

MIDSTREAM

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FEATURES

Supply Growth Continues...



Source: Hart Energy

Maria Sanchez, manager of energy analysis for Drillinginfo Inc. makes her presentation to Oil and Gas Investor's A&D Strategies Conference and Workshop.

But What About Demand?

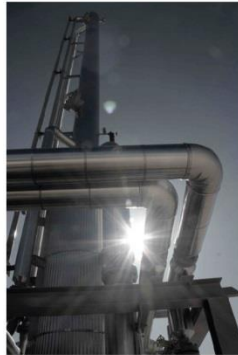
PAUL HART | HART ENERGY

DALLAS—Even at today's low commodity prices "we will see production growth" with crude prices at \$60/bbl and natural gas at \$2.85/Mcf for the foreseeable future.

Those were the predictions of Maria Sanchez, manager of energy analysis for **Drillinginfo Inc.** in her Oct. 12 presentation to *Oil and Gas Investor's* A&D Strategies Conference and Workshop. "Those are the basic prices that will support production growth," she added.

See **DEMAND** on Page 3.

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DEMAND

The economics of U.S. production continue to support higher supply—and even a slight improvement in prices translates into significant production gains, Sanchez said. Also, demand is growing, but that growth is at a slower rate than that of production.



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Production growth will vary by basin with “the big takeaways from the Permian and Anadarko Basin getting the attention,” she added. “Year over year, well performance has continued to improve in these basins, leading to higher productivity per well and better economics. But there will be sweet spots all across the nation” in other shale plays that will garner some interest from producers and their midstream supporters.

“Production efficiency is improving” and that translates into the ability of producers to operate profitably at lower commodity prices, Sanchez explained. “Efficiencies have been striking back at lower prices and leading to production forecasts being revised upwards.”

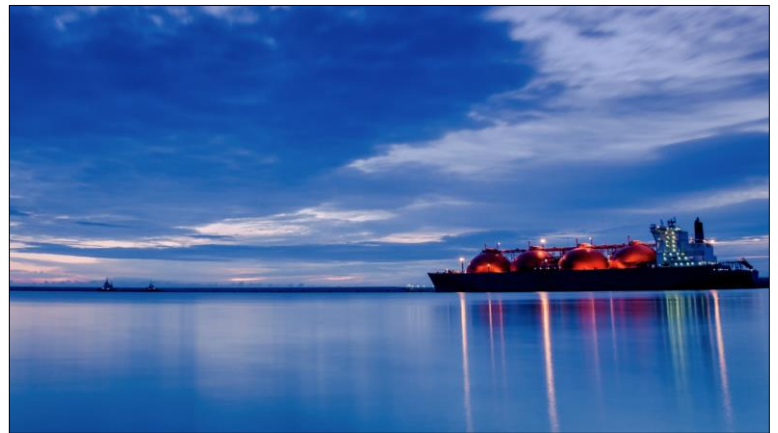
But the worldwide industry must stabilize supply with demand, she cautioned. “Before there can be any sustained rise in prices, inventory levels must normalize to levels from prior to the price crash” that started in late 2014.

The supply/demand equation does seem to be improving as 2017 nears its end, Sanchez said, noting the Organization for Economic Co-operation and Development revised its demand forecasts for second-half 2017 as the worldwide economy perks up. “But normalization is a tough task,” she added. ■

US LNG: At What Cost?

U.S. LNG exports could be a long-term support for natural gas producers and entities up and down the value stream but achieving that potential rests on lots of factors in this complicated business:

- International prices that compete with U.S. exports;
- Financing of huge facilities;
- Long-term commitments from buyers to support financing and guarantee ROI; and more.



Recent reports from Bernstein Research and Tudor, Pickering, Holt & Co. analyzed the U.S. market and what economics and commodity prices it will take to achieve acceptable returns.



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Analysts at Bernstein led by Jean Ann Salisbury keyed in on the economics of fixed fees, specifically, “several upstart LNG projects (that) have advertised costs of \$500/ton and \$2/MMBtu fixed fee (as compared to the Wave 1 range of \$2.25-\$3.50/MMBtu.” Promised costs such as these have attracted significant attention, because if they are possible, “it could lock in structurally low LNG costs for decades,” Salisbury and co-authors noted, and undercut the economics of early movers in the space like Cheniere Energy Inc. To gain insight, the Bernstein analysts analyzed three ventures: Calcasieu-Venture; Driftwood-Tellurian and Magnolia LNG.

New technologies adopted by companies jumping into the game are driving the promised lower fixed costs. But the analysts found in their “deeper dive” that most are “within the range of costs for existing U.S. brownfield buildouts, including Cheniere,” and further, the technologies put forward “remain untested at the scales in which they are being touted.”

The LNG capex numbers put forward often don’t include capital outlays for pipelines, pre-construction, power plants and other factors. Additionally, they point out, competitors could employ the same new technologies, pressuring prices for all.

“In general, though, even with the decline in the cost of LNG related to the general softness in oil and gas service costs and the application of new technologies, it seems unlikely that the overall costs of LNG are going to be below \$600/ton or that \$2/MMBtu prices can be achieved,” they said. —**SUSAN KLANN | CONTRIBUTOR**

FRAC SPREAD

Chill Will Likely Bolster NGL Prices Further

JOSEPH MARKMAN | HART ENERGY

Natural gasoline at Mont Belvieu, Texas, last week posted its highest price since June 2015—a 28-month stretch—as the hub's composite NGL barrel (bbl) extended its stay above \$30 to five weeks.

While last week's price of \$31.76/bbl was only the third-highest for the year, the five-week rally represented the longest maintenance of the \$30-plus price level since late November 2014, when the lowering tide of the down-cycle was sinking all NGL boats. At Conway, Kan., the barrel remained above \$30 for two consecutive weeks for the first time since February.

In its quarterly report, **Jefferies** credited the after-effects of Hurricane Harvey for third-quarter NGL price spikes and contemplated the potential of a price surge for propane if forecasts for a chillier winter come through in the Northeast and mid-Atlantic states.

Jefferies focused on propane supply, which was the shortest in inventory days during July since at least 2000. July stockpiles of 64.1 million barrels, Jefferies said, were about 34% below the five-year average. The July figure was significantly above the July 2013 stockpile of 55.3 million barrels, but the analysts noted that sharply higher domestic consumption and exports brought the inventory days down to only 38.4.

Propane had little price movement at either hub in the last week but still registered among the highest weekly averages of the year, and was 61% above the year-ago price at Mont Belvieu and 62.5% higher at Conway.

Ethane remains the most oversupplied NGL, Jefferies said, with a 34.6-day July inventory that was 31% above the five-year average. The analysts noted that butane and C₅₊ were also oversupplied, but below historical norms.

Ethane's price has been stagnant since Harvey damaged numerous ethylene plants. Despite last week's increase, the price at Conway was still 21.7% below the pre-Harvey August peak. Ethane returned to its pre-Harvey price in September but has slipped for three straight weeks. ■

CURRENT FRAC SPREAD (CENTS/GAL)				
OCTOBER 20, 2017	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	18.38		25.83	
Shrink	18.31		19.77	
Margin	0.07	-136.40%	6.06	-12.03%
Propane	89.68		93.63	
Shrink	25.30		27.32	
Margin	64.38	-0.17%	66.31	-0.85%
Normal Butane	105.88		105.44	
Shrink	28.64		30.93	
Margin	77.24	-0.92%	74.51	-0.24%
Isobutane	108.75		105.75	
Shrink	27.51		29.71	
Margin	81.24	-2.65%	76.04	0.15%
Pentane+	118.95		122.04	
Shrink	30.63		33.08	
Margin	88.32	3.16%	88.96	2.51%
NGL \$/Bbl	30.22	0.72%	31.76	0.37%
Shrink	10.09		10.90	
Margin	20.13	0.59%	20.86	-0.25%
Gas (\$/mmBtu)	2.76	0.97%	2.98	1.58%
Gross Bbl Margin (in cents/gal)	46.81	0.49%	49.08	-0.37%
NGL Value in \$/mmBtu (Basket Value)				
1.04	1.01	2.40%	1.42	-1.97%
3.12	3.11	0.15%	3.25	-0.15%
1.16	1.14	-0.41%	1.14	0.29%
0.69	0.68	-1.76%	0.66	0.55%
1.53	1.53	2.59%	1.57	2.25%
7.54	7.48	0.67%	8.04	0.10%
4.61	4.72	0.50%	5.06	-0.75%

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.

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The Permian Gets Gassy

It's safe to say few rigs are looking for natural gas in the Permian Basin, but that doesn't mean operators are not finding it anyway—and plenty of it.



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The Permian is delivering more than 2.4 million barrels per day of oil (MMbbl/d) and that number will grow substantially in the next few years, according to the U.S. Energy Information Administration (EIA). However, what cannot be overlooked is that about one-third of all the flow from the basin is now associated gas, with wells becoming gassier and wetter farther west in the Delaware Basin of West Texas and southeastern New Mexico.

Already, the Permian makes about 11% of U.S. gas production, according to the EIA.

Permian production was expected to reach 8.5 billion cubic feet a day (Bcf/d) in the third quarter, the EIA reported at the end of the second quarter. Estimates by others are that it will reach 8.8 Bcf/d by year-end. Estimates vary if excluding NGL extracted from the wet gas stream.

In any case, all observers agree that, as the Permian rig count has nearly tripled since 134 in April 2016, more gas and NGL will be coming from the region than in many years.

It's no wonder midstream companies are competing for new gas contracts and scoping out construction sites. According to one midstream source, in the second quarter a gas producer in the Delaware Basin sent a request for proposals for gathering and processing capacity and received 28 responses. —**LESLIE HAINES** | HART ENERGY

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opportunities.
The recent DUG
Midcontinent
Conference and
Exhibition in
Oklahoma City
focused on the upstream but midstream plays a role as well.



In this *Midstream Connect*, hosted by Jessica Morales, listen to insights from Garry Banda, midstream analyst at Stratras Advisors, during his presentation at the conference.

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