

Natural Gas Is Still King

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Matthew Hong
Director of Research, Power and Gas
+1 312 244-7649
matthew.hong@morningstar.com

Data Sources Used in This Publication
EIA

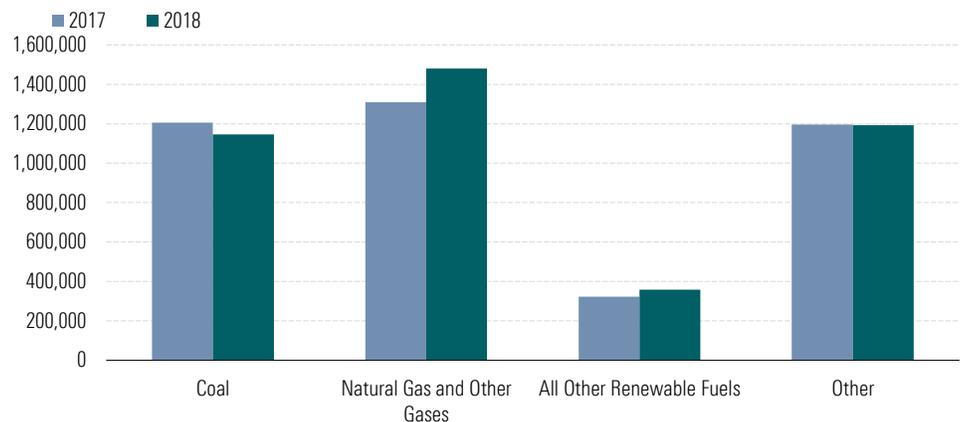
An Evolving Generation Landscape

2018 was yet another year indicating the nation's journey toward greater reliance on natural gas and renewables. The publication of the Energy Information Administration's latest data from Form-923, which includes December 2018, gives us the first opportunity to see how much the generation portfolio for the Lower 48 has changed since 2017. This piece compares the changes in the generation portfolio between 2017 and 2018 and highlights some of the additional changes expected for 2019.

Comparing the Two Years

Natural gas generation in 2018 exceeded 2017 levels by 171,000 gigawatt-hours, expanding its share of the generation stack from 32% to 35% (Exhibit 1). The growth in market share primarily came at the expense of coal generation, which saw its share of the national portfolio decrease from 30% to 27%. Coal generation was down around 60,000 GWh year over year. On top of the shift between fossil fuels, renewable sources expanded their share of the generation stack by 1%, representing 9% of the nation's generation. Renewable generation grew by around 35,000 GWh in 2018.

Exhibit 1 Annual Generation by Fuel Category (GWh)

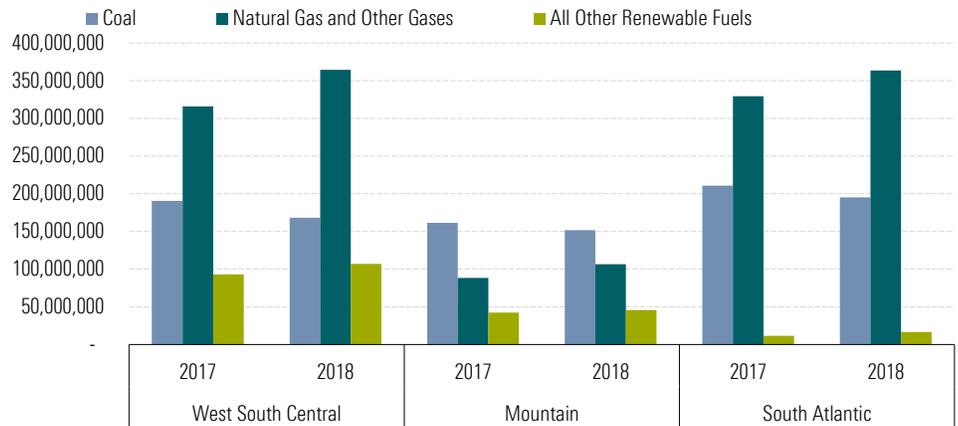


Source: EIA.

Three regions stick out when the national view is broken out into regional portfolios. Coal generation was down year over year in three census regions: South Atlantic, West South Central, and Mountain. Generation from coal was down 22,000 GWh, 9,500 GWh, and 15,000 GWh, respectively, in those three regions. Natural gas generation in those areas ticked up significantly from 2017 levels with the natural

gas share of generation in West South Central, Mountain, and South Atlantic growing to 50%, 29%, and 44%, respectively. Over the course of the year, cheaper natural gas prices off stronger supply likely contributed to the uptick in natural gas burn.

Exhibit 2 Annual Generation by Region for Coal, Natural Gas, and Renewables (GWh)

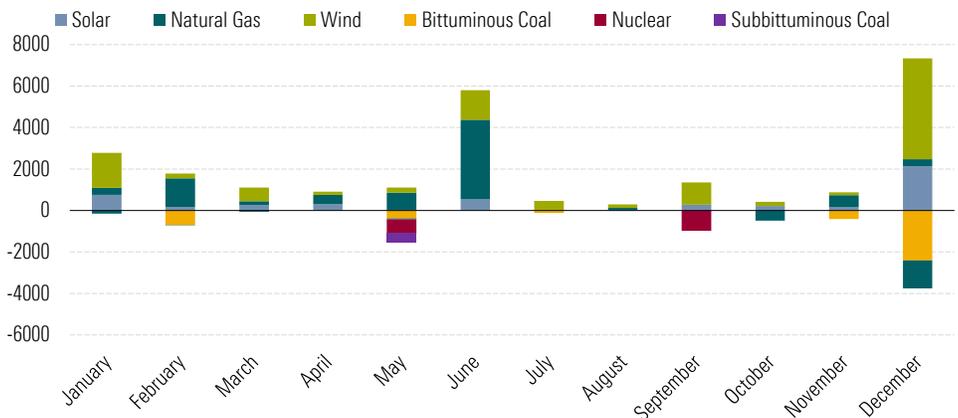


Source: EIA.

Change Will Continue

While the changes in generation between 2017 and 2018 were interesting, the trend of coal retirements and additions to natural gas and renewable generation will continue in 2019. A little over 6,000 megawatts of coal and nuclear retirements are expected throughout the year (Exhibit 3). Over the same time frame, a net 6,000 MW of natural gas plants and 16,000 MW of wind/solar capacity is expected to be added to the generation stack.

Exhibit 3 Power Plant Additions and Retirements by Month, 2019 (MW)



Source: EIA.

While the overall trend of greater reliance on natural gas with an expansion in renewables is pretty consistent across the country, regional differences exist. The middle chunk of the country, from North Dakota to Texas, is looking to add most of the wind capacity with 8,000 MW planned. A little over 3,000 MW of new solar capacity is expected, with around 2,000 MW planned for the South Atlantic and another 1,000 MW on the Pacific Coast. New natural gas plants are also expected across most regions, with the majority of additions coming to the West South Central and South Atlantic regions.

Conclusion

This latest data shows generation is clearly shifting toward a greater reliance on natural gas as coal and nuclear plants retire and renewable sources in the form of wind and solar expand their share of the generation stack. While coal generation continues to represent a significant portion of generation—around 27% in 2018—natural gas' dominance is now undeniable and will continue to expand in the near term, in our view. ■■

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+1 800 546-9646 North America

+44 20 3194 1455 Europe

commoditydata-sales@morningstar.com



22 West Washington Street
Chicago, IL 60602 USA

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