



New York's Proposed Statewide Natural Gas Ban: Defying All Logic

New York Gov. Kathy Hochul announced her support for the state's newest attack on natural gas in January, in what would be the first statewide ban on the use of gas in all new buildings, commencing in 2027. Of course, it is the latest effort to prevent New Yorkers from benefiting from shale gas development, dating back to Gov. Andrew Cuomo's 2014 ban on high-volume hydraulic fracturing and ongoing strident opposition to new natural gas pipelines.

This string of decisions impacting supplies have had negative consequences for many New Yorkers, including moratoriums on new natural gas connections by some utilities, with Consolidated Edison's moratorium for parts of Westchester County still in effect.

JUST

FACTS

While all of these actions have increased prices and reduced choices for consumers, a complete ban on natural gas, as proposed, would make New York's energy landscape exponentially worse.

Here are a few important facts:

Current and Future Sources

On the surface, New York State's generation of electricity from renewable sources is impressive, at about 30 percent of the state's total. Considering, however, that 75 percent of that amount is produced by hydroelectric power from locations like Niagara Falls, New York's renewable production levels line up with the rest of the country, with wind at 4 percent, solar at 2.5 percent and biomass at 1.5 percent.

New York's energy consumption portfolio further reflects the state's current diversity of sources, but also exposes a looming problem, especially if the 2027 ban legislation becomes law. According to a 2019 U.S. Energy Information Administration consumption portfolio, natural gas supplies almost 34 percent of New York's current energy demand.

New York will face a daunting challenge to find affordable and reliable sources of energy in the future to offset the loss of natural gas if a natural gas supply-construction ban is successful.

Physics and the Limits of Renewables

A recent white paper by the Manhattan Institute acknowledged the gains made in recent years to improve the efficiency of wind and solar energy, but also noted neither source will experience breakthrough technology to reach significantly higher energy outputs.

The white paper first estimates that spending \$1 million on utility-scale wind turbines or solar panels will each, over 30 years of operation, produce about 50 million kilowatthours (kWh) of electricity. By comparison, that same \$1 million spent on a shale rig produces enough natural gas over 30 years to generate over 300 million kWh.

The paper also notes the limits of solar power technology with the physics boundary for silicon photovoltaic (PV) cells, called the Shockley-Queisser Limit. The limit has a maximum conversion of 34% of photons into electrons, and the current best commercial PV technology today already exceeds 26%. A similar physics boundary, the Betz Limit, measures the efficiency of wind turbines, and has a maximum capture of 60% of kinetic energy in moving air. Commercial turbines today currently exceed 40%, two-thirds of the Betz Limit.

The paper concludes that the "era of 10-fold gain" in renewable sources is over.

The average residential electricity rate in New York in January 2022 was 17.18 cents/kWh, which is 45% higher than the national average. Limiting energy diversity in New York through schemes like the 2027 statewide ban will lead to even higher prices and energy scarcity, impacting low-income individuals and families the hardest.

Economic Expansion, Environmental Responsibility Can Go Hand-in-Hand



New York's continuing efforts to prevent the additional use of natural gas, which currently supplies more than one-third of the state's energy, ignores the potential for energy scarcity issues if renewables and other sources cannot meet demand, as well as the future economic impacts of significant higher costs to be borne by businesses and consumers.

Source: Energy Information Administration

The Facts

The negative results from legislating against natural gas usage and limiting energy diversity have been demonstrated with 2020's rolling blackouts in California when neighboring states were unable to export electricity and with Germany, where energy policies have its residents paying the highest electricity bills in Europe. With legislation to eliminate natural gas infrastructure in all buildings in 2027, New York will continue down the path of reduced energy security and higher costs for its residents.

Fortunately, legislators in Pennsylvania have taken the opposite approach with bills that would prohibit local governments from writing building codes that restrict energy choices and placing those decisions instead in the hands of developers and consumers. The State Senate passed legislation in the fall of 2021, with the state House following suit in late January. Once approved by the opposite chamber of the legislature, one of these bills is likely to land soon on the governor's desk.



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