

New gas-fired generation to boost Appalachia gas demand

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HIGHLIGHTS

26 gas-fired power projects planned for region

Gas likely to become most-used fuel for power generation in PJM

Houston — With about 21,000 MW of new gas-fired power generation planned in the Appalachian Basin, demand for gas is expected to rise as it overtakes coal in power generation market share.

Twenty-six combined-cycle gas-turbine power plant projects are likely to be built in the states of Pennsylvania, West Virginia and Ohio over the next several years, according to S&P Global Market Intelligence data.

Analysis: Permian Basin gas constraints on track to ease in 2019

The majority of the generation projects are slated to be built in Pennsylvania, where 15 projects, contributing 14,730 MW of capacity, are likely.

In Ohio, the eight projects listed as planned would add 7,695 MW of capacity, according to Market Intelligence.

Three gas-fired power projects have been proposed for West Virginia, representing more than 2,000 MW of capacity. But all three are opposed by interests thought to be allied with the state's coal lobby and have been delayed in the state permitting process.

The proposed projects range in size from the large -- such as Apex Power Group's Guernsey Power Station in Ohio, with a projected capacity of 1,650 MW -- to the small -- an Ohio State University Cogeneration Plant, owned by Axium Infrastructure, with a 60 MW capacity.

Proposed power generation in the three states that is expected to come on line in the 2018-2020 time frame is expected to add about 1.16 Bcf/d of gas demand, assuming a 70% capacity factor and 6,500/Btu/kWh heat rate, according to S&P Global Platts Analytics data.

This increased demand for gas is likely to be met with gas produced from the Marcellus and Utica shales, which currently produce about 29 Bcf/d, according to the US Energy Information Administration.

GAS TO OVERTAKE COAL

Construction of new gas-fired generation in the Appalachian region reflects a trend for gas to eventually overtake coal as the top fuel for power generation in the PJM Interconnection, despite attempts by the Trump administration to retain coal-fired plants slated for retirement.

Driven by the rapid growth of gas production from the Marcellus and Utica shale plays, gas has increased its share of the power generation market in PJM over the better part of the past decade. In January 2012, gas comprised only 17% of generation compared with coal, which captured 43%, according to Platts Analytics data. In April, gas exceeded coal in its share of the PJM market, with gas accounting for 30%, versus coal, which had a 28% share. Platts Analytics forecasts that gas will retain a slightly larger share of the market in the region compared with coal through the end of 2020.

Other recent reports point to the continuing shift to gas-fired power generation in PJM.

EIA Wednesday reported that the average annual capacity factor for gas-fired generators in the PJM region have increased in recent years, reflecting a greater use of gas for power generation in the region.

The increase in PJM's capacity factors for gas-fired generators is the largest of any regional transmission organization in the country in the past five years, EIA found.

"Normally as winter approaches, coal generation picks up to match or beat natural gas generation as the heating degree days ... start to climb. So far this year, coal has not stepped up as usual and natural gas has delivered the incremental megawatt," a report Morningstar issued said Wednesday.

Planned Appalachian Basin Power Projects

Ohio

Name	Owner	Capacity (MW)
Guernsey Power Station	Apex Power Group	1650
Rolling Hills Generating CC	Eastern Generation LLC	1414
South Field Energy	Advanced Power AG	1132
Cadiz Combined Cycle Plant	Ember Partners LP	1050
Lucas Energy Station	Clean Energy Future	964
Trumbull Energy Center	Clean Energy Future	940
Hannibal Port Power Project	Fortress Transportation	485
Ohio State Univ. Cogeneration CHP	Axium Infrastructure US	60

Total 7695

Pennsylvania

Hill Top Energy Center	Hilltop Energy Center	1156
Renaissance Energy Center	American Power Ventures	1140
Hickory Run Energy Station	Kansai Electric Power Co	1059
CPV Fairview Energy Center	Competitive Power Ventures	1050
Beech Hollow CC Plant	Robinso Power Co. LLC	1025
Renovo Energy Center	Bechtel Development Co.	950
Westmoreland Generating Station	Diamond Generating Corp.	925
ESC Tioga County Power Plant	Energy Solutions Consortium LC	893
York 2 Energy Center	Calpine Corp.	874
Allegheny Energy Center	Invenergy LLC	550
Birdsboro Combined Cycle Plant	Ares EIF Management LLC	488
Archibald Energy Project	DCO Energy LLC	485
Franklin Project	Hecate Energy	300
Shell Chemical Appalachia Cogen	Shell Chemical Appalachia	251
Towanda Township Gas Plant	Gateway Green Energy Holdings	165
Total		11311

West Virginia

ESC Brooke County Power I	Energy Solutions Consotium	830
Moundsville Power Project	Quantum Utility Generation LLC	673
Harrison County Project	Energy Solutions Consotium	579
Total		3082

Regional total 21088

Source: S&P Global Market Intelligence

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