

Ms. Carmen Diaz Acting Secretary
New Jersey Board of Public Utilities
Division of Clean Energy
44 S. Clinton Ave. 1st Fl
POB 350
Trenton, NJ 08625-0350

July 19, 2022

RE: The New Jersey Clean Energy Program
Draft Grid Modernization Report
Docket Nos. QO21010085

Dear Ms. Diaz

Thank you for the opportunity to comment on the draft "Grid Modernization Study: New Jersey Board of Public Utilities", prepared by Guidehouse dated June 13, 2022. Grid modernization is one the most important proceedings to be undertaken by the BPU in achieving its clean energy goals by 2050.

Strategies 1 through 4 in the EMP are the clean energy technologies and programs that will be used to achieve the EMP clean energy goals by 2050. Strategy 6 of the EMP will be the process that will implement strategies 1 through 4. However, it is strategy 5 - Decarbonize and Modernize New Jersey's Energy System – specifically the electric grid that will be the most important strategy to achieving the EMP goals in a cost effective and economically efficient manner.

It is clear, as documented in the 2019 Integrated Energy Plan modeling and evaluation, that electricity usage will more than double from 75 million MWh to 160 million MWh in order to achieve the EMP clean energy goals. A New Jersey customer's electric bill will likewise increase based on this increase in usage. At the same time, that same customer's fossil fuel heating and transportation energy costs including the costs for fuel oil, propane, natural gas, gasoline and diesel, will decrease to essentially zero, more than offsetting any increase in a customer's annual energy costs.

In order to achieve all the EMP strategies in a cost-effective manner will require a significant increase in electric distribution systems. This expansion will result in a cost to the electric distribution companies (EDC) and likewise to the electric customer through their rates. At the same time, the expanded use of electricity will significantly increase the revenues to the electric distribution companies (EDC).

The key to managing this cost will be to ensure that the expenses to expanding the electric distribution system are lower than the increase in revenues to the EDC. In very simple terms, if the revenues from increasing electricity usage to the EDC are higher

than the costs to the EDC for expanding the system, the electric rates can remain the same or in some cases go down.

It is critically important to the success of the EMP's clean energy goals that the electric rate remain low or decrease over time. This is important not just for New Jersey's clean energy goals, but for other states with non-clean energy goals. If New Jersey can manage this increase in carbon neutral electricity usage to power the transportation and building sectors with a decreasing rate, it will document a path forward to clean energy for other States and make New Jersey a leader in this area. This could also be an economic benefit to New Jersey and other states transitioning to clean energy. New Jersey could attract large energy users because of its lower and clean energy rates.

The way to successful implementation of the strategies of Section 6 of the EMP, is through proper and thorough planning. The BPU must require the annual submission by the EDCs of an integrated distribution plan (IDP) that details the work to be completed to expand the distribution system for the following year and for a following 10-year periods.

The IDP should not just focus on resource acquisition by the EDC for expansion of feeders, transformers, switching gears and lines, which are important to properly manage the expansion of the distribution systems, but also on processes that enable grid-interactive buildings and flex load procedures available to all electric customers. The grid-interactive building and flex load programs and processes can help to ensure safe and reliable use of the expanding electric distribution system from the customer level, but more importantly help to control and potentially lower cost and aid in keeping electric revenues above electric infrastructure cost for a cost effective transition to 100% clean energy.

Section 3.2 NJAC 14:8-5 Review and Specifically Section 3.2.3

Given the clean energy goals of the EMP to electrify the transportation sector with EVs and the building sector with cold climate heat pumps, will require an increase in electricity usage at the customer level. Achieving the EMP clean energy goals will more than double the annual electricity usage by 2050. A typical single-family home with two EVs, a cold climate heat pump, a heat pump water heater and electric induction stove will be using twice as much electricity as today's average residential customer. In order for these homes to achieve a Zero Energy Building (ZEB) plus Renewable Energy (+RE) will require over 20 kw of installed solar. The capacity limit at NJAC 14: 8-5.4(a)2 should be increased to, at minimum, 25 kw to address this potential increase in electricity.

The standards set for at NJAC14:8-5.4(c), (e) and (f) were set at ultra-conservative levels. These standards were set more than 20 years ago at a time when the impacts on the distribution system were not as clear as they are today. Now with over 150,000 on-site solar installations in New Jersey and millions across the States in the US these requirements need to be revised based on the past 20 years of experience. If the

above requirements are revised to be more flexible as performance standards this would significantly reduce the denials of Level I applications, without impacting safety or reliability of distribution system.

For the same reasons as noted above, this requirements at NJAC 14:8-5.5 (c), (d), (e), (f) and (l)² should be likewise revised to transition from strict requirements to flexible performance standards. Again, revising these requirements in line with current IEEE standards and other recognized procedures implemented in other states, will result in reducing denials of Level 2 interconnection application without impacting safety or reliability. These revisions will save time and money by both the applicants and EDC as well as reduce the frustration levels with the current process.

3.4 Circuit Capacity -3.2.3 Threshold foreclosed circuit rev. NJAC 14:8.5

The BPU needs to adopt a process that separates the interconnection of smaller level 1 and 2 projects from larger grid supply projects that demand too much circuit capacity on the distribution system. The EDC cannot and should not be allowed to deny a level 1 or 2 small scale residential or small business interconnection on the distribution system and require that customer to “agree to pay the required upgrade” before they can be interconnected.

This is no provision of the statute or in regulations that specifically requires the EDC to implement this procedure and cost.¹ The New Jersey electric distribution system is not an open market distribution system, where investors can come in to make reasonable upgrades as needed or required. The EDC is a public utility operating under the sole franchise authority per BPU statutes and regulations as set for at NJSA 48:2-13 and specifically under NJSA 48:3-4. In addition, the Centex Homes LLC case clearly documented that BPU does not have this authority and as such neither do the EDCs.²

This would be akin to the EDC's denying a residential or small business customer who upgraded their electric system to add more capacity or a larger electric devise or system. It is not be consistent with the EDC's franchise responsibilities to deny a customer from installing a larger AC unit. Likewise, an existing residential or small business applying for a level 1 or 2 interconnection should not be denied access.

Solar and other inventor-based systems, while electric generation, are actually seen by the grid as reduced or increased lead, similar to any added increased electric devise or system. The intermittency of solar is akin to the larger electric AC system turning on or off and cycling throughout the day and night across the entire line or feeder. They should be treated the same by socializing these costs.

The customer adding the larger load like a larger AC unit is not charged the cost of any required system upgrade for adding more load to an existing line. Likewise, an existing

¹ NJSA 48:3-111 only states that the EDC may charge the owner of the facility for the cost of connecting. It does not require the EDC to charge for interconnection.

² See 411 NJ Super. 244 (App Div 1999)

residential in small business customer that is seeking a small-scale level 1 or 2 interconnection should not be denied access to the distribution systems - unless and until the customer "agrees to pay for the required upgrades". These cost, just like the customers adding load, should be socialized across the rate-base.

The best way to ensure that the EDC system is managed appropriately to address the above interconnection issues and costs is by the BPU requiring the submission of an annual IDP with an annual review process, similar to the process managed at the RTO/ISO level.

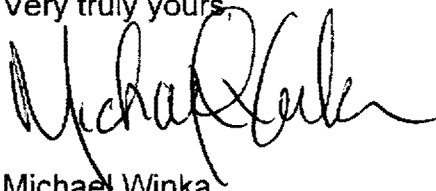
The above suggested revision to the EDC interconnection process for small-scale residential and small business systems, should not include large scale grid supply system interconnecting at the distribution system. Grid supply projects are exporting power to the transmission system and receiving an economic benefit from PJM system. As such these larger grid supply systems should cover the required cost of any upgrade.

The Guidehouse recommendation of defining the term closed circuits, is reasonable and fair and this term should be consistent across the EDC. In addition, this process of closed circuit or likely to close circuit should be tracked in the IDP. The BPU should set a trigger in the IDP process that requires an upgrade once a trigger in the interconnection screening process is reached.

Further, the recommendation that the hosting capacity mapping be standardized across all the EDC is reasonable and fair and should be implemented by BPU. This should include mapping to the specific line and load similar to the mapping performed by ACE and not the general host capacity mapping performed by JCP&L and PSE&G.

Thank you for the opportunity to comment and more than happy to discuss any comment in more detail if needed.

Very truly yours,

A handwritten signature in black ink, appearing to read "Michael Winka". The signature is fluid and cursive, with a large initial "M" and "W".

Michael Winka