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Kilpatrick

5 KEY TAKEAWAYS

Takeaways from the 2024 State Energy Conference of North Carolina

Recently, North Carolina State University and the N.C. Clean Energy Technology Center hosted the annual State Energy Conference of North Carolina. This two-day conference provides the opportunity for leaders in energy policy and decision making in North Carolina and beyond to converge in Raleigh, North Carolina to discuss the future of North Carolina's energy economy.

Kilpatrick Counsel Ben Smith spoke on the "North Carolina's Generation Mix: What Do We Need to Meet the Demands of a Next-Generation Power System" panel about the future North Carolina's electric generation mix. Additionally, Retired Partner Steve Levitas received the North Carolina Sustainable Energy Association's Clean Energy Lifetime Achievement Award during one of the conference's Lunch Keynote Plenary Sessions.

Key Takeaways from the State Energy Conference of North Carolina include:

1

Transmission planning is at the forefront of supply-side electricity generation planning. Historically, transmission planning was reliant on discrete requests to a planning committee to consider a potential transmission grid upgrade. This system did not necessarily meet the holistic planning necessary for a decarbonized, decentralized grid.

In order to meet its increasing electricity demand while also enabling compliance with the statutory compliance reduction requirements, North Carolina has begun to innovate its grid planning including, in particular, building more electricity transmission infrastructure to accommodate new electricity generation assets.

2

North Carolina Offshore Wind is ready to take off. North Carolina has three offshore wind energy areas (or "WEAs"). These WEAs are located in federal water and were leased by the federal Bureau of Ocean Energy Management ("BOEM") in 2017 and 2022, respectively. Statutory requirements (including the Carbon Plan) and the increase in projected new electricity demand via new, large in-state energy users have made clear that North Carolina will need to utilize offshore wind as a means to provide emissions free electricity to North Carolina ratepayers.

There are still hurdles to clear: under North Carolina law, for the regulated utilities to plan for emission-less, in-state electricity generation buildout, those regulated utilities must *own* the generation (excepting some large-scale solar and certain energy efficiency or electricity demand management assets), so the WEAs must be conveyed to the regulated utilities and the state utility commission must approve of the plan and certification of the

assets), so the WEAs must be conveyed to the regulated utilities and the state utility commission must approve of the plan and certification of the grid build to accommodate the WEAs.

3

Statutory requirements are coloring the future of energy. In the 2010s, there was a glut of new solar assets developed by independent power producers and interconnecting to local utilities based upon federal requirements under the Public Utility Regulatory Policies Act of 1978 ("PURPA") and related federal laws as well as solar-friendly North Carolina laws and regulations. In 2017, as the North Carolina General Assembly wrestled with significant solar growth and its effect on the grid, House Bill 589 was passed which pushed independent power producers to a more utility procurement-style system.

Subsequent executive orders and laws—Executive Order #80 and House Bill 951 which was passed in 2021 and led to the above-referenced Carbon Plan, for instance—furthered the clean energy transition in North Carolina through provisions related to energy, transportation, and equity. North Carolina, like many states with regulated monopoly utilities, must continue to reckon with creating the state's energy economy without an open marketplace.

Innovations in distributed clean energy are creating new opportunities for residential and commercial electricity users. Across the country, the concept of "Virtual Power Plants"—the collection of distributed, smaller-scale energy resources that when aggregated and coordinated by grid operators can provide economic and reliability boosts for the grid—are becoming more popular as an alternative to building new, expensive generation assets.

In North Carolina, a Duke Energy Pilot Project known as Power Pair provides the framework for incentivizing residential consumers to pair their residential solar installations with a storage device. Finally, federal incentives have driven the "Solar-for-All" program, which aims to put thousands of residential solar installations on the rooftops of low and moderate income consumers.

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Electric Vehicles and Charging Infrastructure. It's often said that the reason people will not move from an internal combustion engine to an electric vehicle is because of "range anxiety" or the concern related to being able to drive your vehicle long distances without losing power. One way this is being combatted is through vehicle charging infrastructure upgrades, with particular concern about avoiding "charging deserts" where consumers cannot find a vehicle charger.

Also, the charging infrastructure is becoming more dynamic with the concepts of bidirectional charging allowing your electric vehicle to provide more value than ever before either as a storage device for your home or as an asset to the grid.

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