

Re: Docket Number QO24020126, in the Matter of the 2024 New Jersey Energy Master Plan Request for Information (RFI)

To Whom It May Concern,

Thank you for the opportunity to comment on the 2024 update to New Jersey's Energy Master Plan (EMP). I am the Director of Policy and Partnerships at Virtual Peaker, the provider of a distributed energy resource management system, and these comments represent the views of the company.

We would like to provide support for New Jersey Board of Public Utilities (NJBPU) and their stakeholder process that occurred in advance of the 2024 EMP update. By holding the hearings and releasing the RFI, you've created an equitable opportunity for stakeholders to share thoughts and opinions. These comments are organized to reflect the questions asked in the RFI, but will proceed in the order of the Strategies, rather than the order of the Strategies related to the hearings.

Strategy 1: Reduce Energy Consumption and Emissions from the Transportation Sector

While transportation electrification has progressed rapidly, there is still a profound benefit for customers to receive incentives for investing in electric vehicles (EVs) and the infrastructure related to their operation. Incentives will continue to be valuable as long as the upfront costs of these vehicles (including charging equipment) are high, which discourages universal adoption. Issues of range anxiety are decreasing rapidly with the expansion of public charging infrastructure and the improvement of vehicle range. The main point is, don't hinder the momentum of EVs by removing these incentives prematurely.

If the NJBPU believes that there are sufficient upfront incentives for vehicle and equipment purchases and installation, ensuring that those funds reach customers at the point of sale or soon after is another option for improvement. There are many ways that these incentives can enhance the equity of electric vehicles, most obviously by offering higher incentives for customers or communities with certain characteristics who would especially benefit from additional financial support to adopt EVs.

Finally, enabling financial benefits that span the ownership of the vehicle is another improvement, so we recommend that NJBPU directs utilities to have thoughtful and robust EV rates or programs to encourage further adoption. EV time-of-use (TOU) rates encourage customers to charge at times that the grid is not burdened with high system demand, and is generally a solid foundation to influence EV charging. Ensuring those rates have a large enough motivation to charge off peak is essential for the success of the rate: the differential must be significant enough between on and off peak to offer savings opportunities. EV managed charging programs are an even better tool for customer compensation since they give the utility control over when customers charge their

EVs, and this can be more dynamic and system-specific than a generic time period to avoid charging. EV telematics data and EV charger data is sufficiently sound to determine customer compensation using this device data instead of installing a second meter to track usage. EV managed charging programs have made great progress since the 2019 EMP, so we encourage NJBPU to account for the developments in this space and create new expectations in the 2024 update with these capabilities in mind.

Strategy 2: Accelerate Deployment of Renewable Energy and Distributed Energy Resources

As they relate to distributed energy resources (DERs), Virtual Peaker wants to encourage NJBPU to direct utilities in New Jersey to promote customers to install distributed energy resources that are controllable technologies, even if these utilities are not yet ready to implement scaled up demand management and virtual power plants. By installing controllable devices New Jersey will have tools to increase grid reliability.

Virtual power plants (VPP), non-wires solutions, and demand management are low-cost and equitable resources, enabling customers and community members the opportunity to participate in the clean energy transition. With careful planning, these resources, which for residential customers include smart thermostats, water heaters, at home EV chargers, and customer-sited batteries, have the capability to control consumption so that they are leveraging surplus renewable energy and reducing load at times of costly and high greenhouse gas (GHG) emission electricity supply. Batteries paired with rooftop solar are especially valuable for the clean energy transition.

Finally, strategically leveraging distributed energy resources can put downward pressure on rising customer rates at a system level, and those participating receive compensation for their contributions. Through a large population of controllable customer-sited technologies, New Jersey will have tools to increase grid reliability. These demand management resources should be considered first, before building new power plants or installing expensive grid upgrades that may instead be deferred.

Strategy 3: Maximize Energy Efficiency and Conservation and Reduce Peak Demand

For the 2024 EMP update, demand management and VPPs should be a significant component of Strategy 3. In the 2019 EMP, VPPs are mentioned once, with quotation marks. This is no longer a technology that needs to live inside quotation marks. It is not hypothetical or experimental. It is a real asset, and it is a critical component of a balanced, cost-effective, and clean grid in the immediate future. While utilities get comfortable with the capabilities of these tools in their operations and planning groups, NJBPU can support the work through education and awareness, ensuring that these offerings are accessible to all customers.

New Jersey has the opportunity to be a leader in accounting for equity and environmental justice at the front-end of their Energy Master Plans, rather than trying to adapt programs as an afterthought. By creating customer incentives and compensation techniques that consider the needs of the grid in parallel with the historic disadvantages that specific communities have faced, New Jersey can leapfrog the challenges that come when those considerations are confronted in different venues. Considering the upfront capital to install these devices,

utilities can help create parity so that customers without available capital can still invest and benefit from these offerings through things like on-bill financing, reputable leasing, point of purchase rebates, and bundling with education about available and stackable federal rebates.

Strategy 4: Reduce Energy Consumption and Emissions from the Building Sector

In addition to the electrification of buildings and the installation of efficient technologies, these technologies should be “smart” and controllable to encourage their participation in peak shaving events, which contribute significantly to decarbonization goals. Electric air source heat pumps are fantastic technology for demand management and VPPs because they offer year-round controllable electric load for both heating and cooling during times of grid congestion. Many regions are seeing the increase of winter peaks, so having an asset that can contribute to demand management during the heating season is very valuable.

Strategy 5: Decarbonize and Modernize New Jersey’s Energy System

Topics related to customer compensation have been addressed in comments related to previous strategies, but a unique topic related to this strategy is utility compensation. Allowing utilities to treat these VPPs and distributed energy resource management systems (DERMS) as the capital, operational assets that they are, NJBPU can help these resources flourish. Until utilities are given permission to benefit from these investments the way that they benefit from the investment in new traditional equipment or plant upgrades, distributed energy resources will not be fully embraced. Performance based regulation, performance incentive mechanisms, and a "totex" model are a few of the many options for New Jersey to explore that can bring more equitable decision-making of resource selection, which includes virtual power plants.

In terms of grid upgrades and the allocations of those costs, a “value of distributed energy resources” analysis and calculation, like what Minnesota and New York have accomplished, with specificity of locational value could help identify the value that these resources have and reduce the impact of these upgrades. For example, if an asset is more valuable as a grid resource in certain areas of interconnection, then the cost of paying for that upgrade will be paid back quicker through recurring operation and revenues. This can encourage optimal location and can address the issue of upgrade costs. However, the other consideration is the overall impact that these DERs are having on system costs. While upgrades can be attributed to a specific step change that occurred related to the installation of that asset, the value that the asset offers to the grid will be a benefit to the entire service territory because it offers a controllable system that is an alternative to generation from carbon-intensive resources when operated appropriately.

Strategy 6: Support Community Energy Planning and Action with an Emphasis on Encouraging and Supporting Participation by Low- and Moderate-Income and Environmental Justice Communities

Virtual power plants and demand management are low-cost resources that enable all customers the opportunity to participate in the clean energy transition. As mentioned in the comments for Strategy 3, through this 2024 EMP update, New Jersey has an opportunity to be a leader in equity and environmental justice. VPPs and demand management are an excellent tool, but they need to be designed with equity at the forefront. Unlike fossil fuel

power plants that contribute to poor environmental conditions with negative impacts on community health, VPPs and demand management contribute to grid stability without GHG emissions.

Obtaining community input, accounting for unique housing conditions, addressing inequities are the steps that NJBPU can take to ensure that these customers can participate and benefit from the clean energy initiatives in New Jersey.

Strategy 7: Expand the Clean Energy Innovation Economy

While shutting down a fossil fuel power plant leads to the loss of a number of steady, good-paying jobs, the negative impacts of the operation of those facilities does not warrant the preservation of those specific employment opportunities. The economy is changing, for the benefit of the environment and our health. Jobs will continue to shift and change with that evolution and we have to be ok with that, as long as those losing their jobs are supported with workforce transition opportunities.

Similar to the benefits of having a strong solar industry, having a supported DER industry leads to jobs for the installation and maintenance of customer-sited batteries, EV chargers, water heaters, and air source and geothermal heat pumps. Further, promoting devices designed and manufactured in the US supports the nation's clean energy innovation economy, if not New Jersey's. Beyond that, systems to recycle devices that are being retired can contribute to additional jobs and sustainability efforts.

Conclusion

In summary, Virtual Peaker is supportive of the efforts that NJBPU is seeking to achieve through the 2024 update of the Energy Master Plan with the following feedback provided:

- Strategy 1: Continue to provide incentives that reduce the barrier to investing in EVs and their infrastructure and direct utilities to offer EV TOU rates or EV managed charging programs to increase the benefit of their investments.
- Strategy 2: Direct utilities to encourage customers to install controllable DERs that can participate in demand management programs and VPPs.
- Strategy 3: Make VPPs and demand management a prominent component of this strategy based on the technological developments that have occurred since 2019.
- Strategy 4: New construction should include all-electric, efficient and controllable technologies that can participate in VPPs and demand management.
- Strategy 5: Reform utility compensation for DER initiatives that benefit customers and allocate grid upgrade costs thoughtfully with tools like the value of DERs methodologies.
- Strategy 6: Ensure that VPPs and demand management are accessible to populations that have historically been subjected to negative outcomes from the energy system and beyond.
- Strategy 7: Jobs are shifting and DERs offer employment related to installation and maintenance.

We look forward to seeing the results of this stakeholder input reflected in New Jersey's next EMP.

Thank you for the opportunity to comment.

Sincerely,

/s/ Kirsten Millar

Kirsten Millar

Director of Policy and Partnerships

Virtual Peaker