



Where to Now for U.S. Propane Exports?

White Paper by Karen Tang, Managing Editor, OPIS Europe LPG



Propane prices in 2017 entered a new phase that posed the question: Is the era of cheap LPG over?

Since 2012, U.S. Mont Belvieu propane values have been driven down to the 35%-45% of crude oil range, for the most part, as the advent of shale gas production heaped pressure on inventories.

The post-shale era, in which U.S. LPG prices completely decoupled from international benchmarks, may have well passed due to a seismic shift in how export capacity expansions play on U.S. stock levels.

This summer, Hurricane Harvey — the 500-year storm that devastated the U.S. Gulf Coast — demonstrated how the global LPG market has come to depend on U.S. product and how prices are nowadays inextricably linked to Mont Belvieu and vice versa.

The Chain Reaction Seen This Fall

As Harvey raged, export terminal closures on the Gulf Coast raised supply concerns internationally.

The price effect of Harvey was not initially felt in the Gulf Coast, but in the Far East — the destination of two-thirds of U.S. seaborne LPG exports. On Aug. 28, after the Houston Ship Channel closed Aug. 25 because of the storm, outright CFR Japan propane prices surged 10% over the previous week, whereas Mont Belvieu propane rose by 2% over the same period.

The subsequent U.S. rally was partly in reaction to the Far East spike, underscoring how linked global markets have become.

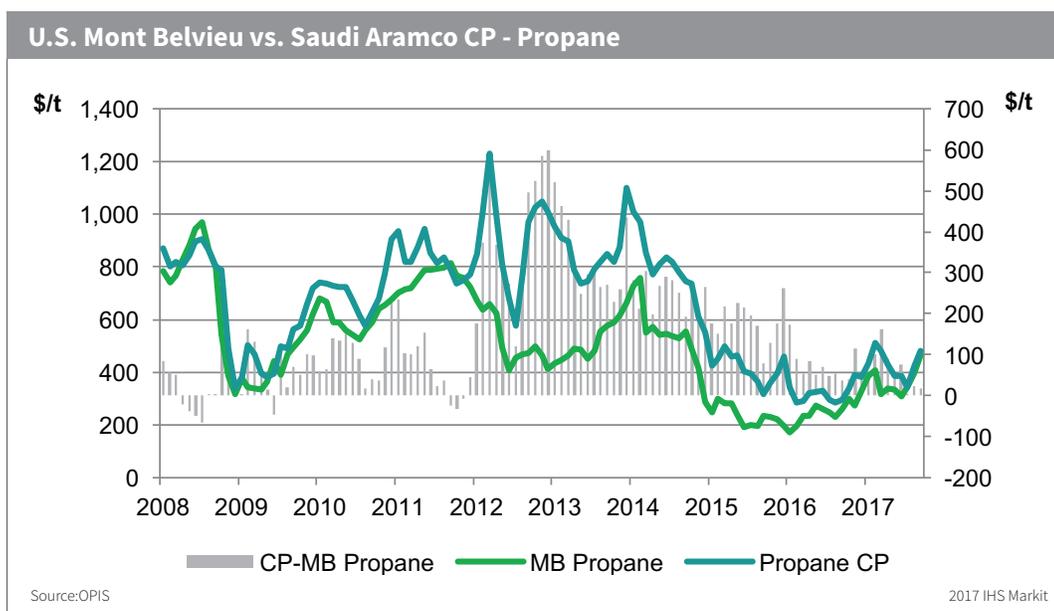
In Harvey's aftermath, Mont Belvieu propane strengthened from 70% of WTI to 78% four weeks later, supported by two factors:

1. Export rates quickly recovered and loading programs caught up to feed the global thirst for product.
2. The post-storm U.S. market saw limited flows into domestic storage caverns due to NGL supply disruptions.

In turn, Northwest Europe propane prices followed on to reach a premium over naphtha for the first time in four years. NWE petrochemical crackers, after years of running increased propane feedstock in place of naphtha, cut propane intake to a 2½-year low and imported less than half of prior-year levels.

For other major global LPG exporters, the Saudi Aramco contract price (CP) used throughout the Middle East was set at \$575/t in October, the highest level seen since \$610/t in November 2014.

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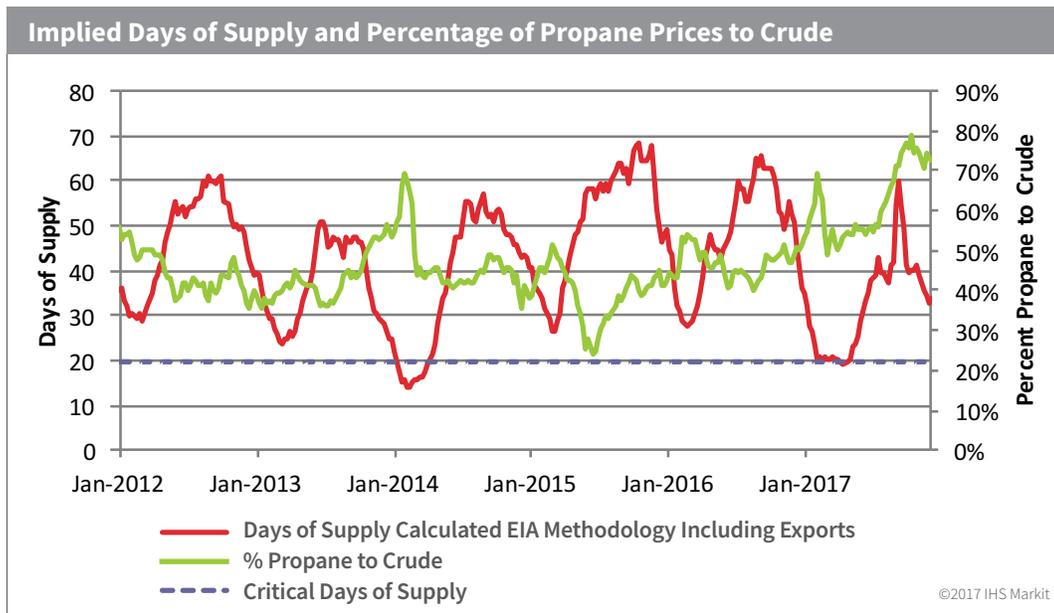


Spotlight on the U.S. Rally

The impact of Harvey accelerated the already-fraught situation of U.S. propane inventories.

IHS Markit, parent company of OPIS, estimated that approximately a week of supply (including exports) was lost in the immediate aftermath of the storm, leading the United States to start winter with a five-year low of just 41.4 days of implied supply.

Concerns over U.S. inventories arguably first surfaced in March after winter ended with around 40 million barrels in stock.



Mont Belvieu propane's ratio to crude oil, rather than dipping heading into the summer months as in previous years, rolled along in the mid-50s percentage of WTI range before shooting up from July onwards to above 70%, where it stands now.

To put that into perspective, U.S. propane-to-crude values this October were higher than during the peak of the extreme weather event dubbed the "polar vortex" that blasted through North America in January 2014.

Rattling the Global Chain

History shows that propane-versus-crude values spike when a critical level of around 20 days of supply is breached. Prices spiraled to 70% of WTI during the height of the polar vortex, when stock levels were depleted to 17.3 days of supply. When this happened last winter, the market reacted by pulling back export rates.

OPIS records indicate that around nine U.S. Gulf loading cargoes were canceled or rolled forward in January and February as the arbitrage to Asia became uneconomical.

Analysts have forecast that propane prices, having topped the \$1/gal milestone, will not see its value to crude taper off until April and there are scarce few in the market today that don't expect cargo cancellations to remain a factor this winter.

And, if Harvey's story is any guide this will have worldwide ramifications.

So, What Can We Expect Looking Further Ahead?

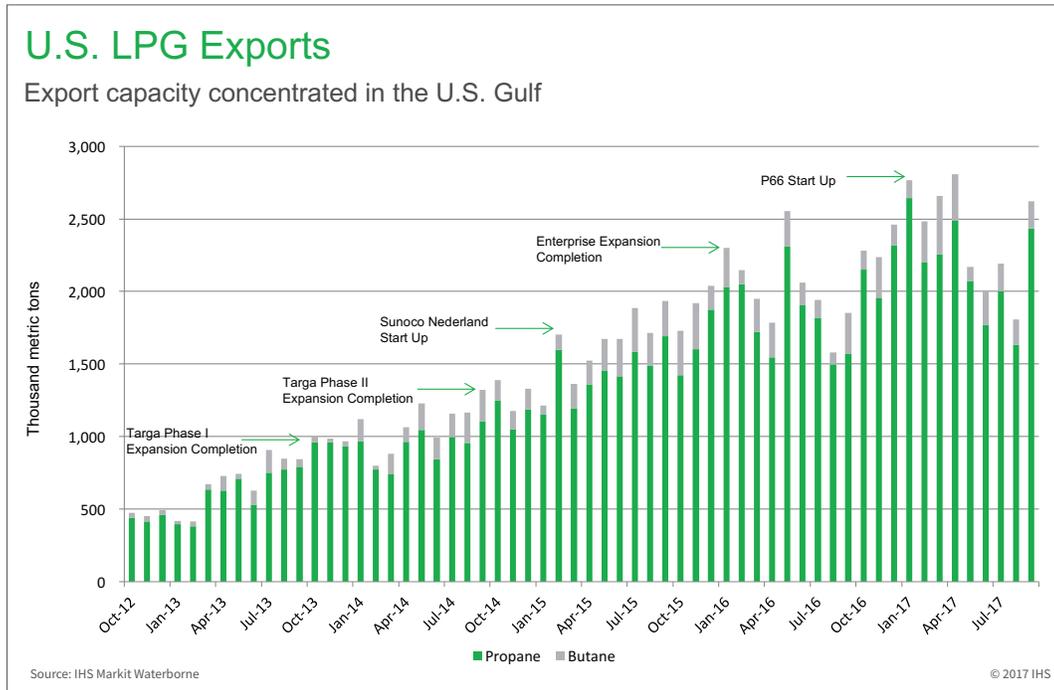
Over the next few years, U.S. propane values are expected to weaken as U.S. production resumes growth. However, U.S. and global markets will remain in delicate balance and prices closely intertwined.

When it's economical to export from the U.S., the market appears ripe to do so. U.S. LPG export rates can swing by more than half a million tons from month to month.

Mont Belvieu propane's ratio to crude oil, rather than dipping heading into the summer months as in previous years, rolled along in the mid-50s percentage of WTI range before shooting up from July onwards to 74%, where it stands now.

Spot premiums in the FOB U.S. Gulf coast resale market – the barometer of the global export pull – have, for the most part, traded in the 3.5-7.5cts/gal range over Mont Belvieu in 2017.

Meanwhile, the IHS Markit Waterborne Report notes that U.S. Gulf Coast marine terminal fees for new contracts have fallen to decade-low levels at just over 6cts/gal, where they are forecast to hold until into 2020.



Don't Count Out the West

The unveiling of the new locks at the Panama Canal have opened the floodgates to Asia – around 35% of the traffic going through the expanded canal are LPG cargoes – though it remains to be seen whether these levels will be maintained with congestion and a hike in toll fees adding to the cost of transport.

Still, opportunities abound for U.S. exports, as new markets for LPG continue to be developed. Many of those are found in the West, which has perhaps been overlooked compared to the dizzying demand growth in China, India and Southeast Asia in recent years.

Additional new export terminal capacity, including the startup of the Mariner East II project on the U.S. East Coast, now scheduled in second-quarter 2018, will be of particular interest and intensify competition with the Gulf Coast terminals.

At the OPIS Europe LPG Summit in London in October, chemicals producer INEOS outlined its 2-billion euro investment plans for Europe, including the construction of a new PDH plant and capacity expansions at its two existing gas steam crackers, on top of breaking ground for the largest butane storage tanks on the continent.

INEOS, whose transatlantic ethane import project rejuvenated Marcus Hook as well as its own cracker operations in Norway and the U.K., is joined by Borealis and Poland's Grupa Azoty – which have PDH projects in the works – to front some of the biggest investment announcements in Europe's petrochemical industry for decades.

While demand in the traditional residential/commercial sector has been in decline in Europe, LPG's clean fuel credentials could see it replace coal and heating oil in rural regions, according to energy distributor SHV. Furthermore, the European LPG Association has lobbied for LPG to fall under the scope of "alternative fuels" in European Union legislation in order to garner more policy support. And political momentum is gaining on tackling air pollution, where LPG-fueled vehicles perform very strongly.

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In Eastern Europe, Ukraine is the market to watch. With one of the world's fastest-growing LPG demand rates – it now ranks as the seventh-largest autogas market globally – and after an acute supply crisis in August, it is looking at where to secure additional supplies and diversify from Russian imports. This follows Turkey, which since 2015 has been regularly importing U.S. LPG to reduce its reliance on Russian gas.

Outside Europe, trading company Vitol, which also presented at the OPIS Summit, outlined the growth potential for West Africa's LPG market as a domestic fuel – from 1.6 million tons in 2017 to 2.6 million tons in 2026 – with demand more geared toward butane.

The legacy of the U.S. shale boom looks set to endure for at least the next decade. The IEA's latest World Energy Outlook highlighted that the U.S. will account for 80% of the increase in global supply between now and 2025 and shale producers will fund new ways to step up output. U.S. exports, and Mont Belvieu pricing, will be influencing further corners of the world. ■

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About the Author



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Karen joined the OPIS team to cover the European LPG markets. She has been involved in the LPG market since 2007. She is based in London and previously worked as a reporter at Argus Media and a market analyst at Saudi Aramco. Karen is from Sydney and has also lived in New York City covering the U.S. NGL market for OPIS. She holds a Bachelor of Engineering and a Bachelor of Arts from the University of New South Wales.



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