-Houston May 16, said he chose the company's name because he was proud of the work the nation has done in the energy field—and because he wanted to telegraph that he would need partners.

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Partners he got, but he's after more.

In the past nine months McClendon raised a breathtaking $8.5 billion of institutional capital, started five companies and acquired production of 25,000 barrels of oil equivalent per day on 600,000 net acres. The parent company has grown to 325 from 16 employees, with about 30 new people joining every month.

McClendon is also forming a company that will allow investments by third-party broker dealer networks called American Energy Capital Partners LP, with $2 billion to $3 billion of capital raised.

Asked by Hart Energy if his high-profile status has opened doors to his raising capital, McClendon drew laughs by saying that during his time with Chesapeake he was caught in a "journalist drive-by shooting. My problem was I was in a cul-de-sac."

Ultimately, he said his backers are people who "respected what I tried to stand up for and build over the last 30 years. It's a lot of fun to be back out there."

McClendon deflected a question about published reports that one of his companies may be attempting to buy Enduring Resources LLC. Enduring has been trying to sell its Midland and Delaware Basin holdings for an estimated $2 billion.

However, McClendon said two new companies will focus in the Permian and the Marcellus and that they have raised $4 billion in capital.

"We have two transactions under contract that haven't been announced yet or detailed," McClendon said. "Those combined are around $4 billion and should close by end of the summer."

McClendon used his appearance not just to talk up his various ventures, but to make a pitch for land and talent.

In discussing his companies in various plays, he told the audience he would be interested in speaking to anyone about potential deals.

"I need deals and I need people, and that's a part of my presentation today," he said.

McClendon said he has set out a strategy using multiple companies to stage around a particular play, basin or strategy. Since the market values play-focused companies more, he plans to take his companies public in the next several years.

In discussing the creation of the public companies, McClendon made light of his departure from Chesapeake, saying he had served as CEO of a public company for 20 years and enjoyed "it for 19 of those."

But he couldn't resist another pitch to the crowd: "If you've ever fancied yourself a public company CEO, we'll be in the market. Let me know."

Global Oil Demand To Hit 92.8 Million Barrels/Day In 2014

BY **JACK PECKHAM** | HART ENERGY

The International Energy Agency (IEA) announced in its latest monthly Oil Market Report—released May 15—that global oil demand in 2014 is likely to hit 92.8 million barrels per day (MMbbl/d), up 1.32 MMbbl/d from 2013 and slightly higher than the IEA's forecast last month.

However, global refinery crude throughputs hit a seasonal low in April, at 75.4 MMbbl/d, because of "plant maintenance and seasonally weak demand," according to the IEA.

Global oil refinery runs "are set to rebound steeply until August as turnarounds unwind and demand increases. Global throughputs are projected to average 76.2 MMbbl/d in 2Q [second quarter] 2014, 0.4 MMbbl/d lower than in 1Q 2014," the IEA reported.

According to the report, during first-quarter 2014, refinery crude run increases "largely stemmed from the Middle East, Russia and the U.S., while Asian and European refiners, whether in the OECD or the non-OECD regions, saw only modest gains, or even losses, from a year earlier."

Meanwhile, refinery margins "generally posted a strong recovery in early April before plummeting again late month," according to the IEA. "Surging gasoline cracks, following steep stock draws, bolstered returns in Europe and the U.S.

"U.S. Gulf Coast margins gained the most, up $5.15/bbl on average from March, supported by weak regional crude prices. In Northwest Europe margins were $2.40/bbl higher on average while the Mediterranean posted gains of $1.45/bbl. Margins in the U.S. Midcontinent and in Singapore also improved, though gains were tempered by relative strength in crude prices," the IEA reported.

Demand trends

Among the OECD member nations, oil demand "seems to have flattened out in year-on-year terms in February and March, with respective changes of -0.1% and +0.4% posted," according to the IEA.

"Despite signs of a rebound in oil demand in 2013, OECD oil markets remain entrenched in long-term structural decline as anticipated efficiency gains outstrip the effect of economic growth."

The report said that in the U.S., "transport fuel demand led the large February U.S. data revision, with gasoline deliveries now assessed at 8.7 MMbbl/d and those of gasoil/diesel at 4.2 MMbbl/d."

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"These numbers are respectively up on the year earlier by 3.2% [for gasoline] and 5.0% [for diesel/gasoil], suggesting that a combination of higher consumer confidence and lower prices at the pump has more than offset travel disruptions caused by exceptionally cold weather earlier this year. U.S. gasoil demand likely gained some additional traction in February as the very cold weather raised space-heating requirements," the IEA reported.

Europe: A recent uptick in German and U.K. oil demand "helped lift the estimate of global demand for 1Q 2014," according to the IEA. "German industrial activity is performing relatively well, having risen on a year-on-year basis in the seven months through March, with an equally robust performance seen in the U.K. recently."

Asia-Oceania: The report said that during first-quarter 2014, this region consumed about 8.9 MMbbl/d, down 0.5% year-on-year (yoy) after contraction of 1.3% in fourth-quarter 2013 and 2.7% in third-quarter 2013. Power sector demand for oil in the region's largest economy, Japan, has helped to slow down the recent declines in demand.

Non-OECD: "Despite stuttering somewhat in 4Q 2013, non-OECD oil demand rebounded strongly in 1Q 2014, as the Indian demand trend in particular showed some improvement," according to the report.

"Other notably stronger 1Q 2014 demand contributors, compared to 4Q 2013, were China, Brazil, Iran and Saudi Arabia. Total non-OECD deliveries are forecast to average out at around 45.8 MMbbl/d in 2014, 3.1% up on the year," the IEA reported.

"Africa, Asia and the Middle East are forecast to post the strongest growth. Recently steep gains have also been seen in Latin America, although those may prove short-lived as the macroeconomic outlook for that region underperforms, according to International Monetary Fund data.

"Strengthening industrial growth, particularly from the petrochemical sector, plus ongoing expansions in non-OECD transportation fuel demand are forecast to support relatively robust projections for non-OECD gasoline, jet, gasoil, LPG and naphtha demand in 2014."

China: Relatively challenging economic conditions "continue to dampen expectations of Chinese oil demand for 2014," the report said. "An estimated 10.2 MMbbl/d of oil products were delivered in March, up 2.0% on the year, trimming the approximation of first-quarter 2014 demand to 10.1 MMbbl/d.

"The Chinese oil demand estimate for March remained constrained by a combination of steeply falling gasoil/diesel and fuel oil deliveries, in line with the ongoing industrial slowdown that is sweeping the economy.

"Other factors than the economy are also dampening the apparent demand figures, including reports of relatively high product exports—2.8% up on the year earlier—and anti-pollution policies.

"Some cities are reportedly imposing quotas on new vehicles purchased, in an effort to ease pollution and ease congestion. Nonetheless, gasoline has been providing in recent months some of the strongest momentum to Chinese demand, alongside jet/kerosene demand, which continues to rise sharply in line with passenger traffic.

"Growth, however, should pick up through the remainder of the year, as near 7.5% economic growth is forecast to support relatively strong gains in gasoline, jet fuel and petrochemical products to say the least," the IEA reported.

India: Oil demand grew by 0.8% in March yoy, to roughly 3.6 MMbbl/d, according to the IEA.

"The March gain represents the eighth consecutive month of demand growth, reversing a protracted period of contraction around mid-2013, as rising sales of gasoline and LPG offset declines in most other product categories," the report said.

"Diesel deliveries, in particularly, have been falling since mid-2013 as government efforts to reduce the diesel subsidy have seen diesel prices rise in comparison to those of gasoline. In contrast, gasoline use has been on the rise.

"With revisions to March and February demand roughly offsetting each other, the growth forecast for the year as a whole has been left roughly unchanged at +2.6%, with total Indian oil demand forecast to average around 3.5 MMbbl/d in 2014."

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Russia: Despite concerns about the health of the Russian economy, "recent oil-demand data remain relatively robust," according to the report.

"An estimated 3.4 million b/d [bbl/d] of oil products were delivered in March, 5.3% up on the year earlier, marking 13 consecutive months of annual growth. The strongest gains are registered in the gasoil, residual fuel oil and 'other products' categories.

"Russian industrial output rose y-o-y [year-on-year] in both February and March, by 2.1% and 1.4%, respectively, according to the Federal State Statistics Service. For the year as a whole, Russian demand is projected to grow by a relatively modest 1.7%, to 3.5 MMbbl/d, consequential on forecasts that the underlying economy will be facing headwinds," according to the IEA.

Brazil: "Weaker-than-anticipated gasoil demand led the sharp drop in overall deliveries seen in March, to 3.1 MMbbl/d," the IEA reported. "At an estimated 1.1 MMbbl/d in March, gasoil deliveries came out 50,000 bbl/d below the month earlier forecast, as economic tailwinds curbed industrial activity. Indeed the latest data from the Instituto Brasileiro de Geografia e Estatística reported industrial activity rising by just 0.4% on a month-on-month basis in February, while the most recent manufacturing sentiment indicators point towards a deterioration in expectations since the turn of the year."

Saudi Arabia: At roughly 2.9 MMbbl/d in February, "Saudi Arabian oil deliveries exceeded both month- and year-earlier levels," the report said.

"Year-on-year growth climbed to a seven-month high in February, supported by strong gains in gasoline and jet/kerosene, both products that have garnered support from a recent uptick in consumer confidence. The forecast for the year as a whole, at 3.1 MMbbl/d, amounts to a gain of 3.2% on 2013 levels, and has been revised up on last month's report, reflecting stronger-than-anticipated 1Q 2014 demand, with 70,000 bbl/d added since last month's report," according to the IEA.

Alpha Crude Connector To Build New Crude Oil Transportation System

Alpha Crude Connector LLC (ACC), a joint venture between Frontier Midstream Solutions LLC and Concho Resources Inc., will construct a new crude oil transportation system in the Permian Basin. The ACC system will include more than 400 miles of crude oil transportation pipeline, multiple truck racks and more than 300,000 barrels (bbl) of storage in the northern Delaware Basin of southeastern New Mexico and West Texas. The pipeline will have a transportation capacity of more than 100,000 bbl per day to multiple delivery points including local refineries, rail outlets and major downstream pipelines.

In conjunction with the joint venture, Concho agreed to enter into a long-term transportation agreement with ACC. ACC will also solicit interest from other producers and marketers for capacity on the system. ACC will file for Federal Energy Regulatory Commission approval for the new common carrier pipeline. An open season will begin in June, with construction to follow. The system is expected to enter service during the second half of 2015.

Atlas Pipeline Sells Interest In West Texas Pipeline

Atlas Pipeline Partners LP completed the sale of its subsidiaries holding a 20% interest in the West Texas LPG Pipeline for $135 million, subject to certain closing adjustments. The purchaser was a subsidiary of Martin Midstream Partners LP. Atlas Pipeline will use proceeds from the sale to reduce its outstanding debt.

Citigroup Global Markets Inc. acted as financial advisor and Jones Day acted as legal advisor for the transaction.

Canada Boosts Pipeline Safety Rules As Northern Gateway Ruling Nears

BLOOMBERG

Canada is increasing the liability of pipeline operators for spills and giving regulators more power to enforce safety measures.

Companies that operate major pipelines will be required to have access to 1 billion Canadian dollars ($919 million) in funds for the cleanup of spills. The government plans to introduce legislation that will hold operators liable for that amount even if they weren't at fault or negligent, Natural Resources Minister Greg Rickford said in a speech on May 14. When operators are at fault, their potential liability will be unlimited.

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"Even in the most extreme and unlikely circumstances, the government will ensure that the environment, landowners and taxpayers are protected and the polluter pays," Rickford said in the speech.

Canada's National Energy Board, which regulates pipelines, will gain powers to advise operators on safety, including what materials to use and how to respond to emergencies. Regulators will also have the authority to take over cleanup operations if a company is unable or unwilling to do so. Rickford also said the government will "better integrate" input from aboriginal groups into pipeline safety.

Prime Minister Stephen Harper is trying to bolster public support for new pipelines as his government plans to rule on Enbridge Inc.'s Northern Gateway project, which would carry crude from Canada's oil sands to the Pacific coast. While crude producers say the route is needed to ease bottlenecks that are depressing the price of Canadian heavy oil, environmentalists and aboriginal groups have raised concerns about the risk of spills.

Spill prevention

Harper's cabinet has until June 17 to decide on the route after a regulatory panel recommended approval in December, subject to conditions.

British Columbia Premier Christy Clark has said her province will only back the pipeline if it satisfies five conditions, including "world-leading" spill prevention and response systems on land or water.

Transport Minister Lisa Raitt said on May 14 that the government will beef up oversight of oil-tanker traffic by drafting safety plans in four heavily used zones, including southern British Columbia.

EnCap Flatrock Closes $3 Billion Fund

Private equity firm EnCap Flatrock Midstream closed EnCap Flatrock Midstream Fund III LP (EFM III). The fund exceeded its goal of $2.25 billion and reached its hard cap of $3 billion within four months. Fund III received support from existing limited partners of its predecessor funds as well as new investors, including corporate and public pension plans, family offices, insurance companies and university endowments and foundations.

EFM III will follow the same investment strategy as its predecessors EnCap Flatrock Midstream Fund I LP and EnCap Flatrock Midstream Fund II LP (EFM II). The investment strategy focuses on independent, startup midstream companies with experienced management teams. EFM II is a 2012 vintage fund that closed at its hard cap of $1.75 billion and has made equity commitments to 10 portfolio companies. Since EnCap Flatrock closed its first fund in 2010, it has made equity commitments to 16 portfolio companies and has had four realization events totaling about $4 billion.

DTE Energy To Expand Bluestone Pipeline

DTE Energy's Gas Storage and Pipeline segment secured long-term gathering commitments with Southwestern Energy Co. and Cabot Oil & Gas Corp. The commitments will significantly expand DTE's Bluestone Pipeline and Gathering System.

The 44.5-mile pipeline and gathering system has a current capacity of 600,000 dekatherms per day (Dth/d). The system provides transportation to both the Millennium Pipeline in Broome County, N.Y., and the Tennessee Gas Pipeline in Susquehanna County, Pa. The incremental pipeline capacity is supported by long-term agreements with minimum contract terms ranging from 10 to 15 years. Once the expansion facilities enter service, the pipeline's capacity will increase to 975,000 Dth/d. The expansion increases capacity by more than 60% since the gathering system entered service in 2012.

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Lucid Buys New Cryogenic Processing Plant In The Permian Basin

Lucid Energy Group LLC purchased a cryogenic processing plant manufactured by UOP Russell, to be located 10 miles from Big Lake, Texas, in the Permian Basin. The Big Lake plant has a natural gas processing capacity of 200 million cubic feet per day (MMcf/d), and will raise Lucid's total processing capacity in the Midland Basin to 320 MMcf/d. Big Lake will be the third natural gas processing facility Lucid has constructed since it started operating in the Permian Basin.

The Big Lake plant will connect to Lucid's 450-mile pipeline system and support production from the Wolfcamp Shale in Irion, Reagan and Crockett counties, Texas. The facility will also connect to Lucid's high-pressure gas header system, which crosses five counties in the Midland Basin. Construction is underway and it is expected to be operational in first-quarter 2015.

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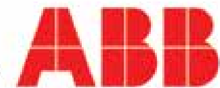

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Japan's LNG Dilemma, Energy-Supply Challenges

BY KRISTIE SOTOLONGO | HART ENERGY

Japan's Cabinet recently approved an energy policy reversing the previous government's plans to gradually mothball nuclear power plants. One compelling reason for adopting the new policy was the realization by the government that in the absence of nuclear energy—which accounted for 30% of the total—Japan had to pay heavily for importing oil and natural gas from abroad, according to New Delhi-based think tank Observer Research Foundation (ORF).

Thermal power, which required massive oil and gas imports, cost the Japanese economy 3.6 trillion yen (US$35.5 billion) annually, by most estimates. That gargantuan spike in the imports bill was largely borne by the Japanese taxpayers, who are currently paying between 30% and 40% more for electricity, ORF researcher K.V. Kesavan noted in an April 22 analysis.

"Purely from the economic viewpoint, there is a case for a shift away from the earlier zero-nuclear option. But any government in charge of the national energy policy at this juncture has also to carefully gauge the people's mood and see that their concerns regarding safety are fully addressed if the government were to embark on reactivating the nuclear reactors," Kesavan wrote.

The Fukushima triple tragedy of March 2011 dealt a blow to the long-term goals of Japan's national energy policy. Since returning to power in December 2012, the Liberal Democratic Party (LDP) and Prime Minister Shinzo Abe have worked to revitalize Japan's nuclear industry. The new Basic Energy Plan declares that nuclear power is a key source of base-load power and promotes the restart of Japan's nuclear reactors.

"From the beginning, the Abe administration showed its inclination to use nuclear energy as an important element in its energy policy," Kesavan maintains. "But it had to move rather cautiously, because it could not ignore the strong public antipathy to the nuclear power."

More specifically, the administration unsure about the support it would receive from its own principal coalition partner—the New Komeito Party—and many within the LDP itself weren't convinced of the necessity of the nuclear energy, the ORF analysis observes.

While not explicitly spelled out in the new national energy policy, some key factors likely driving the Abe government's recommitment to atomic power are worth considering, according to some industry analysts.

In a recent research note, Washington, D.C.-based independent energy analyst Melissa Hersh noted that Japan lacks domestic energy resources, and nuclear plants appear to be the only currently deployable, non-fossil fuel source of base-load power.

The high costs of importing LNG may see Japan reverse course on its plans to shutter all nuclear power plants and begin reactivating some facilities, according to a recent Observer Research Foundation report.

"Second, to compensate for the loss of nuclear generation, Japanese utilities have increased imports of fossil fuels at great cost," Hersh observed.

According to the U.S. Energy Information Administration (EIA), Japan is the world's top importer of LNG, second leading coal importer and third largest net oil importer. Nuclear power could reduce fossil fuel dependency and increase energy source diversity, which also increases Japan's energy security, she wrote.

"Third, Japan's recommitment to nuclear energy is a response to the unabated regional trend of nuclear expansion in Asia. In sum, a consistent source of base-load power is seen as critical to Japan's domestic and international economic prowess and standing among the world's major powers," Hersh said.

Energy supply

With nearly all of the country's 48 nuclear reactors idled, the nuclear-power industry in Japan is concerned about how long it will take the Nuclear Regulatory Agency (NRA) to complete its screenings, the ORF's Kesavan noted.

"There is also concern that if the NRA applies its 40 years' operation rule, a large number of reactors would need to be replaced by new reactors in the coming years, and if new reactors are not built in time, it could adversely impact the country's energy supply," he added.

According to an April 11 *Reuters* report, Japanese utilities have incurred $50 billion in operating losses, can't afford to upgrade their nuclear power plants and have asked for government bailouts.

The utilities attributed the huge operating losses to $90 billion in fossil-fuel replacement costs and $16 billion to upgrade existing reactors to meet government standards, *Reuters* reported.

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LEAD STORY | From The Front

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shales, is rising rapidly and isn't expected to level off until 2024, he said.

As the country's production rises, consumption is decreasing. That helps make a case for U.S. oil to be exported, Weinstein said. "None of this was really projected and this 'shale revolution' has really been a game-changer in terms of production, consumption and imports."

The U.S. has been the top natural-gas-producing country for the past several years, surpassing Russia in 2011. EIA projections show gas production continuing to rise, doubling by 2040. However, U.S. exports of gas, other than to Canada and Mexico, are close to zero. "We're basically not in the game," Weinstein said. "Good news—that's starting to change."

There is some discussion in Washington today not only about making it easier to ship LNG abroad, but also to start exporting crude oil, which is essentially prohibited by law, he said.

He said that two LNG export terminals are under construction, one in Texas and the other in Louisiana. Additionally, more than a dozen other permits are being reviewed by the U.S. Department of Energy (DOE). However, several countries are moving more quickly toward exporting LNG than the U.S. The country could potentially lose control of these emerging markets unless the DOE expedites the permitting process, Weinstein warned.

Weinstein pointed out that oil is not "black gold" any longer; it's just another globally traded commodity. America needs to import and export products when it makes economical and logical sense, and that time is now for exporting oil and gas, he said.

Although the Keystone XL Pipeline does not affect the Permian directly, it does show where the current administration stands in terms of the oil and gas industry. "It's been a six-year political standoff and in my mind a diplomatic slap in the face to our friends in Canada," he said.

Bernard Weinstein, associate director at the Maguire Energy Institute. (Source: Southern Methodist University)

Oil exports are big business for most countries with large crude reserves. The U.S., however, has opted to keep its oil at home, similar to China, Weinstein said. "I think it's time to remove the restrictions and let the market determine where oil is produced, where we buy it from and who we sell it to."

Thanks to Permian Basin and the Eagle Ford Shale, Texas' population has soared in the past decade, Weinstein remarked. From 2003-13, the state's population had grown 20.1%, whereas the U.S. population increased by 9%.

"Without question the energy boom has had a lot to do with the comparative economic health of our state," he said. "It's not only been good for Texas and the energy-producing states, it's been good for the whole economy," he said.

The contribution of energy to economic growth has quadrupled in the past decade, and has altered the investment climate, Weinstein commented, adding, "The fact that the U.S. has cheap and abundant energy is drawing investment to the country.

"Importantly, this new energy boom is giving us unprecedented political leverage on the world stage."

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