

Cold January Highlights NY's Need for Dispatchable Clean Generation

January 2022 was a period of sustained cold temperatures throughout New York and the Eastern United States.

During the month, electricity was supplied predominantly by hydroelectric, nuclear and natural gas/dual fuel resources. This shift is notable since the 2022 winter was the first in decades without the Indian Point nuclear facility in operation as the two generating units were retired in Spring of 2020 and 2021, respectively.

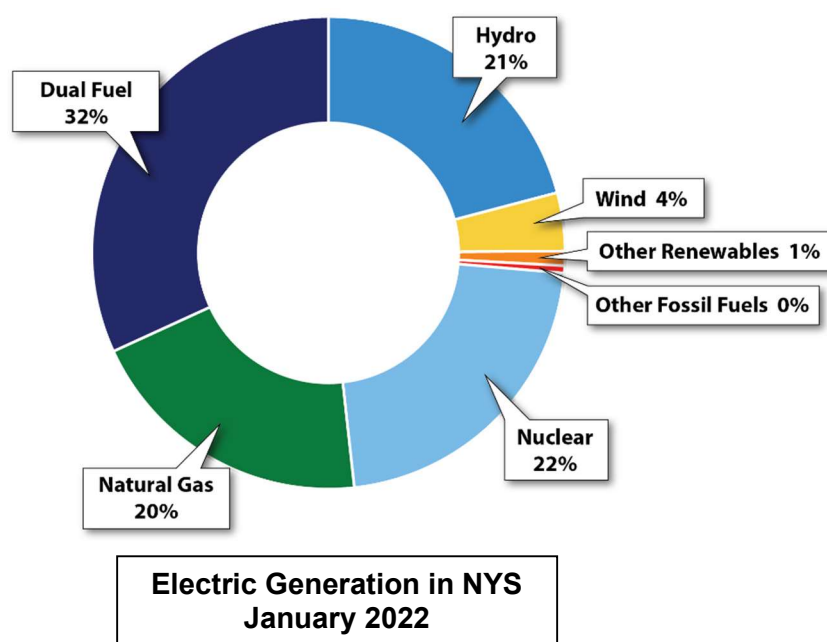
Wind and other renewable resources only accounted for approximately 5% of total generation during this time of high energy demand and cold weather. More concerning, low and inadequate wind generation was experienced on 25% of the days for the month due to a lack of wind, and low solar generation on 22% of the days due to shorter daylight hours and heavy cloud cover.

Today's renewable resources are emissions-free, but their output is weather-dependent. This intermittency and the need for electric supply to meet customer energy demand every hour of the day may result in reliability issues if not proactively addressed. The need for dispatchable generation will become increasingly important as peak energy use in New York shifts from summer to winter, which is expected to occur in the mid- 2030s with adoption of electric-based heating systems for homes and buildings.

The Utility Consultation Group supports the accelerated development of renewable generation. To ensure the state both achieves its renewable electricity goals while maintaining electric reliability, the state will need to use a wide variety of tools including: considering changes to the rules that govern the state's competitive wholesale energy markets, addition of new electric infrastructure to serve customers, and mitigating the impacts of increasing winter electric peak demand from heating electrification by leveraging existing pipe networks to deliver low-carbon fuels and continue meeting a portion of NY building heating load as a practical, reliable and cost-effective alternative to full electrification. In addition, the state will need to amplify its research and

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Climate Action Council Draft Scoping Plan



development efforts to increase access to net-zero dispatchable electric supply; this can be accomplished using a number of methods, including: increasing the amount of energy storage on the electric system; increasing the amount of dispatchable resources available such as traditional hydro generation; increasing access to dispatchable supply by expanding the electric transmission system; and using existing gas transmission and distribution systems to transport zero- or low-carbon fuels to conventional generation; or some combination of all these methods.

The New York Independent System Operator (NYISO), which oversees the state's electric grid, recently recognized in its Comprehensive Reliability Plan that “[a]s we move to a zero-emissions grid, it’s critical we understand how the growth of intermittent resources and extreme weather could impact the ability to maintain reliability of the New York bulk electric system.”

The Climate Leadership and Community Protection Act draft Scoping Plan also states: “Current studies identify that even after full deployment of available clean energy technologies, there is a remaining need for 15 to 25 gigawatt of electricity generation (i.e. 15 to 25 large power plants) in 2040 to meet demand and maintain reliability.” The best path to decarbonization includes a diverse and complimentary mix of energy resources that achieves emissions reductions while maintaining a flexible and reliable electric grid.