Climate goals at odds with NY's power needs

Report: State's energy grid must still rely on fossil fuel plants, at least for now, to avoid the risk of blackouts

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The state's vow to clean the air in environmental justice communities by shuttering fossil fuel-generated power plants linked to asthma and other negative health outcomes is running into an unlikely foe – clean energy.

Surging amounts of power needed to electrify everything from cars to heating systems is pushing New York state's energy grid to its outer limits, particularly in New York City, according to a new report by the New York Independent System Operator. The city is geographically isolated from cleaner sources of energy – solar, wind, hydro and nuclear – that exist in upstate New York and the transmission network to send that power down to the city doesn't exist yet.

On top of that, power plants that use natural gas are retiring at a faster pace than renewables like solar and wind power are coming onto the grid, the NYISO report says.

That means natural gas peaker plants in the city, which take their name from the periods they run the most, will need to stay open past their expiration dates so the downstate region doesn't run the risk of rolling brownouts.

"It seems likely that some component of those peakers that are targeted for retirement would need to stay on," NYISO president Rich Dewey said during a press briefing Wednesday following the nonprofit's release of its annual "Power Trends" report.

Climate goals versus NY's power needs

Dewey said Wednesday the state will need to strike a balance between pursuing some of the nation's most ambitious climate goals while ensuring the grid remains reliable to prevent against blackouts. "Our priority is to make sure that never happens," Dewey said. "And then it's really about looking at the balance of the retirements and the balance of the introduction of the new supply. So we've just got to be really careful not to prematurely retire resources if we don't have that replacement supply at the ready."

In 2019, the state Department of Environmental Conservation adopted a Peaker Rule, requiring plant owners to add emission-reducing pollution controls by this year and 2025.

As result, 37 plants, many of which have operated for 50 years or more, have plans to retire, according to the DEC.

Their elimination means the loss of one gigawatt of fossil fuel generation from the grid, enough power for 750,000 homes.

The seven New York Power Authority peakers in the city and on Long Island were not impacted by the new rule since they were built in 2001 with cleaner emissions controls.

Gov. Kathy Hochul said the NYPA peakers need to close by 2030 but can remain open if needed to keep the electrical system reliable.

Peaker plants staying open for years is 'unconscionable'

The news that peaker plants will need to stick around indefinitely, while not a surprise, was unsettling to advocates who've pushed lawmakers to close plants in city neighborhoods dubbed "Asthma Alley" for the toll they've taken on the respiratory systems of people in disadvantaged communities.

“As NYC and the entire region struggles with dangerous air quality from the Canada fires, South Bronx residents are at an even greater risk given the existing air pollution burden they’ve been forced to endure for decades and that have resulted in a range of illnesses, from asthma to cognitive impairment,” said community advocate Arif Ullah, who heads South Bronx Unite.

Ullah’s group and others have been pushing the state to shut down peaker plants run by the NYPA in the South Bronx, which are slated to close by 2030 but could remain open if they’re needed.

“They must be retired immediately,” Ullah said. “2030 is not soon enough. To leave open the possibility of these destructive facilities operating even longer is unconscionable.”

The plants were built in 2001 amid concerns the downstate region would not have enough reliable sources of energy to prevent against a blackout and were supposed to run when demand for energy was high.

But in recent years, they’ve been operating with greater frequency. Energy output at NYPA’s Hell Gate and Harlem River Yards plants tripled between 2018 and 2022.

Last year, the Harlem River Yards plant ran for 211 days, according to a report by two dozen community and environmental groups sent to the state in March.

That’s led to increases in the pollutants carbon dioxide and nitrogen oxide, according to U.S. Environmental Protection Agency data.

The NYISO report noted the trend, linking the emissions uptick to the 2021 closure of the Indian Point nuclear power plant in Westchester County “and corresponding increases in production from fossil resources needed to meet demand and maintain reliability.”

Is Canadian hydropower on the way?

New York wants to create an emission-free electric system by 2040. But to achieve that, the state will need to triple the clean energy supply on the grid, according to the NYISO. The state’s counting on a $6 billion project known as the Champlain Hudson Power Express (CHPE) to bring hydropower down from Canada to New York City along the Hudson River.

And there are plans to bring offshore wind energy generated off the coast of Long Island into New York City and points north.

If the CHPE project doesn’t begin operating in 2026 as promised, the downstate region could face reliability issues, the NYISO says.

Newer renewable energy technology isn’t ready yet in NY

State-of-the art technology like battery storage to store wind and solar power when the wind isn’t blowing and the sun isn’t shining are not readily available yet.

“It seems unlikely that we’ll have enough market-based solutions to eliminate the need for at least some element or some of portion of those peakers to be extended for a period of time,” Dewey said.

Energy demand is expected to surge in New York in the coming years. By 2034 peak demand season will shift from summer to winter as more electricity is needed to power cars and heat buildings, the report notes.

To meet state goals, 90% of homes will need to rely on electricity for heat by 2050. Currently, just 10% do.

The number of electric cars on the road in New York is expected to reach 7.7 million by 2040.

