

MIDSTREAM

Monitor

DECEMBER 21, 2018 | VOLUME 36 | ISSUE 49

To Our Readers

Hart Energy is in the process of streamlining digital delivery of *Midstream Monitor* to provide the most relevant information to the midstream sector in the most direct way. As part of this process, this issue of *Midstream Monitor* is the last to be produced in PDF format.

However, the *Monitor* email will continue in 2019 as it always has, returning from holiday hiatus on Jan. 4. It will continue to offer the same high-quality digital content with links to relevant articles, videos, charts and graphs, including the weekly Frac Spread.

If you have any questions, please contact Len Vermillion, Group Managing Editor, Digital News Group, Hart Energy at lvermillion@hartenergy.com.

Hart Energy wishes a happy and safe holiday season to all.

FEATURES

Selling To A Different World



FRANK NIETO
CONTRIBUTOR

Thinking back to 2008, the world seemed like a very different place. Donald Trump was a businessman and host of a popular reality show, ExxonMobil Corp. was the largest company in the world based on market capital, and "American Idol" on Fox was the most popular show on television.

Today, Trump is, of course, the U.S. president, ExxonMobil has fallen behind tech heavyweights like Apple, and "American Idol" just returned to network television on ABC after being cancelled several years ago by Fox.

On the other hand, the world isn't that different: The New England Patriots lost the Super Bowl in 2008 and 2018, the most popular movies at the box office in both 2008 and 2018 featured superheroes, and the iPhone has been the most popular gadget every year in this 10-year span.

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The Renaissance

More importantly to the oil and gas industry in general and the midstream in particular, 2008 marked the beginning of the U.S. energy renaissance. Though West Texas Intermediate crude prices hit a record \$147 per barrel (bbl) that summer, the U.S. ended the year as the largest producer of natural gas.

Shortly thereafter, producers began using similar unconventional production techniques and technologies to replicate the success they were having with shale gas to unlock crude and liquids plays.



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Clearly this strategy has paid off with the U.S. producing more crude oil than any other country for the past seven years—while breaking production records on a regular basis for the past four. This amount of production resulted in Congress lifting the domestic ban on crude exports at the end of 2015.

The U.S. is now on track to become the largest exporter of crude in 2019.

Currently, the U.S. exports about 2 million barrels per day (MMbbl/d) of crude and condensate combined, but these levels are just the start of where production and export levels are going. At its peak, the U.S. will be a Top-Five exporter competing with OPEC member nations, Russia and Canada for market share.

"Our forecast has U.S. crude exports peaking at 4.5 MMbbl/d (3.6 MMbbl/d of only crude, and 900,000 bbl/d of condensate) in 2032 with a slow decline from there. Exports will also peak at this time and have similarly slow decline," John Coleman, senior analyst, North American crude markets, Wood Mackenzie, told Hart Energy. ■



MIDSTREAM CONNECT

'This Is A Growth Business,' Says Kenny Feng Of Alerian



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Alerian's Kenny Feng spoke to Hart Energy's Paul Hart at the Midstream Finance Conference in Dallas, reiterating that the midstream continues to be a growth business and a solid investment.

He also made the point that management should know the value of the company's assets and when it's time to sell, then don't hesitate to sell. — HART ENERGY



FRAC SPREAD

Coming From North Pole—Higher Gas Prices

JOSEPH MARKMAN | HART ENERGY

The hypothetical NGL barrel at Mont Belvieu, Texas, continued its 10-week swoon to a 17-month low in the past week. Since reaching its high for the year of \$41.65 at the start of October, the barrel's price has fallen 39%.

That said, it was a pretty good week. With the exception of butanes, margins expanded at the Mont Belvieu and

Conway, Kan., hubs as natural gas prices fled the zone of \$4+ per million British thermal units (MMBtu) to the territory of \$3+/MMBtu.

Warmer-than-average weather has tempered gas prices but that could change. The polar vortex, a whirling cone of stratospheric low pressure over the poles, strengthens during the winter because of the sharper contrast in temperature between the poles and mid-latitudes.

However, forecasters expect the vortex to weaken soon and deliver a cold, snowy January following the mild December. Amy Butler, an atmospheric scientist at the University of Colorado, told **The**

Weather Channel that she expects the weakening to begin during the last week of December.

Typically, the weakened vortex will lead to cold air outbreaks in Eurasia first, before moving toward North America two to four weeks later. That could bring a chill to the eastern two-thirds of the U.S. by mid-January. The 2018 vortex weakening led to several nor'easters and then persistent chill into April.

EnVantage Inc. warned in a report that the last week of December is also a time of light trading and the weather could have an outsize effect.

"Be careful of the thin trading in the markets during that week that can lead to extreme volatility in the markets," the analysts said.

Ethane is also down, absorbing a 9.5% hit at

CURRENT FRAC SPREAD (CENTS/GAL)				
DEC. 21, 2018	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	21.95		27.48	
Shrink	24.57		25.79	
Margin	-2.62	-22.80%	1.69	53.31%
Propane	62.48		67.80	
Shrink	33.95		35.64	
Margin	28.53	0.63%	32.16	4.78%
Normal Butane	72.50		73.13	
Shrink	38.43		40.35	
Margin	34.07	-2.57%	32.78	-2.08%
Isobutane	91.80		76.80	
Shrink	36.91		38.75	
Margin	54.89	6.39%	38.05	-12.76%
Pentane+	97.90		106.38	
Shrink	41.10		43.15	
Margin	56.80	14.05%	63.23	9.64%
NGL \$/Bbl	23.94	-6.49%	25.41	-5.48%
Shrink	13.54		14.21	
Margin	10.40	6.25%	11.20	4.15%
Gas (\$/mmBtu)	3.71	-14.37%	3.89	-11.91%
Gross Bbl Margin (in cents/gal)	23.46	6.56%	25.92	4.23%
NGL Value in \$/mmBtu (Basket Value)				
Ethane	1.21	-13.24%	1.51	-9.55%
Propane	2.17	-8.12%	2.35	-4.71%
Normal Butane	0.78	-9.20%	0.79	-7.76%
Isobutane	0.57	-3.06%	0.48	-12.33%
Pentane+	1.26	0.10%	1.37	-0.25%
Total Barrel Value in \$/mmBtu	5.99	-7.30%	6.51	-5.97%
Margin	2.29	7.00%	2.62	4.50%

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 Midwest region, Mont Belvieu based on Houston region. Shrink is defined as Btus that are removed from natural gas through the gathering and processing operation.

Mont Belvieu and a 13.2% drop at Conway in the past week. Mont Belvieu's price of 27.48 cents per gallon (gal) is the lowest since May and only the second time it has dropped below 30 cents/gal in second-half 2018.

EnVantage explains this as the result of the link between ethane and natural gas prices and expects that link to remain close until mid-January or even mid-February. That's because crude oil prices are likely to remain low and ethane cracker demand will continue to be sluggish from less demand from struggling Asian market. EnVantage does not expect this to change until the middle or even end of first-quarter 2019. ■



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Will EV Demand Drop After Credits Expire?

In an effort to encourage consumers to drive electric vehicles (EVs), the U.S. government has issued an income tax credit, called the Plug-In Electric Drive Vehicle Credit. This tax credit effectively reduces the cost of the vehicle in an indirect way; the money does not come off of the top of the purchase price, but it comes in the form of reduced tax liability to the U.S. Internal Revenue Service (IRS). The goal of the tax is to aid the emerging EV market in the U.S. while the technology matures and scales, lowering prices to competitive levels with internal combustion engine (ICE) vehicles. The credit applies to battery electric vehicles (BEVs) that do not have an ICE component and to plug-in hybrid electric vehicles (PHEVs) and is worth up to \$7,500, varying on the vehicle's battery capacity.

It is worth noting that the credit is not payable, meaning that if an individual's tax assessment is less than \$7,500, assuming their vehicle carries the maximum credit, the individual does not receive money back from the IRS. The tax credit will cover incurred liability to the IRS and will be fully used without a rollover option. The credit must be applied toward the tax liability of the year in which the vehicle was purchased. The tax credit is structured with a base amount of \$2,500 and a variable \$417 per kilowatt hour of capacity above 5 kWh within the vehicle. Below is an example of eligible vehicles. This is not a complete list. BEVs (highlighted in red) receive the maximum tax credit, while PHEVs (blue) vary.

For leased vehicles, the tax credit goes to the manufacturer that is offering the lease, and technically owns the vehicle, not to the lessee. Market forces will likely drive the manufacturer to push some of that savings to the consumer, but it is unlikely that the full value will be passed along. —CHRIS BROWN | STRATAS ADVISORS



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IndustryVoice: Underground Storage Goes Midstream

When U.S. Midstream enterprises go shopping to store energy, they have a few options. Above-ground tanks abound—just drive over Houston's Beltway 8 East bridge, north of the Houston Ship Channel, to get a bird's eye view of a huge tank farm. What you can't see is the extensive network of underground storage facilities —facilities that contain natural gas and natural gas liquids in underground chambers called caverns—that serve the midstream. Underground storage is a cost-effective, safe and long-term solution for storing industrial quantities of hydrocarbons. WSP has supported midstream clients for decades with its “one-stop-shopping” storage solution, ranging from planning, engineering and permitting to cavern construction. (Sponsored Content) —WSP



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