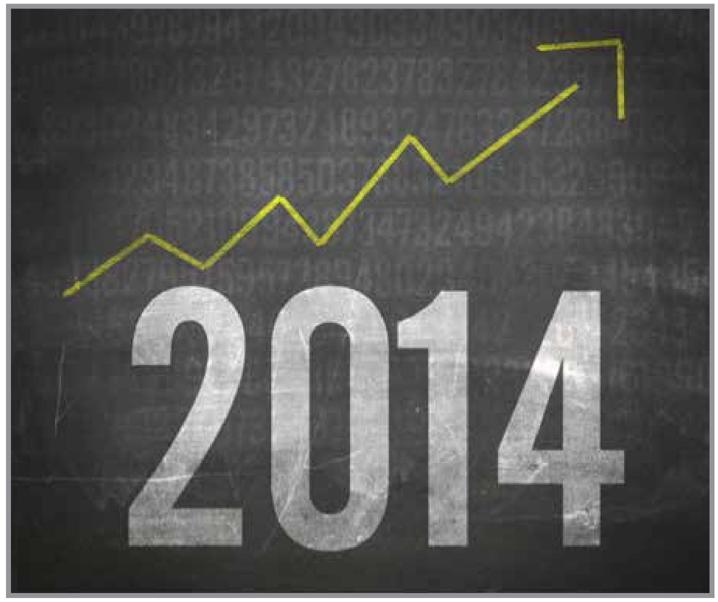
HARTENERGY

MIDSTREAM Monitor December 23, 2013 | Volume 31 | Issue 50

Bright Outlook For Midstream, Oil and Gas In 2014

Recent reports predict strong markets for MLPs and the midstream next year.

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



Trending Up | The future looks strong for the U.S. oil and gas markets as well as the MLP sector according to several new reports.

This past year saw the midstream overcome a multitude of obstacles in a typically resourceful fashion from the continued emergence of rail transportation, pipeline reversals and repurposing of existing infrastructure. The industry will need to continue these trends, but the biggest story of 2013 may prove to be that it emerged on the other side of the storm and the sailing should be smoother going forward.

Two important forecasts for the oil and natural gas industry were recently released by the Energy Information Administration (EIA) and Wells Fargo Securities. Both reports anticipate domestic production to have a profound impact on the economy going forward as the U.S. is expected to wind the clock back more than 40 years as the country will hit production levels not seen since the Nixon Administration.

According to the early release of EIA's *Annual Energy Outlook 2014*, domestic crude production will approach the record 9.6 million barrels (bbl.) set in 1970. The report anticipates domestic production hitting 9.5 million bbl. by 2016. However, after reaching this peak crude production is expected to level off and perform at a steady rate from 2017 to 2040.

Crude imports are expected to fall to a 25% share in 2016 before growing to 32% in 2040 as

Continued on **Page 13**

HIGHLIGHTS FROM TODAY'S EDITION

FRANK NIETO
Editor, *Midstream Monitor*
& *MidstreamBusiness.com*
fnieto@hartenergy.com

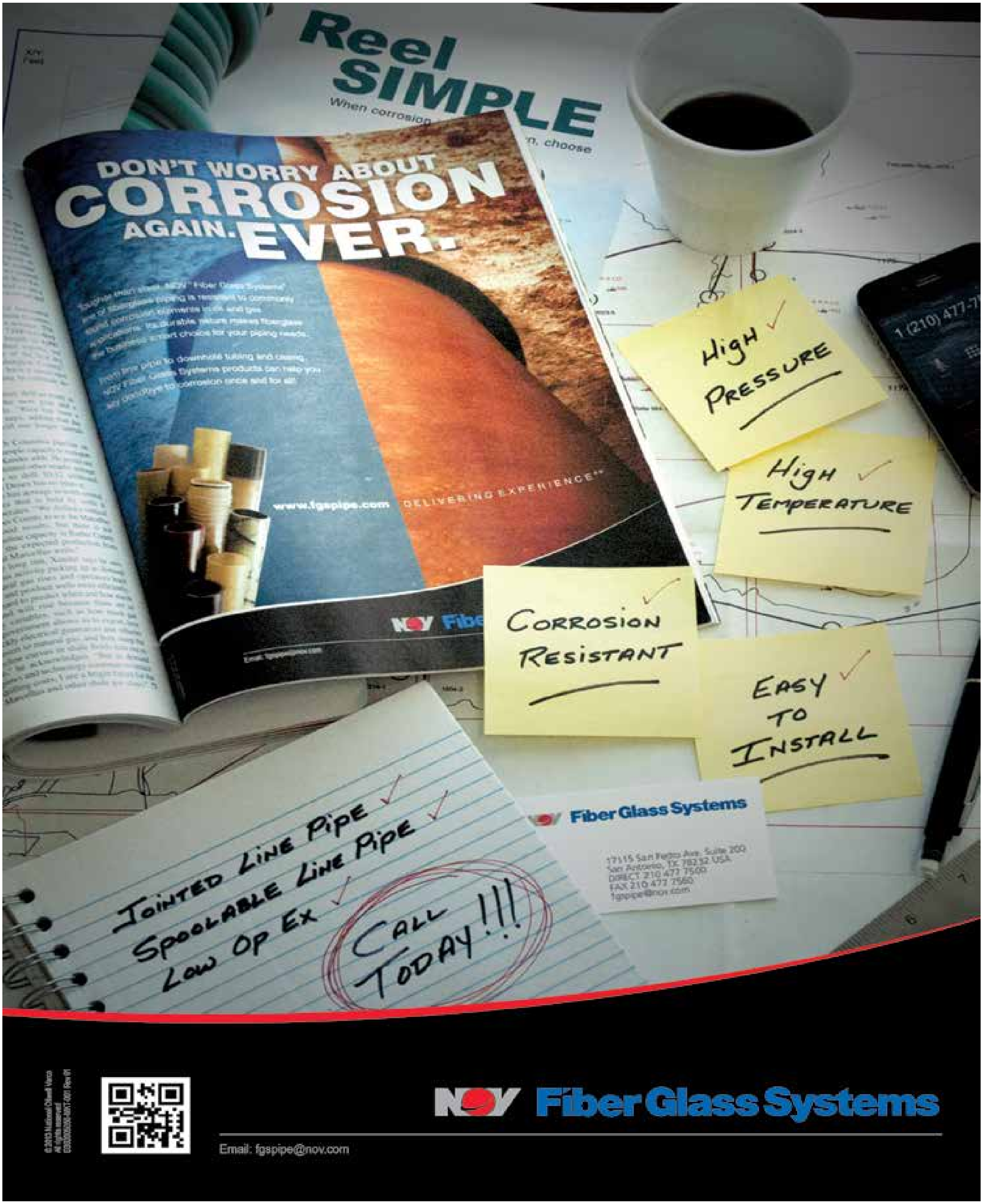
Moving Up
Propane continued its hot streak and is now the second most profitable NGL.
PAGE 3

Reading The Tea Leaves
Could the naming of a Keystone XL adversary to a senior advisor post by President Obama indicate the outcome of the project?
PAGE 6

Opening Up The Market
The state monopoly on oil and gas was ended by the Mexican government.
PAGE 6

The Time Is Now
Cheniere's Souki said the industry has never been more exciting than now.
PAGE 7

Expanding The Energy Base
ExxonMobil announced that all forms of energy are crucial to meet future demand.
PAGE 12


Reel SIMPLE
DON'T WORRY ABOUT CORROSION AGAIN. EVER.
www.fgspipe.com
DELIVERING EXPERIENCE
High Pressure
High Temperature
Corrosion Resistant
Easy to Install
Fiber Glass Systems
17115 San Pedro Ave. Suite 200
San Antonio, TX 78232 USA
DIRECT 210 477 7500
FAX 210 477 7560
fgspipe@nov.com
Jointed Line Pipe
Spoolable Line Pipe
Low Op Ex
Call Today!!!
NOV Fiber Glass Systems
Email: fgspipe@nov.com

Propane Now Second Most Profitable NGL

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

As 2013 comes to close, light natural gas liquid (NGL) prices are making large strides with propane fast becoming one of the most profitable components in the NGL barrel (bbl.).

Propane has been fast gaining ground since November, which saw the product's demand levels increase on multiple fronts, including farming, export and heating markets, and reached record demand levels in the month.

Conversely heavy NGLs continued to lose ground despite oil prices improving as gasoline demand decreased with the Energy Information Administration (EIA) having announced an unexpected increase in supplies the week of December 6. Since then prices for butane, isobutane and C_{5+} have fallen pretty drastically.

Conway propane prices are now the second most valuable NGL behind C_{5+} and the Mont Belvieu value is just behind butane and isobutane. This is a highly unusual situation as it is the first time in more than a decade it has occurred.

Propane increased 9% to $1.42 per gallon at Conway, its highest value since it was the same price the week of September 28, 2011. The Mont Belvieu price grew at a slower rate due to the limited propane heating demand out of this market compared to Conway. The Texas price increased 2% to $1.30 per gallon, which was the highest price at the hub since the first week of the year when it $1.34 per gallon.

CURRENT FRAC SPREAD (CENTS/GAL)

December 23, 2013	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	19.00		29.37	
Shrink	27.65		27.91	
Margin	-8.65	-29.49%	1.46	202.65%
Propane	142.44		130.42	
Shrink	38.20		38.56	
Margin	104.24	17.53%	91.86	2.85%
Normal Butane	134.30		132.34	
Shrink	43.24		43.66	
Margin	91.06	0.31%	88.68	-6.49%
Isobutane	133.62		132.48	
Shrink	41.53		41.93	
Margin	92.09	1.91%	90.55	-7.33%
Pentane+	204.86		208.64	
Shrink	46.25		46.69	
Margin	158.61	0.71%	161.95	-3.03%
NGL $/Bbl	44.59	2.14%	44.69	-0.74%
Shrink	15.23		15.38	
Margin	29.36	9.48%	29.31	-0.38%
Gas ($/mmBtu)	4.17	-9.54%	4.21	-1.41%
Gross Bbl Margin (in cents/gal)	68.58	10.58%	68.45	0.01%
NGL Value in $/mmBtu (Basket Value)				
Ethane	1.05	3.83%	1.62	9.22%
Propane	4.94	8.80%	4.53	1.56%
Normal Butane	1.45	-3.09%	1.43	-4.87%
Isobutane	0.83	-1.95%	0.82	-5.53%
Pentane+	2.64	-1.80%	2.69	-2.67%
Total Barrel Value in $/mmbtu	10.91	3.09%	11.09	0.10%
Margin	6.74	12.83%	6.88	1.04%

NGL PRICES

Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Dec. 11 - 17, '13	29.37	130.42	132.34	132.48	208.64	$44.69
Dec. 4 - 10, '13	26.89	128.42	139.12	140.24	214.36	$45.02
Nov. 27 - Dec. 3, '13	25.92	119.90	138.73	142.13	213.30	$43.82
Nov. 20 - 26, '13	25.54	119.30	143.40	146.20	210.60	$43.85
November '13	24.74	118.38	142.70	145.93	207.80	$43.39
October '13	25.45	113.69	147.90	151.30	209.99	$43.50
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
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
Dec. 12 - 18, '12	21.55	75.54	173.82	184.53	211.96	$40.74
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
Dec. 11 - 17, '13	19.00	142.44	134.30	133.62	204.86	$44.59
Dec. 4 - 10, '13	18.30	130.92	138.58	136.28	208.62	$43.65
Nov. 27 - Dec. 3, '13	18.20	119.83	136.50	136.57	206.63	$42.08
Nov. 20 - 26, '13	18.20	119.48	142.28	143.43	205.58	$42.45
November '13	18.37	119.53	141.53	143.76	200.04	$42.08
October '13	21.12	110.53	147.71	154.40	201.90	$42.19
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
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
Dec. 12 - 18, '12	16.90	68.32	181.92	182.00	206.70	$39.33

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

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

NGL PRICES & FRAC SPREAD | Week in Review

Mont Belvieu isobutane had the largest price decrease of any NGL at either hub this week as it decreased 6% to $1.33 per gallon, its lowest price since it was $1.32 per gallon the week of July 24. This was only marginally greater than the butane price of $1.32 per gallon at the hub as these sister products are converging. The Conway price for butane and isobutane were nearly identical at $1.34 per gallon.

Although C_{5+} retained its status as the most valued NGL, it also experienced price decreases at both hubs this week. The price fell 3% to $2.09 per gallon at Mont Belvieu, its second-lowest price in six weeks; and 2% to $2.05 per gallon at Conway, which is at the same level the product has traded at for the past month.

As mentioned in last week's issue of Midstream Monitor, the struggles of heavy NGLs in the period that is normally its peak season of gasoline blending does not bode well for prices in the summer and spring. Propane demand is likely to decrease as normal winter temperatures take hold, but export demand should be retained. This makes a strong possibility that propane can retain its status as the second-most valuable NGL next year.

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / December 19, 2013	
Gas Hub Name	Current Price
Carthage, TX	4.16
Katy Hub, TX	4.21
Waha Hub, TX	4.19
Henry Hub, LA	4.26
Perryville, LA	4.19
Houston Ship Channel	4.23
Agua Dulce, TX	N/A
Opal Hub, Wyo.	4.32
Blance Hub, NM	4.22
Cheyenne Hub, Wyo.	4.29
Chicago Hub	4.52
Ellisburg NE Hub	3.24
New York Hub	4.00
AECO, Alberta	3.62

Source: Bloomberg

Ethane prices increased this week at both hubs, but continued to face headwinds due to improved natural gas prices that continue to push back on the frac spread margin at both Conway and Mont Belvieu. Additionally, the Conway market had very low volatility for the eighth consecutive week.

Mont Belvieu ethane rose 9% to its highest level since the beginning of spring as they hit 29 cents per gallon. The price at Conway increased 4% to 19 cents per gallon, its highest price in a month. The margins at both hubs were either negative or only theoretically positive as gas prices remained above $4 per million Btu as heating demand remains healthy in the Northeast and Midwest.

RESIN PRICES – MARKET UPDATE – DECEMBER 19, 2013					
TOTAL OFFERS: 9,115,776 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
LLDPE - Film	2,496,852	0.73	0.78	0.67	0.71
LDPE - Film	2,110,024	0.705	0.85	0.74	0.78
HDPE - Blow Mold	1,865,496	0.72	0.735	0.68	0.72
LDPE - Inj	1,392,024	0.7	0.785	0.72	0.76
HMWPE - Film	1,336,392	0.75	0.765	0.71	0.75
PP Copolymer - Inj	1,014,552	0.785	0.875	0.79	0.83
HDPE - Inj	866,552	0.71	0.75	0.68	0.72
PP Homopolymer - Inj	845,104	0.76	0.865	0.78	0.82
LLDPE - Inj	820,920	0.74	0.775	0.69	0.73
Total Spot: 12,747,916 lbs					

Source: Plastics Exchange – www.theplasticsexchange.com

According to Hart Energy's *Commodities Report*, gas futures prices increased despite temperatures reaching more moderate levels. These healthy gas prices were caused by the significant withdrawal levels for gas experienced the past month with the sustained cold front.

Indeed the EIA reported that gas storage levels fell a staggering 285 billion cubic feet to 3.248 trillion cubic feet (Tcf) the week of December 13 from 3.533 Tcf the previous week. This was 13% below the figure of 3.736 Tcf posted last year at the same time and 7% below the five-year average of 3.509 Tcf.

The National Weather Service's forecast for the final full week of 2013 anticipates that the Midwest and Northeast will again experience colder-than-normal temperatures, which could cause the storage level to drop below the 3 Tcf threshold entering 2014.

The theoretical NGL bbl. price improved 2% at Conway to $44.59 per bbl. with a 10% increase in margin to $29.36 per bbl. while the Mont Belvieu price decreased 1% to $44.69 per bbl. with a slight decrease in margin to $29.31 per bbl.

The most profitable NGL to make for the week was C_{5+} at $1.59 per gallon at Conway and $1.62 per bbl. at Mont Belvieu. This was followed, in order, by propane at $1.04 per gallon at Conway and 92 cents per gallon at Mont Belvieu; isobutane at 92 cents per gallon at Conway and 91 cents per gallon at Mont Belvieu; butane at 91 cents per gallon at Conway and 89 cents per gallon at Mont Belvieu; and ethane at negative 9 cents per gallon at Conway and 2 cents per gallon at Mont Belvieu.

Obama Administration To Add Anti-Keystone Advocate

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

The White House announced an appointment to President Obama's Global Development Council that may signal the administration's stance on the long-delayed Keystone XL Pipeline decision. John Podesta, former chief of staff to President Clinton from 1998 to 2001 and a long opponent of the project, was nominated as a counselor to the president.

Podesta is currently chair of the Center for American Progress think tank, which has been critical of the project. Although he announced he would recuse himself from any discussions on the Keystone XL, should his input on environmental and energy be strongly considered by the administration it could carry over to the final decision on the pipeline.

"This is likely an adverse turn for securing a favorable decision on the Keystone XL," John Kneiss, director, North America for Hart Energy Research & Consulting, told *Midstream Monitor*. He said that despite the announced recusement it would be difficult for a senior advisor to the president not to express his viewpoints.

It is becoming increasingly likely that the administration will continue to delay a final decision on TransCanada's pipeline almost another year until after the mid-term elections next November. "I believe the administration is trying to come up with ways to defer the decision and then as a true lame duck likely issue a denial," Kneiss said.

The industry already appears to be adjusting to this likelihood as it is discovering alternative ways to move volumes from the Canadian oil sands to the U.S. Gulf Coast, including rail car and marine transport. In the end, the economic impacts won't be as large for the American worker, and the industry shouldn't experience any large setbacks. Ironically, the environmental community's fight against the project resulted in less jobs and transport solutions that are arguably more troubled than pipelines while doing nothing to slow the production or consumption of crude oil.

While a lot of the attention on this appointment has centered on the Keystone XL, Kneiss said that he believes that Podesta's overall environmental views are more troubling for the industry. "I think more significant is his view that the executive branch should use all authority available to adopt policies and rules on climate change and the environment, which includes reduction in conventional energy use and expansion of renewable energy."

Senior Advisor | John Podesta, a noted foe of the oil and gas industry, could impact the Obama Administration's energy and environmental policies. (Courtesy: Center for American Progress)

Podesta's role as a senior counselor is likely to provide him with more influence and access to President Obama than other staffers who were supporters that recently left the administration that held similar beliefs and values on energy and the environment.

"As senior counselor, he can expect to have Oval Office discussions with limited participants including the president, whereas other junior staffers likely gave briefings or held discussions as part of much larger meetings that would have diverse views expressed," Kneiss said.

Mexico Passes Oil Bill Seen Luring $20 Billion Per Year

BUSINESS WIRE

Mexico's Congress approved a bill to end a 75-year state oil monopoly and generate as much as $20 billion in additional foreign investment a year.

The nation's most significant economic reform since the North American Free Trade Agreement secured the required two-thirds majority in a 353-134 lower-house vote December 12. The proposal must be ratified by state assemblies, the majority of which are controlled by the alliance backing the reform.

The bill will change Mexico's charter to allow companies such as Exxon Mobil Corp. and Chevron Corp. to develop the largest unexplored crude area after the Arctic Circle. Supporters say the overhaul could propel Mexico into the top five crude exporting countries while opponents say it will funnel resource wealth to foreign investors. The peso gained.

"The reform will energize Mexico's economy," Carlos Capistran, chief Mexico economist at Bank of America Corp., said in a telephone interview with *Bloomberg*. "Congress was able to pass a better-than-expected constitutional reform."

Producers will be offered production-sharing contracts or licenses where they get to own the pumped oil and will be allowed to log crude reserves for accounting purposes.

The reform could boost foreign investment by as much as $15 billion annually and potential economic growth by half a percentage point, JPMorgan Chase & Co. said in a November 28 report. Capistran said the overhaul could bring an additional $20 billion foreign direct investment as soon as 2015 and further strengthen the peso as the market absorbs the news.

Pena's Cornerstone

The passage comes one year after President Enrique Pena Nieto took office and returned his Institutional Revolutionary Party, or PRI, to power after a 12-year hiatus.

The 47-year-old leader has called the oil overhaul the cornerstone of his administration, following approval of an education bill to make teachers more accountable for performance, a law to spur increased telecommunications competition and a program to jump-start bank lending.

Since joining a free-trade agreement with the U.S. and Canada in 1994, Mexico has become one of the world's most open trading economies. Even so, many industries are still dominated by single groups, such as billionaire Carlos Slim's America Movil SAB in mobile-phone service and Comision Federal de Electricidad, or CFE, in electricity.

'Extraordinary Moment'

In October, Congress passed a tax overhaul to reduce the government's dependence on revenue from Petroleos Mexicanos, the state-owned producer known as Pemex. Proceeds now fund about a third of Mexico's federal budget.

"It's an extraordinary moment," Tony Garza, a former U.S. ambassador to Mexico under former President George W. Bush and an adviser at law firm White & Case LLP in Mexico City, said by phone. "There's potential to attract additional investment into shale and ultra-deep waters so that those resources can be exploited in a way that's ultimately good for the country."

The energy overhaul probably will be ratified by a majority of Mexico's 31 states early next year, with the first contracts based on its model ready by the end of 2014, Alexis Milo, chief economist at Deutsche Bank Securities Inc. in Mexico City, wrote in a research note.

The overhaul "will increase the availability of energy for Mexicans, at more affordable prices, and increase oil and natural gas production," Eloy Cantu, a PRI lawmaker, said during the bill's debate. It will "generate greater economic growth that will lead to job creation," he said.

Cheniere's Souki: Good Time To Be In Energy

BY **CHRISTINA ALTY** | ASSISTANT EDITOR, HART ENERGY

Everyone gets jealous sometimes and Charif Souki , chairman and chief executive officer for Cheniere Energy, wasn't above telling a room full of Young Professionals in Energy (YPE) members that he was jealous at the organization's senior leadership reception December 2 in Houston.

"Young Professionals in Energy, first thing I want to tell is I am jealous obviously because you are young but also because this is probably one of the most exciting times in our business I have ever seen," he said.

He went on to say that predicting the future is just not possible. "You will have enough opponents and experts, and economists and analysts who will tell you what is going to happen five years from now but I guarantee you one thing: they will be wrong," Souki said.

No one predicted five years ago the situation the country is in today. There was a point that the U.S. was worried they would run out of energy and would have to import everything and they were wrong, he said.

"In the last five years a miracle happened, we found an abundance of energy in this country and the tables have completely reversed," he said. "To put it in prospective what has happened to the cost of energy in this county, when you put it together and you compute it is the equivalent of a $300 billion per year tax cut. We spend less money on gas, less money than any other country in the world on our gasoline. We heat our homes significantly cheaper than anywhere else. We turn our lights out for less."

There are incredible energy opportunities in the U.S. right now that Souki pointed out. He said that in 2012, 42,000 wells were drilled at a cost of $200 billion and $18 billion was spent on infrastructure that will increase to more than $216 billion during the next 12 years.

He also pointed out that the "U.S. is on pace to be a net gas exporter by mid-decade." The Energy Information Administration

(EIA)'s forecast released in September stated that the country cut imports by 61% since 2005.

While the U.S. is in a positive place right now, there are certain things that must be done to ensure that peak potential is reached. His presentation said that $200 billion in capital investment was needed in midstream and downstream by 2025 and "America must reconfigure and frequently reverse its pipelines, rails and marine terminals to meet new energy delivery needs."

The right combination of things will allow the U.S. to become not only a net energy exporter but also bring unemployment rates down not just in energy producing states but at a national level. Souki sees the potential and "Cheniere Energy is contributing necessary to meet the needs of our energy moment."

The company is currently spending $5 billion to build a liquefaction project at Sabine Pass. The project is employing 2,000 construction workers currently and will be expanding that to 4,000 workers in 2014.

"We are on our way to investing $25 billion in future LNG projects," he said.

Williams' Geismar Olefins Plant Moves Forward After OSHA Fine

BY **CHRISTINA ALTY** | HART ENERGY

The Occupational Safety and Health Administration (OSHA) proposed the Williams' Geismar, Louisiana, Olefins plant pay $99,000 in fines after its investigation concluded the plant violated six process safety management standards following an explosion last summer that left two people dead and more than 100 others wounded.

"Williams Olefins violated safety and health standards which, when followed, can protect workers from hazardous chemicals," said Dorinda Folse, OSHA's area director in Baton Rouge."It is the employer's responsibility to find and fix workplace safety violations and to ensure the safety of its workers. Failing to do so cost two workers their lives."

Among the violations that the company was cited for was "a willful violation," which means that the company had not developed "clear, written procedures for how to change and put idle pressure vessels into service." Violations become willful when a company is knowledgeable about the law's requirements on a matter and disregards it with without concern for worker wellbeing or safety.

The other five violations according to the OSHA report were: "inadvertently mixing hot quench water with propylene; failing to provide appropriate pressure protection for a pressure vessel; complete a process hazard analysis to address the opening of hot quench water flow into a pressure vessel; properly document workplace training; and promptly correct deficiencies related to process safety management discovered by an internal compliance audit team. A serious violation occurs when there is substantial probability that death or serious physical harm could result from a hazard about which the employer knew or should have known."

Williams Olefins has 15 business days from receipt of the citations and penalties to comply, request an informal conference with OSHA's Baton Rouge area director, or contest the findings before the independent Occupational Safety and Health Review Commission. The report was released December 11.

John Dearborn, senior vice president, natural gas liquids and petchem services responded by saying that William was cooperative with the investigation and is currently reviewing the OSHA findings.

"In addition to conducting our own internal incident investigation, we are committed to learning from OSHA's report to further enhance safety at the Geismar plant and across our organization," he said.

This was the first set of violations the Geismar Olefins plant had since 2009.

"Safety and the protection of employees and communities in which Williams does business is, and always has been, our number one priority," Dearborn continued. "We are committed to safely completing the rebuild and expansion work now underway, and to bringing the expanded plant into safe and reliable operations for the benefit of the plant's employees, contractors, the community and customers."

The company has said that it is executing a plan to rebuild, turnaround and expand the Geismar Olefins plant by April 2014.

Duke Energy Progress' Sutton Natural Gas Plant Begins Operations

Duke Energy Progress' new 625-megawatt (MW) L.V. Sutton combined-cycle natural gas plant began serving North Carolina and South Carolina customers.

The approximately $600-million plant replaces the existing three-unit, 575 MW coal-fired plant that the company recently retired after 59 years of service.

It represents a significant milestone in the company's ongoing commitment to generate electricity in cleaner, more efficient ways.

The new plant uses state-of-the-art technology and air quality controls that result in significantly lower emissions than those of the coal plant it replaces. The following figures are compared to coal plant operations in 2007:

- Sulfur dioxide will be reduced by 99%
- Nitrogen oxides will be reduced by 97%
- Carbon dioxide will be reduced by 41%

Duke Energy invested $9 billion in the past 10 years to build several advanced natural gas and coal plants in North Carolina and Indiana.

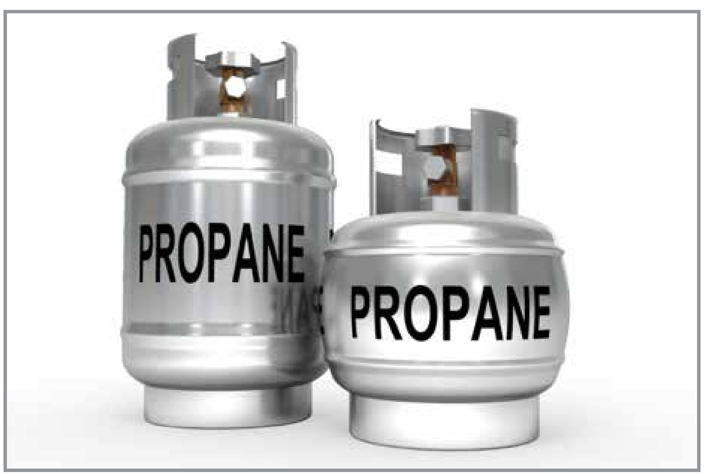
The new plants will allow the company to retire nearly 6,800 MW of older coal and large oil-fired units.

Nearly 6,300 MW of the capacity Duke Energy will retire is coal, which represents 25% of its coal fleet. By the end of 2013, Duke Energy will have retired more than 3,800 MW of that 6,300 MW, including the Sutton coal plant. Duke Energy soon will begin a multi-year decommissioning process that will result in safely deconstructing the coal units and effectively closing the site's coal ash basins to protect groundwater.

Out To Pasture | Duke Energy's coal-fired Sutton plant (above) is being retired after 59 years of service as the company began operating a new 625 MW combined-cycle gas-fired plant. (Courtesy: Duke Energy)

Propane Demand Hits Record High For November

The Energy Information Administration (EIA) announced this week that propane produced from natural gas has been the fastest-growing component of overall U.S. propane supply. Propane production in the U.S.has set record highs on an almost weekly basis in 2013 as a result of increased oil and gas drilling. A record corn crop harvest has increased the demand for propane in the central U.S. Expanded propane production met this agricultural demand, while continuing to supply other markets.



Hot Property | Propane is the fastest growing NGL this fall as it experienced increased demand from the farming, export and heating markets.

A record-setting corn harvest is currently underway in the U.S. According to the U.S. Department of Agriculture, corn production is forecast to be a record 14.9 million bushels in 2013-14. Corn must be dried to a 15% moisture content before it can be stored to avoid mold and other quality problems. Because propane is used for crop drying, a wet growing season in the Midwest combined with the largest corn yield in U.S. history has greatly increased the demand for propane. Thus far, Indiana, Iowa, Minnesota, Montana, Nebraska, South Dakota, and Wisconsin have declared states of emergency to allow for more delivery of propane throughout the Midwest.

According to EIA weekly data, demand for propane is currently at the highest level ever recorded for November. For the week ending November 1, the U.S. consumed nearly 1.8 million barrels per day—a figure typically not seen until January or February, when the winter heating season reaches a peak. As a result, propane inventories in PADD 2 (the Midwest) have fallen to their lowest level for November since 1996. Along with spiking domestic demand, competitively-priced U.S. propane exports have also surged. Exports from the United States are currently estimated to be 288,000 barrels (bbl.) per day, not far from the record of 308,000 bbl. per day set in May 2013.

This boost in propane demand has created a spike in propane prices across the country. The winter heating season is just beginning to affect consumption figures, so propane demand for the 2013-14 season could continue at a record pace into the spring.

Freeport LNG And IFM Investors Sign $1.3B Equity Agreement

Freeport LNG Expansion LP and IFM Investors announced that IFM Investors will invest approximately $1.3 billion of equity funding for Freeport LNG's proposed natural gas liquefaction and liquefied natural gas (LNG) loading facility on Quintana Island near Freeport, Texas. The facility involves the development of three liquefaction plants.

The investment by IFM Investors will provide equity required for the development of Freeport's second facility (Train Two). Investment capital will be drawn down over Train Two's planned 51-month to 54-month construction period. The balance of the Train Two capital needs will be sourced from a consortium of project finance lenders. Financial close for the transaction is expected to take place in mid-2014 pending regulatory and other approvals.

In February 2013, Freeport LNG executed a 20-year use-or-pay liquefaction tolling agreement with BP Energy Co. equivalent to the minimum guaranteed production capacity of Train Two.

Project Update

On December 10 Freeport LNG awarded two contracts, each valued at approximately $2.5 billion, to a joint venture between CB&I, Inc. and Zachry Industrial Inc. to construct the initial two trains of the liquefaction project. Freeport LNG expects to receive U.S. Federal Energy Regulatory Commission approval for the initial three-train liquefaction project and commence construction of the first two liquefaction trains in mid-2014, with the construction of the third liquefaction train expected to begin in first quarter 2015. The first train is anticipated to commence operations 45-48 months from start of construction, with the second train in operation approximately six months after the first train.

Freeport LNG received authorization from the U.S. Department of Energy (DOE) to export the entire LNG production volume of the initial three trains of the liquefaction project to any country that has, or in the future develops, the capacity to import LNG and with which trade is permissible.

Publisher's Note

Due to the holiday season, *Midstream Monitor* will not be published next week. We will resume our normal publishing schedule with the January 6 issue.

Pembina Pipeline To Proceed With Phase III Expansion

Pembina Pipeline Corp. reached binding commercial agreements to proceed with constructing approximately $2 billion in pipeline expansions. The Phase III Expansion is underpinned by long-term take-or-pay transportation services agreements with 30 customers in Pembina's operating areas and is expected to be in service between late 2016 and mid-2017, subject to environmental and regulatory approvals. The 540 kilometer (km) Phase III Expansion will follow and expand upon certain segments of the company's existing pipeline systems from Taylor, British Columbia southeast to Edmonton, Alberta to fulfill capacity needs for Pembina's customers, with priority being placed on areas where debottlenecking is essential.

The core of the Phase III Expansion will entail constructing a new 270 km, 24-inch pipeline from Fox Creek, Alberta, to the Edmonton area, which is expected to have an initial capacity of 320,000 barrels (bbl.) per day and an ultimate capacity of over 500,000 bbl. per day with the addition of midpoint pump stations. Once complete, Pembina will have three distinct pipelines in the Fox Creek to Edmonton, Alberta corridor. With the company's existing pipelines and current expansions, these three pipelines are expected to have the designed capacity to transport up to 885,000 bbl. per day if fully expanded. The Phase III Expansion also contemplates increasing pipeline interconnectivity between Edmonton and Fort Saskatchewan including Pembina's Redwater and Heartland Hub sites as well as third-party delivery points in these areas. This interconnectivity will provide the option for customers to access a broad variety of delivery points including fractionators, refineries, and storage hubs and increased access to pipeline and rail take-away capacity.

The contracts underpinning the Phase III Expansion are ten-year transportation services agreements for volumes that average over 230,000 bbl. per day, or approximately 75% of the initial capacity, and that provide a steady, long-term EBITDA stream which is expected to be, on average, in the range of approximately $270 million to $300 million per year. The company anticipates securing further pipeline transportation commitments over the next six to nine months while it refines the project scope.

With the addition of the Phase III Expansion, Pembina's previously announced 2014 capital spending plan will increase from $1.5 billion to $1.7 billion. Pembina expects the majority of spending associated with this project will occur during the main construction periods from 2015 through 2016.

Penn Virginia To Sell Eagle Ford Midstream Assets For $100MM

Penn Virginia Corp. (PVA) announced that it's selling substantially all of its natural gas midstream assets in the Eagle Ford for $100 million.

The Ragnor, Pennsylvania-based company entered into a definitive agreement with a newly-formed affiliate of ArcLight Capital Partners LLC, an investment firm with $10 billion under management.

PVA is selling a gas gathering and gas lift system, including some 119 miles of pipelines and associated facilities located in Gonzales and Lavaca counties, Texas. The sale is expected to close in first-quarter 2014.

"The divestiture of our natural gas midstream assets is the first step in a series of potential divestitures which will reduce our indebtedness, improve our liquidity and fund further investment in our oily Eagle Ford shale play," said H. Baird Whitehead, president and chief executive, in the release.

As of October 30, Penn Virginia has about 107,000 gross (67,000 net) acres in the oil window of the Eagle Ford shale play in Gonzalez and Lavaca counties. The company entered the play in August 2010 and has an estimated inventory of 1,060 well locations.

After paying its partners, the company intends to use the remaining proceeds of $95 million to help fund its 2014 capital expenditure plan. In October, the company estimated that its 2014 capex is up to $540 million. The company plans a six-rig drilling program with five operated by Penn and one operated by an outside firm.

Gorgon LNG Cost Now Up To $54B

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

The advantages held by the North American oil and gas industry over the rest of the world were once again highlighted by Chevron's announcement of another cost increase for its proposed Gorgon liquefied natural gas (LNG) plant in Australia. The project, which was estimated at US$39 billion when it was first announced in 2009, has now been estimated to cost US$54 billion after having already increased to US$52 billion in 2012.

When the project was first announced many analysts stated that it was likely that Australian LNG would push U.S. exports out of the Asian market because of the cheaper cost to ship LNG from Australia to these markets. However, at these costs and with these delays the possibility is becoming stronger that the U.S. could compete at least for a while longer.

Chevron officials stated that the increased estimates were due to the high Australian dollar, higher wage costs for skilled workers in the country, weather delays and challenges attached to construction on Barrow Island. However, similar cost overruns and increases have hampered other projects in Australia, which highlights the challenges faced when attempting to build nearly an entire new midstream infrastructure at one time. The North American midstream industry has the advantages of more than 100 years worth of experience and infrastructure already in place that can help with development of new projects.

The Gorgon plant, which is 47% owned by Chevron and 25% owned by ExxonMobil and Royal Dutch Shell, is estimated to be 75% complete and is scheduled to begin service in 2015.

EQT Closes Gas Utility Sale

BUSINESS WIRE

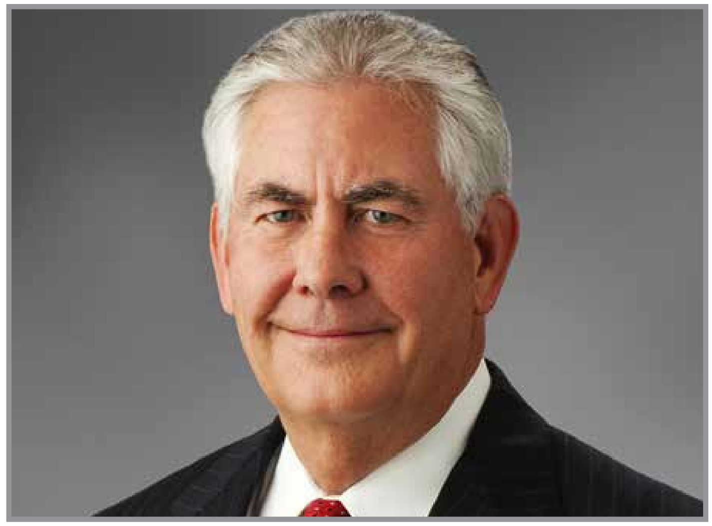
EQT Corp. completed the transfer of its natural gas distribution business, Equitable Gas Co. LLC, to Peoples Natural Gas. The transaction included a cash payment of approximately $740 million to EQT, which includes a $720 million base price and $20 million of initial purchase price adjustments; as well as select midstream assets and commercial arrangements.

"During the last five years, our business strategy has focused on Marcellus shale development as we intensified efforts to grow our natural gas exploration and production program, and expand our midstream operations. This transaction provides capital to continue investing in EQT's core businesses — delivering shareholder value and providing sustained economic growth in our operating regions," said David Porges, chief executive of EQT Corp.. "With a modest amount of capital, the acquired midstream assets will become a valuable addition to our strategically located pipeline network —serving EQT Production and other Marcellus natural gas producers."

The newly acquired Marcellus midstream assets include approximately 200 miles of transmission pipelines and four storage pools. The long-term commercial contracts for EQT to provide gas transmission and storage to Peoples will facilitate the local use of the region's low-cost Marcellus gas and reduce the region's reliance on gas from the U.S. Gulf Coast.

ExxonMobil: All Forms Of Energy Needed To Meet Growing Demand

BY **KRISTIE SOTOLONGO** | HART ENERGY



Meeting Demand | While oil and gas will account for 60% of all energy needs through 2040, ExxonMobil's CEO Rex Tillerson said that other forms of energy will grow in importance. (Courtesy: ExxonMobil)

The world will require all forms of energy during the next quarter century to meet a greater than one-third increase in demand that will be driven by population growth, improved living standards and expanded urbanization, according to ExxonMobil's *Outlook for Energy: A View to 2040*, which was released December 12.

"Understanding global energy trends is absolutely critical for effective energy policy," company Chairman and Chief Executive Rex W. Tillerson said while announcing the annual forecast. "The world depends on safe, reliable and affordable energy development to support economic growth and our modern way of life."

In its outlook, Irving, Texas-based ExxonMobil Corp. projects that future energy needs —expected to be about 35% higher in 2040 than 2010 — will be supported by more efficient energy-saving practices and technologies, increased use of less-carbon-intensive fuels such as natural gas, nuclear and renewables and ongoing development of technological advances to develop new energy sources. Without gains in efficiency, global energy demand could have risen by more than 100%, the report notes.

Driving increased energy demand is anticipated population growth that will reach nearly 9 billion in 2040 from about 7 billion currently, and a projected doubling of the global economy — at an annual growth rate of nearly 3% — largely in the developing world where rising living standards will continue to lift millions of people out of poverty, according to the outlook.

The forecast projects that oil and gas will continue to meet about 60% of energy needs by 2040. Liquid fuels — gasoline, diesel, jet fuel and fuel oil —will remain the energy of choice for most types of transportation because they offer a unique combination of affordability, availability, portability and high energy density.

An expected 25% increase in demand for oil, led by increased commercial transportation activity, will be met through technology advances that enable deep-water production and development of oil sands and tight oil, the outlook notes.

Gas will continue to be the fastest-growing major fuel source as demand increases by about 65%. According to ExxonMobil, gas is projected to account for more than 25% of all global energy needs by 2040 and it is expected to overtake coal as the largest source of electricity.

Nuclear energy will see solid growth, despite some countries scaling back their nuclear expansion plans following the 2011 Fukushima incident in Japan. Growth will be led by the Asia Pacific region, where nuclear output is projected to increase from 3% of total energy in 2010 to nearly 9% by 2040.

Renewable energy supplies — including traditional biomass, hydro and geothermal as well as wind, solar and biofuels — will grow by nearly 60%, according to the outlook. Wind, solar and biofuels are likely to make up about 4% of energy supplies in 2040, up from 1% in 2010.

Energy used for power generation will continue to be the largest component of global demand and is expected to grow by more than 50% by 2040 as improved living standards that come with urbanization and rising incomes lead to increased household and industrial electricity consumption through wider penetration of electronics, appliances and other modern conveniences. The growth reflects an expected 90% increase in electricity use, led by developing countries where 1.3 billion people are currently without access to electricity.

The *Outlook for Energy* is ExxonMobil's long-term global view of energy demand and supply and its findings help guide investments that underpin the company's business strategy. The forecast is developed by examining energy supply and demand trends in more than 100 countries and 15 demand sectors, such as transportation, industrial and power generation.

Twenty different types of energy that will be available to future consumers are evaluated while taking into account assessments of future technologies, government policies and cross-border trade flows.

READ FULL ARTICLE ONLINE

Continued from Page 1

domestic production levels decrease. The report noted that this increase in share has been altered by 5% from a 37% share in last year's forecast due to production adjustments.

Meanwhile gas production is expected to run at an even greater clip of an average of 56% increase from 2012 to 2040, when it is forecasted to reach 37.6 trillion cubic feet (Tcf). This production will see gas secure the largest share of domestic electric power generation, accounting for a total market share of 35% by 2040. However, coal will remain an important part of the domestic energy supply as it is projected to have a 32% market share by 2040.

The increased use of gas to generate electricity will lower carbon emissions by nearly 10% over the 20-year period from 2020 to 2040, according to the EIA. However, the reduction in nuclear power will partially offset these emission gains.

Production growth is expected to increase exports of liquefied natural gas (LNG) to 3.5 Tcf in 2029 and remain at that level through 2040. The EIA anticipates gas pipeline exports to Mexico to increase by 6% from 600 billion cubic feet in 2012 to 3.1 Tcf in 2040 while pipeline exports to Canada are expected to grow by 1.2% per year from 1 Tcf in 2012 to 1.4 Tcf in 2040. "Over the same period, U.S. pipeline imports from Canada fall by 30%, from 3 Tcf in 2012 to 2.1 Tcf in 204, as more U.S. demand is met by domestic production," the report said.

The U.S. will continue to be one of the largest producers of cheap gas and natural gas liquids (NGL), which will help increase industrial shipments at a rate of 3% annually from 2012 to 2022, according to the EIA. This will slow to a 1.6% annual growth rate from 2022 to 2040. "The projection assumes growing competition from aboard that flattens output growth in energy-intensive industries after 2030," the report said.

The EIA is forecasting gas prices to improve in the period in the near-term as consumption by the industrial and electric power sectors increases, in the later years of the study, prices will be also be driven up by LNG exports.

By 2018, the agency anticipates Henry Hub prices increasing to $4.80 million Btu (MMBtu) before decreasing to $4.38 per MMBtu in 2020 following an increase in production. Growth is expected to slow over the last 20 years of the study due to slower domestic demand and net export levels. By 2040, the report forecasts Henry Hub prices hitting $7.65 per MMBtu. As impressive as this figure is, it is 4% below the price forecast in last year's outlook.

Looking at the near-term stance for master limited partnerships (MLP), Wells Fargo Securities' December 2013 *MLP Monthly* report anticipates a positive outlook for the sector in 2014 based on strong fundamentals. These include the solid build-out of domestic energy infrastructure over the next two to three years; MLPs still maintaining strong yields that will continue to attract strong investments; positive fund flows that will help the sector continue to grow and mature; and the increasing likelihood of consolidation in the space.

The oil and gas industry is carrying other positives over from 2013 to 2014 that should have further positive impacts on the MLP sector, according to Wells Fargo Securities. These include increased exports for liquefied petroleum gas (LPG), refined products, condensate splitters, LNG, and, potentially, ethane; further development of pipeline systems; the continued development of the Marcellus and Utica shales that will have a positive impact on gas flows to the Gulf Coast and Midwest.

Some of these positives have the possibility of a negative spin, according to the report. These include the overall weakness of the equity market being driven by the end of federal support mechanisms that could result in higher interest rates; the increasing scrutiny brought on by short sellers as the sector becomes more mainstream, and the "ever-present" tax risk.

The investment firm also highlighted several negative trends to watch, including: gas storage and pipeline fundamentals that will remain challenging; the possibility that ethane rejection could increase as Marcellus production is connected to the Gulf Coast via Enterprise Products Partners' ATEX Pipeline, which could result in reduced NGL pipeline volumes; the likelihood that Gulf Coast crude differentials will remain narrow based on current pipeline capacity; the possibility of backwardation in crude and refined products storage values; and the resulting risk of MLPs paying high multiples for acquisitions should volumes and cash flow do not match projections.

READ FULL ARTICLE ONLINE

Contact Information:

FRANK NIETO Editor
fnieto@hartenergy.com

Contributing Editors: Richard Mason, Mike Madere, Scott Weeden, Michelle Thompson, Nissa Darbonne, Leslie Haines, Peggy Williams, Susan Klann, Darren Barbee, Paul Hart, Emily Moser, Chris Sheehan, Steve Toon, Velda Addison, Kristie Sotolongo, Rhonda Duey, Caroline Evans, Nicole Johnson, Christina Alty, Larry Prado

HARTENERGY
1616 S. Voss, Suite 1000 • Houston TX 77057-2627 • USA