



## **New Study Highlights Feedstock and Delivery Cost Advantages for Chemical Manufacturing in Shale Crescent USA**

*IHS Markit shows feedstock and product logistics advantages for methane, propane and butane-based projects in the Shale Crescent region compared to the U.S. Gulf Coast*

**San Antonio, TX, March 19:** Investing in select chemical projects in the Shale Crescent USA region of Ohio, West Virginia and Pennsylvania offers financial advantages – rooted in feedstock and delivery costs – when compared to opportunities on the Gulf Coast and in other regions, according to a new independent [study](#) by global business information provider [IHS Markit](#) (Nasdaq: INFO).

Commissioned by Shale Crescent USA, '**Estimated Logistics Benefits of the Shale Crescent USA Region Versus the U.S. Gulf Coast for Natural Gas and LPG**' highlights chemical industry development opportunities for the region based on predicted volumes and cost of natural gas and methane, propane and normal butane (LPG) production in the Marcellus and Utica shale plays; the estimated logistics-related cost advantage of feedstock supply; and the cost to distribute the chemical products to regional customers. The report follows a previous [study](#) conducted by IHS Markit in March 2018, which evaluated the prospects for a world-scale ethylene and polyethylene plant based on ethane feedstock in the Shale Crescent USA region.

The Marcellus and Utica Shale plays, which underlay the Shale Crescent region, are two of the most prolific shale plays in the world. IHS Markit forecasts that the region will supply 45 percent of United States natural gas production by 2040, up from 29 percent in 2018. As a byproduct of abundant shale gas, the Shale Crescent region is rich in natural gas liquids (NGLs) used in petrochemical production and plastics manufacturing, including ethane, propane and butane. IHS Markit forecasts the region will supply 19 percent of United States NGL production in 2040, up from 14 percent in 2018.

While the Gulf Coast has long served as the United States' primary energy and petrochemical hub, the Shale Crescent region's abundant natural gas and NGL supply – combined with its access to water for transportation and processing, as well as its proximity to the vast majority of North American demand for thermoplastics – make it a prime candidate for a second U.S. petrochemical hub.

“Research continues to drive home the myriad economic advantages for manufacturers in the Shale Crescent region when compared to other, more traditionally accepted energy and chemical hubs,” said Wally Kandel, spokesperson for Shale Crescent USA. “Investors are catching on that the Marcellus and Utica Shale formations offer unprecedented benefits; there are few other places in the world, if any, where the supply, manufacturing facilities and end users are all in close proximity. We look forward to welcoming more international chemical and energy companies to the region to open or expand their business and reap these benefits.”

“The Shale Crescent USA region will be a significant contributor to the supply of natural gas, ethane, and LPG well into the future,” said Anthony Palmer, vice president, chemical consulting at IHS Markit.

“The specific supply and logistics of natural gas and LPG in the Shale Crescent USA region affords a cost advantage to its local use within the region, albeit not as significant as that of ethane.”

Palmer also concluded that “while both methanol and ammonia/urea production from natural gas are economically advantaged in the region due to the low feedstock costs, the most advantaged LPG derivative is an integrated propylene (via propane dehydrogenation) to polypropylene project in the Shale Crescent region. Access to ample supplies of locally produced propane leads to a competitive manufacturing cost for propylene, and subsequently polypropylene, which is augmented by the region’s close proximity to over three-quarters of the U.S. polypropylene end use market.”

After breaking down the U.S. market for each of the products considered into sub -regions and quantifying the portion in close proximity to the region, IHS Markit modeled theoretical, identical plants in both the Shale Crescent USA and on the U.S. Gulf Coast, simulating local manufacturing costs and evaluating the costs to deliver products to the U.S. Midwest region.

For 2020, the study found the following cost advantages for NGLs and derivatives in the Shale Crescent region as compared to supply from the U.S. Gulf Coast:

- Methane: 15% lower feedstock cost
- Propane: 6% lower feedstock cost
- Butane: 13% lower feedstock cost
- Methanol: 26% lower delivery cost
- Integrated Ammonia/Urea: 12% lower delivery cost
- Integrated PDH/Polypropylene: 11% lower delivery cost

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*About Shale Crescent USA:*

Shale Crescent USA is a multi-stakeholder initiative aimed at promoting the unparalleled business advantages in the “Shale Crescent” region of Ohio, Pennsylvania and West Virginia along the Ohio River. Touting abundant, low-cost natural gas, access to water and proximity to key markets, the Shale Crescent offers world-class business advantages and opportunities. For more information, please visit [www.shalecrescentusa.com](http://www.shalecrescentusa.com).

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