

Can aging grid handle new green power?

Tom Johnson



Credit: (AP Photo/Robert F. Bukaty, File)

File photo: Utility lines

Modernizing the electric grid is going to be a long and expensive process, but New Jersey needs to begin upgrades if it is to achieve its clean-energy goals, energy experts told lawmakers Thursday.

“We’re talking about tens or hundreds of millions of dollars, if not more,” said Abe Silverman, of Columbia University’s Center on Global Energy Policy and former general counsel of the New Jersey Board of Public Utilities. “It is not a cheap process.”

One new transmission interconnection designed to hook up power from yet-to-be built offshore wind farms is currently priced at more than \$1 billion by the state. It is the first of several such lines that are expected to be needed for future wind projects.

Officials tasked with determining how to allocate the costs of transitioning to a clean-energy economy face the same dilemma regarding grid upgrades. The so-far unanswered question is how much customers should be asked to foot the expense of developing costly new — but cleaner — ways of generating electricity and what incentives ought to be provided by the state and federal government.

Sen. Bob Smith (D-Middlesex), the chairman of the Senate Environment and Energy Committee, called Thursday’s hearing over concerns about the state’s efforts to ensure that the grid is ready to seamlessly plug in the massive amounts of electricity expected to come from new solar and offshore wind energy into an aging power system.

His concerns are well grounded. “We just don’t have a grid ready to meet the demand,” Silverman acknowledged, citing the state’s efforts to electrify the transportation and building sectors. By 2050, there could be three times more electricity flowing through the grid than today, he said.

‘We’re in trouble’

“Walk outside this building, we’re in trouble,” Smith said, referring to the haze blanketing New Jersey and the rest of the region from uncontrolled wildfires in Canada, an event many blame on a worsening climate crisis.

“We can’t wait much longer. We’ve got to get this stuff moving,” said Smith, as staff from the BPU outlined a nine-point program initiated by the agency to speed up interconnections that allows new energy generation to hook up with the existing power grid.

‘We just don’t have a grid ready to meet the demand.’ — Abe Silverman, Center on Global Energy Policy, Columbia University

It is one of the biggest challenges facing policymakers: how to integrate new sources of power into a system where much of it is more than a century old. In South Jersey, homeowners in much of the region cannot install solar systems because the local utility cannot handle the new power.

“I agree with you,” said Chance Lykins, BPU’s director of governmental affairs. “We are running out of time.” The plan to fix the interconnection process is aimed at strategically modernizing the system to achieve the state’s clean-energy goals, said Lykins.

The BPU plan relies on both short-term and long-term fixes, involving streamlining the application process, encouraging and testing new technologies and figuring out a new way to allocate the cost of modernizing the grid.

Cost allocation, several panelists agreed, is probably the most challenging problem. In the past, when new power-generating facilities sought to connect into the grid, they ended up paying the cost. That system, however, has real drawbacks, Silverman said. He suggested socializing the cost, including having utility customers pay for at least a portion.

No overnight solutions

“These are huge problems that have to be overcome,” Lykins said. “This is something we can’t do overnight.”

Smith questioned whether New Jersey, currently enjoying an unusually large surplus in its state budget, should use some of that to speed up grid modernization.

Beyond just interconnections, there are other issues delaying clean-energy projects from moving forward, according to Azim Haque, a vice president of PJM Interconnection, which operates the nation’s largest power grid.

In New Jersey, there are 47 clean-energy projects involving a combined generation capacity of 4,345 megawatts that have cleared the interconnection process, but have yet to be commercially deployed, Haque said. Supply chain issues, financing and siting problems account for some of those delays.

Editor’s note: This story has been updated to correct the amount of power expected to come from the clean energy projects set to be connected to the grid.