NATURAL GAS PRODUCTION: PACE OF GROWTH TO SLOW IN 2020

PREVIEW | FundamentalEdge Report | December 2019

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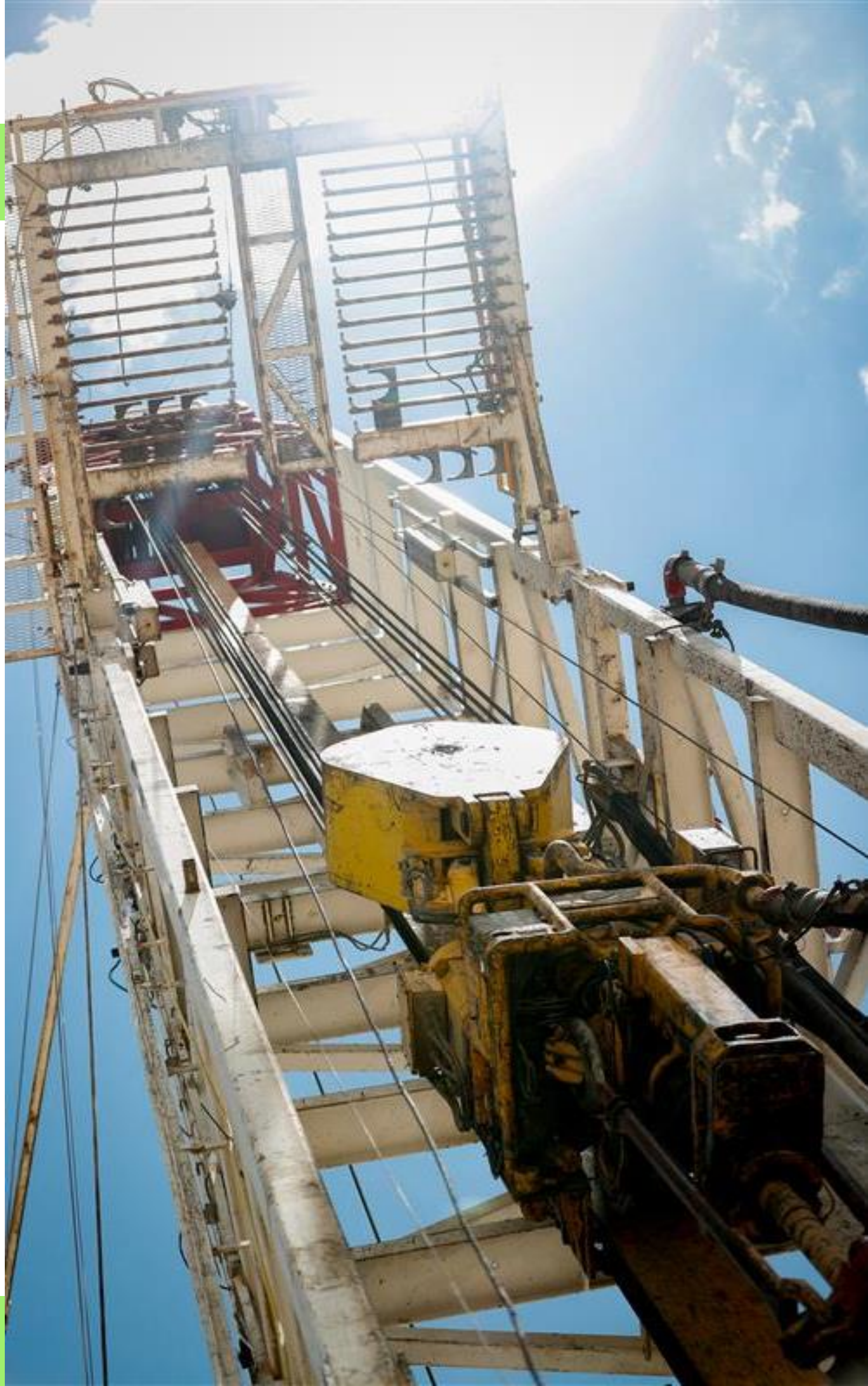

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Introduction and Key Takeaways

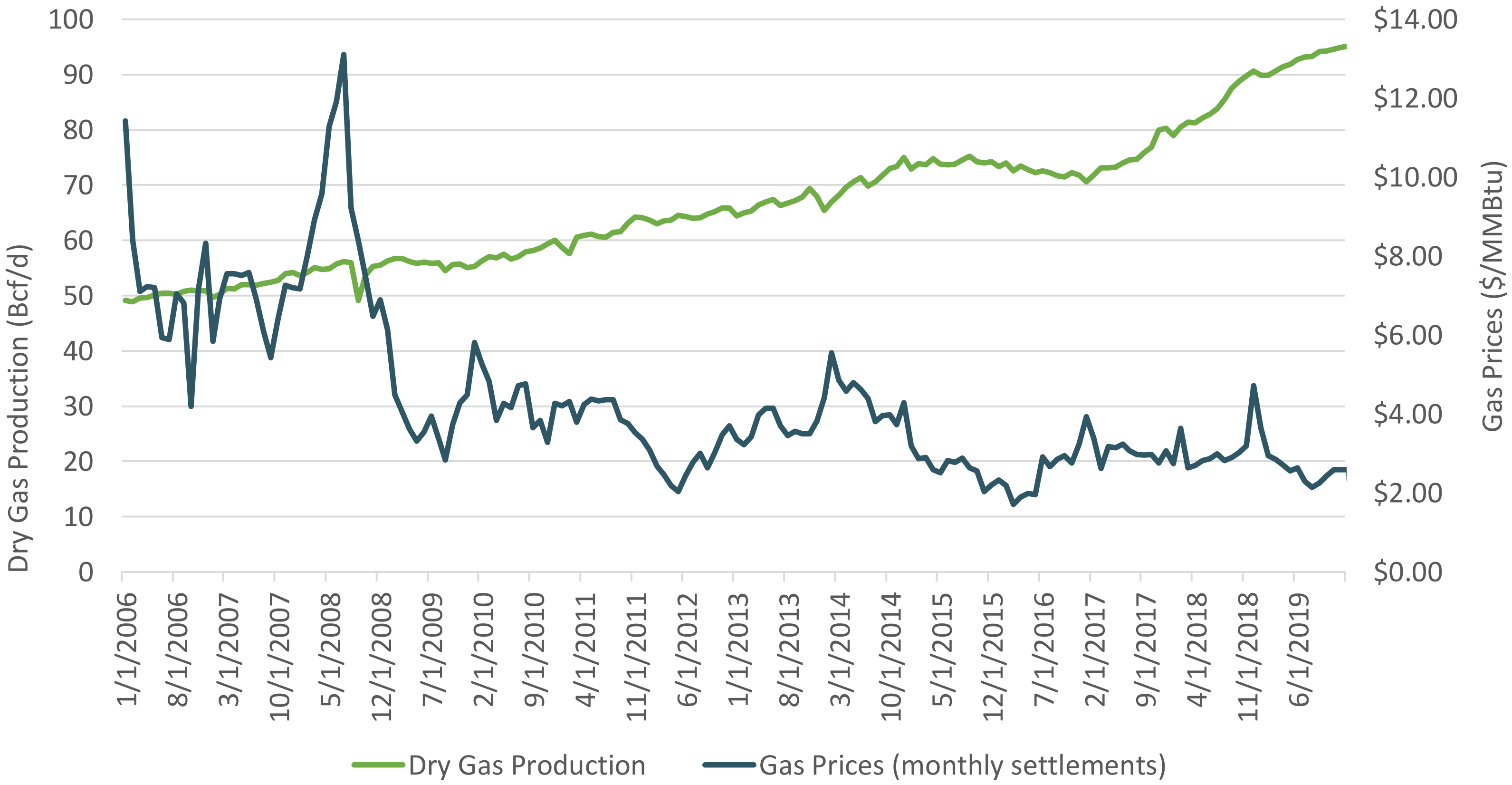
- ***Natural Gas Production: Pace of Growth to Slow in 2020*** is an interim report of Enverus's FundamentalEdge Series. This report includes a recap of 2019 and what to expect in the natural gas market in 2020.
- Dry gas production has seen annual increases of 8-9 Bcf/d in 2018 and 2019. Enverus expects that gain to drop to about 2 Bcf/d in 2020. This expectation is based on early guidance by E&P operators and assuming commodity prices of $55/Bbl for WTI and $2.50/MMBtu for Henry Hub. Enverus also sees downside risk on this forecast, which is most likely expected to get reduced once guidance is finalized in the next couple of months.
  - **Marcellus / Utica**: 2019 was meant to bring long-awaited relief with the onset of several pipeline expansion projects. While this was true for a good part of the year, aggressive gains in production continued to surprise and caused renewed price weakness this past fall.
  - **Permian**: Crude economics drive production growth in the Permian. Some relief was provided in the form of the new Gulf Coast Express pipeline during 2019, but it was quickly filled to capacity. Promising basin economics will continue to face takeaway capacity constraints.
  - **Haynesville**: Just over 1 Bcf/d YoY growth here has surprised many, likely limited to Tier 1 acreage, which is the only area reliably in the money with a $2.13/MMBtu gas breakeven.
- **Consumption and Exports**: Domestic demand grows slowly over normal weather scenarios with upside risks in colder winters. Strong growth in LNG exports and moderate growth in Mexico exports provide the necessary outlet for increased US production.
- **Storage Outlook**: Enverus expects gas inventories to end the season 1.7-2.0 Tcf. This level will push prices down in 2020. Enverus expects gas prices to average $2.50/MMBtu starting in 2020.

US Dry Gas Production

Natural gas production has been increasing rapidly since 2006. That growth accelerated in 2017. In the past three years (Dec 16-Dec 19), dry gas production grew by 32%, or 23 Bcf/d. During this time, the US has also seen prices drop.

2019 is no exception with production gaining over 4 Bcf/d exit-to-exit, while gas prices have averaged only $2.64/MMBtu.

The following slides present a detailed basin review to understand where growth has occurred and what to expect in 2020.



Source: ProdCast

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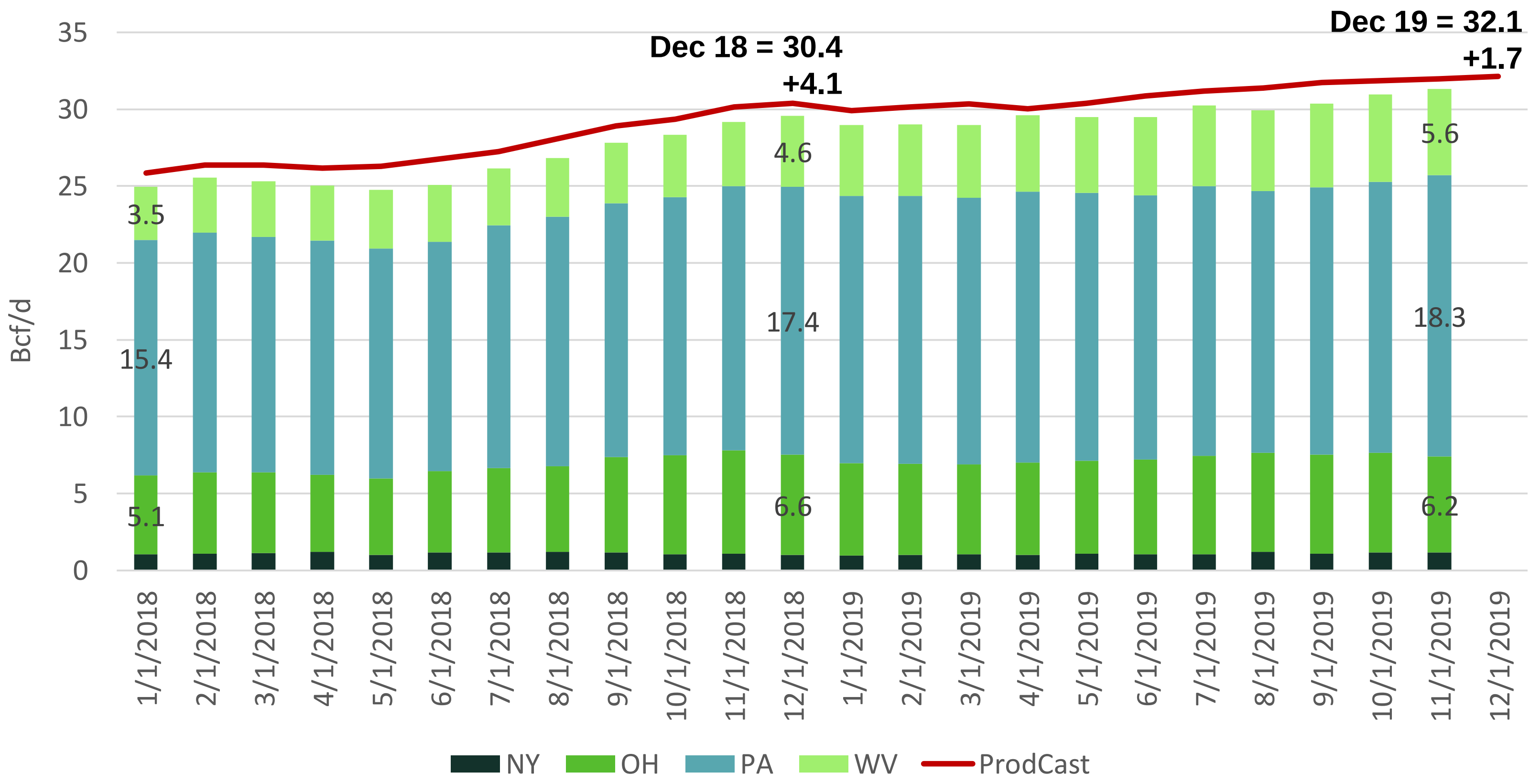
Marcellus and Utica Gas Production

The Marcellus, defined as Pennsylvania and West Virginia, is responsible for most of the growth in 2019. Gas production in the Utica (Ohio) has remained relatively flat.

In this region, over 95% of production can be observed in pipeline nomination data (meter readings), thus reinforcing confidence in the forecast.

The region will likely close out 2019 having added about 1.7 Bcf/d from December 2018 to December 2019.

Dry Gas Production: Pipeline Sample and Forecast



Source: Enverus ProdCast and OptiFlo Gas

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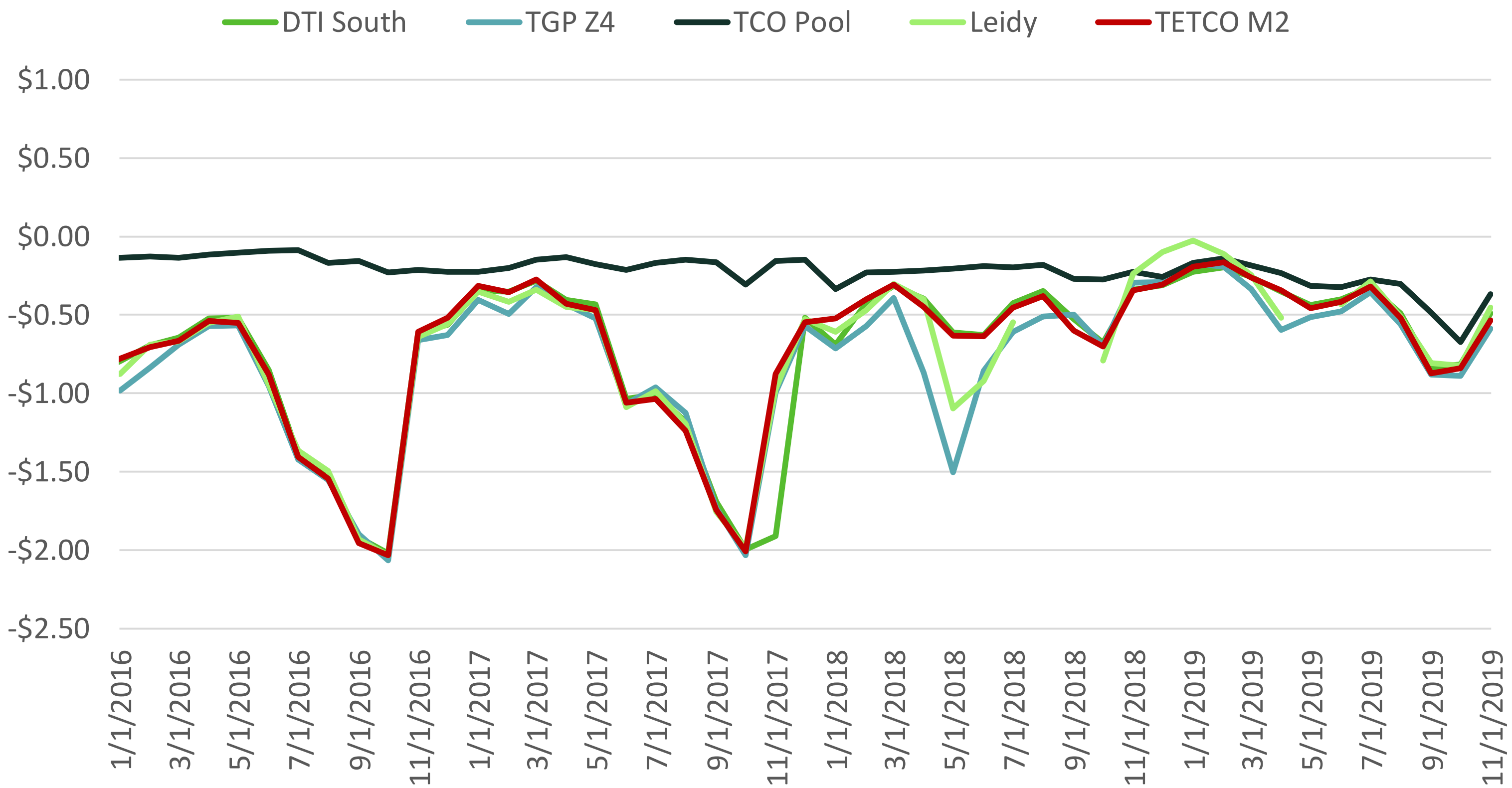
Marcellus/Utica Regional Pricing

Gas production growth in the Marcellus/Utica has often been constrained by pipeline takeaway capacity.

In 2016 and 2017, basis hit its lowest levels, dropping to more than $2.00 per MMBtu below Henry Hub while pipeline capacity was getting built.

By the end of 2018, significant takeaway capacity had been added, the region was unconstrained during most of 2019 and basis traded in the $0.30-0.50/MMBtu range. However, production gains took off again and as shoulder season demand set in, basis again displayed evidence of constrained flow during Sept-Oct 2019, trading on average $0.80/MMBtu with daily blowouts over $1.00/MMBtu.

Looking ahead, the region is expected to continue to battle with capacity constraints going forward especially during low demand periods.



Source: Bloomberg

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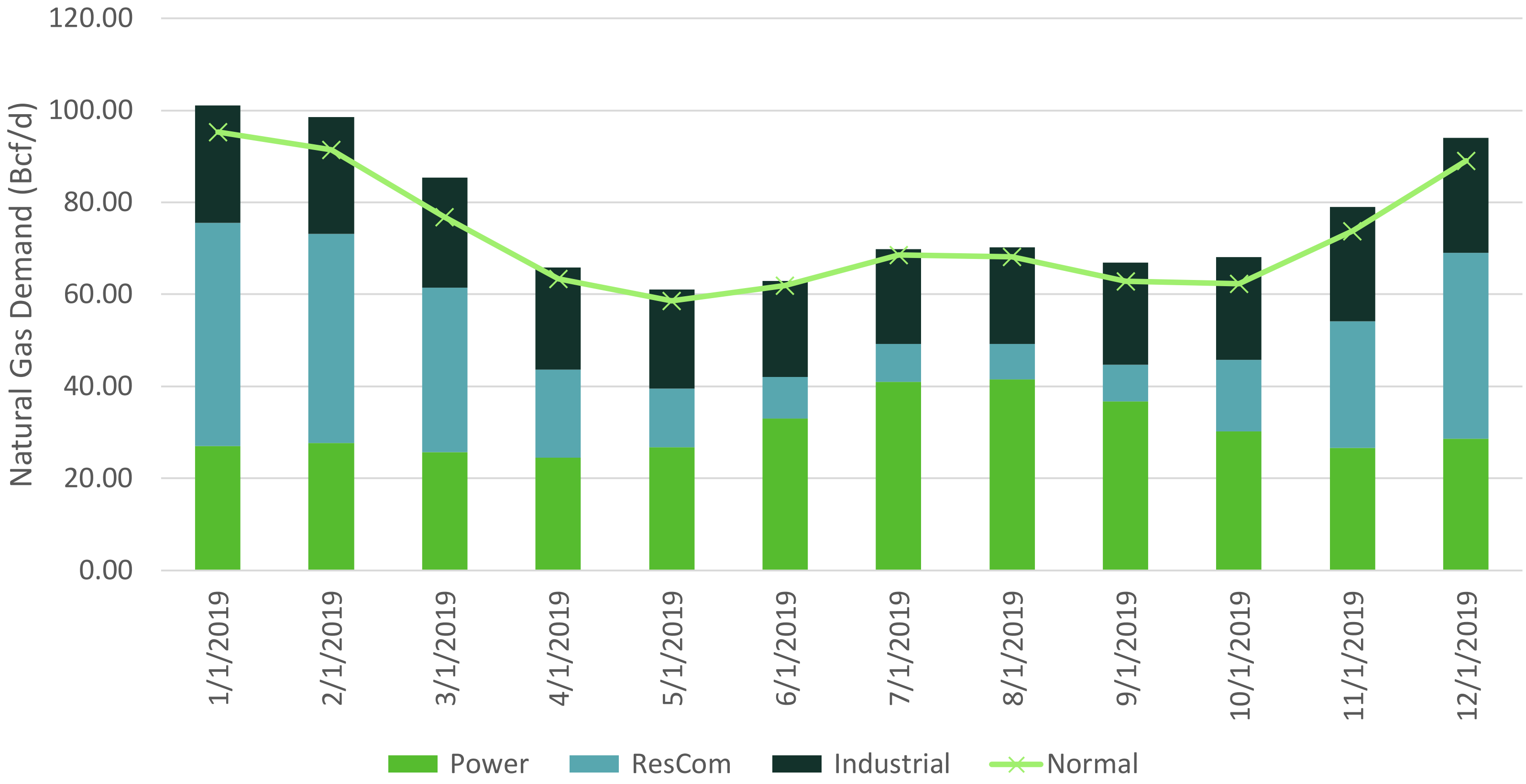
Domestic Demand by Sector (vs Normal)

In 2019, natural gas demand in the US has averaged only 6% higher normal.

The winter of 2018-19 was colder than normal and pushed demand up in the first quarter, while summer was basically at normal levels.

In 2020, Enverus expects demand in the US (ResCom, Power and Industrial) to average 77.2 Bcf/d, an increase of 0.3 Bcf/d compared to 2019.



Source: EIA, Enverus

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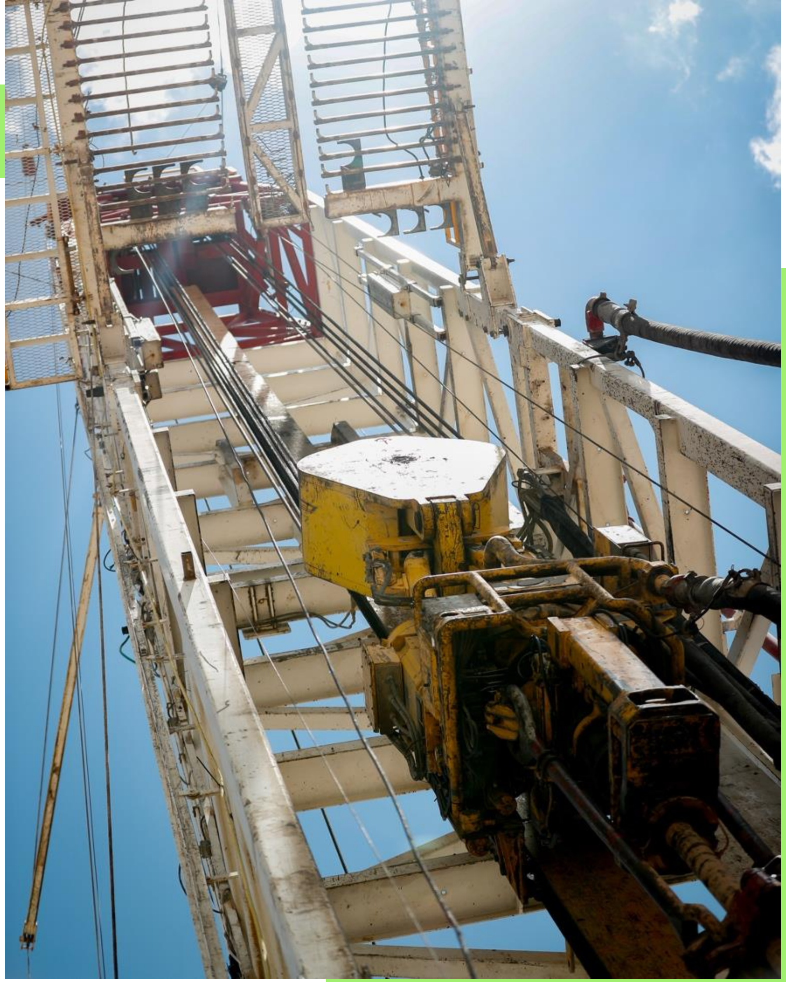
2020 and Beyond



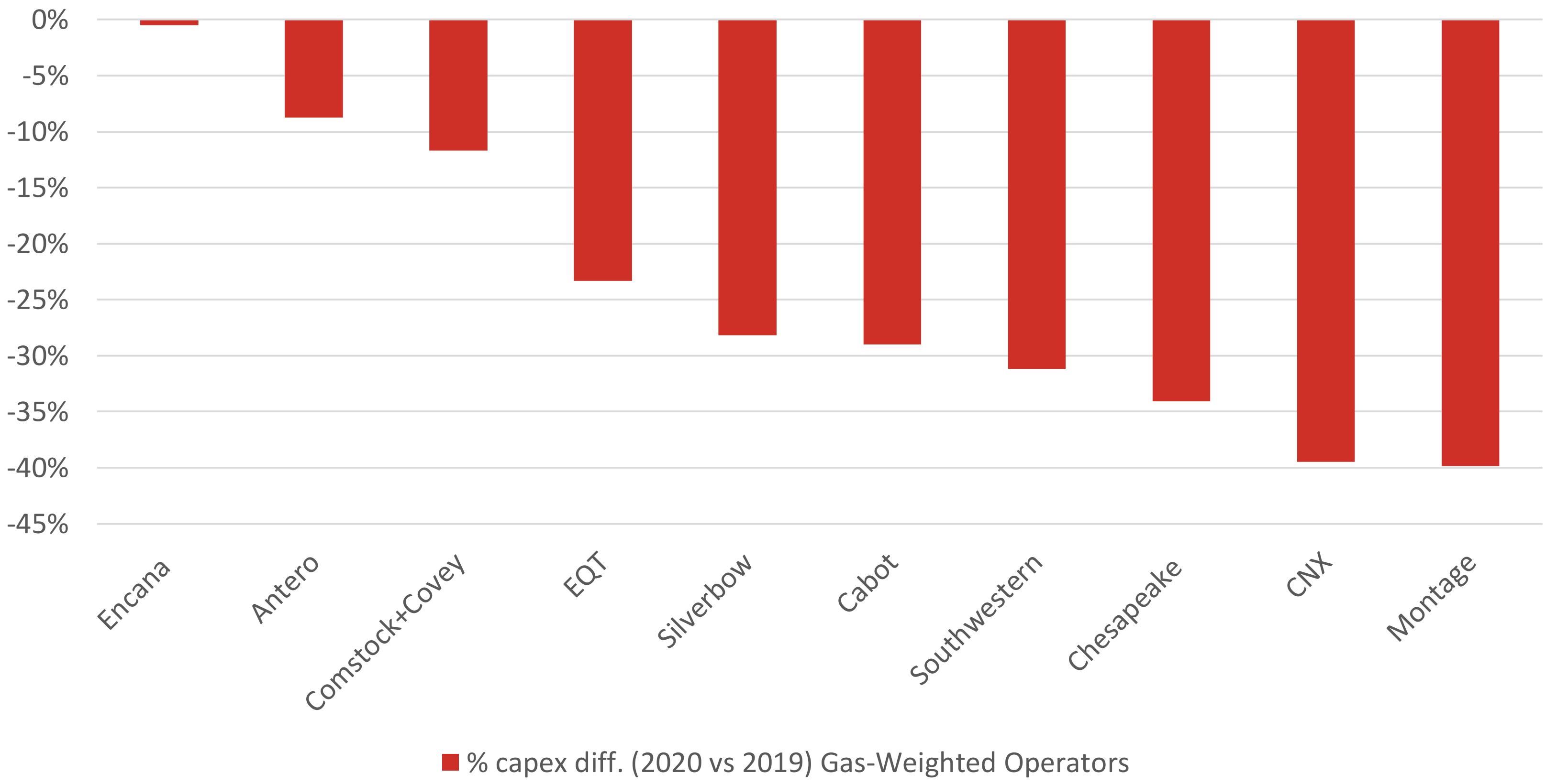
Early 2020 Guidance

Data Indicates Significantly Lower Spend

Weaker gas prices at the end of 2019 and financial pressure (free cash flow, debt reduction, shareholder returns) are driving capex lower in 2020.

Gas-weighted producers average about a 25% capex reduction in 2020

- Notables like EQT and Chesapeake decreased the most in an absolute basis, dropping $1.1B between the two.
- 6 Appalachia pure players have collectively reduced capex by ~$1.5B (EQT, Cabot, Southwestern, Antero, CNX, and Montage).



Source: Company Filings

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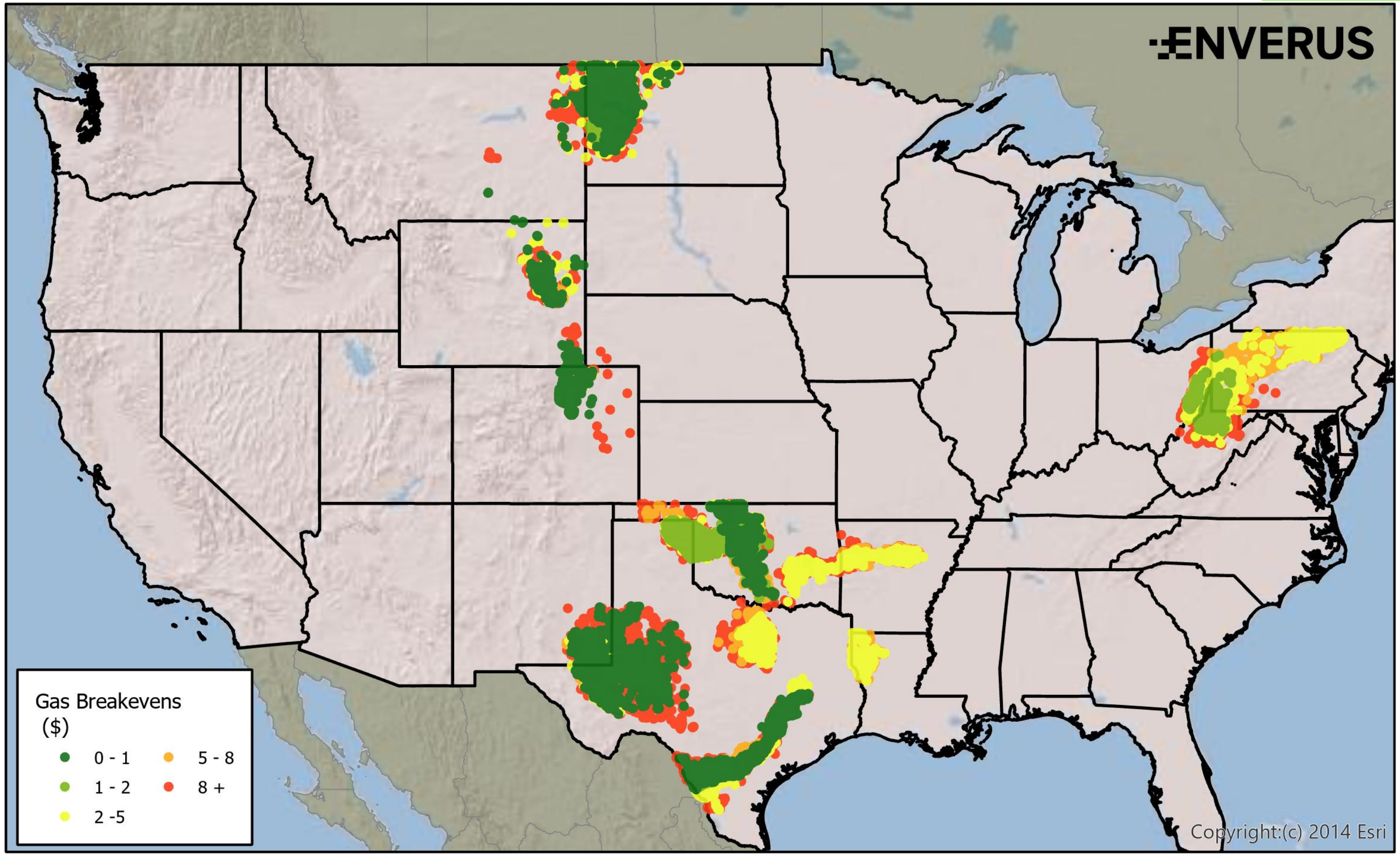
Gas Breakeven Map

Assumptions:

- $55 Crude Price
- 12.5% MARR
- Prevailing Tax Rates
- 20% Royalty Rate



CONTACT

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This is a preview of the full report.
If you are interested in learning more, please contact your MarketView account manager or businessdevelopment@drillinginfo.com, and for immediate help: 1 (800) 282-4245

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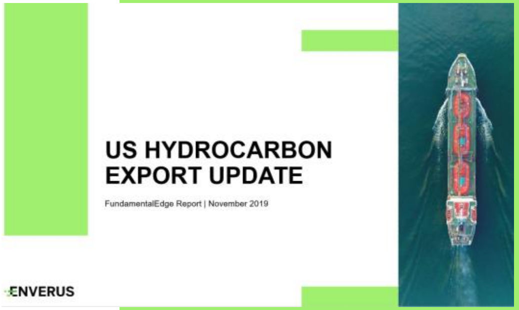
Additional Publications



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