June 12, 2024

Submitted electronically

Sherri L. Golden
Secretary of the Board
44 South Clinton Ave., 1st Floor
PO Box 350
Trenton, NJ 08625-0350

Re: Request for Information: In the Matter of the 2024 New Jersey Energy Master Plan, Docket No. QO24020126

Dear Secretary Golden:

Vote Solar respectfully submits the following comments in response to the Request for Information issued May 14, 2024.

Respectfully submitted,

/s/ Kartik Amarnath
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Introduction

Vote Solar is grateful to the New Jersey Board of Public Utilities ("Board" or "BPU") and Board staff for the opportunity to provide comments regarding the 2024 New Jersey Energy Master Plan ("EMP"). The 2024 update to the EMP comes at a crucial moment in the state's clean energy trajectory. Federal support from programs such as Solar for All, as well as significant momentum with state-level energy initiatives, have created conditions for the EMP to be updated with more aspirational goals and a path to meet them. This will be imperative for New Jersey to truly meet the urgency of the climate crisis.

Vote Solar is a national non-profit advocacy organization that supports state governments in establishing policies that advance an equitable clean energy future. We have worked with the BPU on a number of fronts, including energy storage, FERC Order No. 2222 compliance, grid modernization, community solar, and the state's successful Solar for All application. We look forward to continuing to work with the BPU to advance the state's clean energy target of 100% by 2035 through this EMP update and other initiatives.

We will be providing responses to the Board's Request for Information ("RFI") related to the following EMP Strategies:

Strategy 2 - Accelerating Deployment of Renewable Energy and Distributed Energy Resources
Strategy 5 - Decarbonizing and Modernizing New Jersey's Energy System
Strategy 6 - Supporting Community Energy Planning and Action in Underserved Communities
Strategy 7 - Expanding the Clean Energy Innovation Economy

RFI Responses

Strategy 2 of the 2019 EMP:
1. What mechanisms are needed to ensure clean energy development incentives are aligned to match generation and load?

In order to align clean energy development incentives to match generation and load, integrated distribution system planning and responsible incorporation of ancillary technologies at multiple time scales will be imperative. These efforts will help to refine how incentives are distributed. To this end, the BPU's efforts around grid modernization, particularly the call for all EDCs to develop integrated distributed energy resource plans and hosting capacity maps is a positive step. It is essential that these efforts remain transparent, so that the clean energy market, and state incentive programs that enable this market, can iteratively orient themselves according to the needs of the grid. Furthermore, the BPU's efforts around charting a path for energy storage will also help align DER deployment with the state's generation and load needs. Efforts to meet FERC Order 2222 compliance will also ensure that new grid technologies and programs such as DER aggregation can help address peak load and other strains to the grid.

Amidst all of the positive developments the state is undertaking, it is important that New Jersey accounts for the ways that DERs, in the process of matching generation and load, provide additional social and environmental benefits. For example, when DERs help reduce peak load, this in turn provides the benefit of having to rely less on peaker plants that are both high in cost as well as high in emissions. These plants are often sited in disadvantaged communities that are particularly vulnerable to the health impacts of fossil fuel generation. Incentives should therefore be directed towards projects and programs that not only meet generation and load needs clarified by resource plans and hosting capacity maps, but also are

in service to environmental and energy justice needs such as expanding energy affordability and reducing negative health impacts by offlining generation from the most expensive and polluting facilities.

Historically, load and generation needs are intimately tied to equity and justice. When the grid is under most stress, such as during peak periods and extreme weather events, it is disadvantaged communities that disproportionately bear the brunt of harms produced by shut-offs, intermittencies, and polluting peaker plants that are utilized to keep the grid operational. Therefore, using an equity first framework to how incentives are distributed will ensure that not only load and generation needs are met, but done so in ways that ensure the greatest lasting impact by prioritizing those who stand to benefit the most.

To establish an equity first approach to clean energy incentives, where we value the goals we want to see that are intimately tied to - but go beyond - load and generation needs. We recommend the state allocate incentives proportionally to a project's social equity impacts. Projects must be valued based on how much impact they have for the most vulnerable, whose health and well-being is intimately tied to the state's generation and load needs. One strategy to do this would be to utilize a scoring system for program and project applications that scores projects based on the equity-based impacts of a given proposal. For example, applications could be scored proportionally to the degree to which the proposal can demonstrate emissions reductions from target polluting facilities in or near disadvantaged communities through peak load shedding and other means, and/or provide power to critical facilities sited in - or in service to - disadvantaged communities. Under such a scoring scheme, projects that potentially enable emitting facilities, such as certain kinds of storage projects, would be ineligible for incentives. Additionally, the scoring mechanism should account for ancillary benefits such as community ownership, workforce development with target populations, and/or reduced energy burden for low-income households. Since New Jersey's numerous incentive programs are uniquely designed to address different areas of the clean energy sector, we recommend this scoring mechanism be used in alignment with the goals of each incentive program. In some cases, this could mean the scoring mechanism determines the amount of incentive granted to a proposal, or in other cases proposals must go beyond a certain scoring threshold to be eligible to apply or participate in the incentive program.

We recommend the valuation and scoring mechanisms that would help enable an equity-first approach to meeting generation and load needs be done in consultation with clean energy, consumer advocate, and environmental justice stakeholders through the formation of a standing working group. This working group would design the scoring and valuation mechanisms and oversee its implementation and rollout while providing iterative design changes as needed.

2. How can we accelerate the pace at which renewable generation projects are built without making it cost-prohibitive for ratepayers and/or developers?

It is imperative that the transition to a modernized energy system that accommodates renewables equitably distributes costs and benefits of such a transition. Communities and households historically left out of the traditional energy economy that also stand to benefit the most from a modern and flexible grid must be prioritized as active participants and beneficiaries of the new energy economy.

The allocation of costs onto ratepayers is a valid concern that can be meaningfully addressed through an accurate and transparent valuation of DERs and their system-wide cost saving potential. Numerous robust studies have shown how DERs provide meaningful savings to all EDC customers, and these savings could only be further entrenched through equity-focused incentive structures.

In ISO New England ("ISO NE") from 2014 to 2019, DERs contributed to $1.06 billion in savings for all customers.[1] Of these savings, $743 million were due to wholesale price suppression while $317 million due to reduced demand. In a New Jersey context, such savings would only go further through FERC Order 2222 compliance, where there could be more coordination among distributed resources through aggregation, providing for enhanced and equity-focused grid services. Aggregated DERs could leverage private capital for grid upgrades, rather than solely ratebasing these costs. Furthermore, aggregated DERs can reduce demand for energy procurements from expensive and polluting peaker plants through peak shaving. Renewables also provide cost savings through ancillary environmental and economic benefits. For example, they provide added fuel diversity to the grid, which can lead to reduced emissions from fossil fuel infrastructure and, by extension, vital health-related savings and reduced excess deaths from environmental pollutants. These savings are often not captured in analyses of the costs of renewables, which prevents these important technologies from being valued for the full benefits they provide.

To ensure the full value of renewables is captured, we recommend the state consider the following transformative interventions. First, New Jersey should consider performance based ratemaking: utilities should profit from smart decision making that aligns with today's societal goals, rather than continue operating under archaic business models. Second, utilities should also be required to engage in proactive long-term planning, rather than reactively addressing bottle-necks as they arise. While the requirement that EDCs develop integrated distributed energy resource plans is a positive development, it will be important to ensure these plans are made transparent, plans are developed in consultation with environmental justice and consumer advocacy stakeholders, and that these plans are integrated into other proceedings related to ratepayer and capital costs and how they are allocated such as rate cases. Finally, New Jersey should initiate a regulatory sandbox in partnership with stakeholders across environmental, energy, and social equity sectors to identify and fast-track interventions that result in overall grid and community benefits.

New Jersey is also uniquely positioned to accelerate renewable energy development through strategic use of the Solar for All grant. Public funds have the potential to establish new and self-sustaining markets where there hadn't been viable opportunities under business-as-usual conditions. Projects that would normally not be able to get financed under existing market conditions, but could very well animate the market and open the door for expanded access, should be prioritized. Solar for All funds should be used for the development of renewable projects that equitably expand the market by serving disadvantaged communities through innovative business models that ensure low-income participants capture the full breadth of economic and environmental benefits from renewables. This includes community-owned renewable projects, which should be designed and established in collaboration with anchor institutions and community-based organizations serving disadvantaged communities.
(Elowyn, SFA)

Strategy 5 of the 2019 EMP:
1. How can New Jersey more swiftly advance required electric distribution system upgrades with which DER project developers may be faced in order to bring their project online? Should project developers be required to pay for the full upgrade, or can financial mechanisms be put in place to reduce the upfront burden of grid upgrades, reduce or mitigate any impacts on ratepayers, and achieve cost effective expanded hosting capacity for DER?

1See report here: "Solar Savings in New England" Report prepared by Synapse Energy. Link: https://drive.google.com/file/d/1ubw6mAVVyfGFgdygHIIX2Q6lLY23L5Oa/view

We recommend New Jersey consult with key stakeholders to integrate best practices for interconnection costs and requirements stipulated in *Freeing the Grid*, a joint initiative between the Interstate Renewable Energy Council (IREC) and Vote Solar which grades states based on policies that help increase clean energy adoption and grid access.[2] Under the Freeing the Grid grading scheme New Jersey receives a 'D' grade. Best practices include the following:

- Require documentation to demonstrate site control
- Adopt reasonable application fees for small projects and systems up to 5 MW
- Adopt reasonable costs for supplemental review
- Include an upgrade cost cap
- Adopt a mechanism to share upgrade costs among other applicants or utility customers
- Waive insurance requirements for systems up to 25 kW
- Waive external disconnect switch requirements for systems up to at least 10 kW
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New Jersey should also direct Solar for All funds towards providing offsets for grid upgrade costs related to interconnection, particularly for DERs located within disadvantaged communities. New Jersey can draw from Con Edison's DER Make-Ready Program, which offsets grid upgrade costs for DERs located in a disadvantaged community or in a building where at least 25% of households participate in the Energy Affordability Program.[3] The BPU can work with EDCs to establish similar systems of support, and utilize a mix of funding sources in order to provide this support, thereby avoiding placing the burden entirely on customers or developers. This would make interconnection to the grid more accessible for those who are most often left out and stand to benefit the most from clean energy, while bolstering the entire clean energy market. Finally, while it is relevant to clean energy stakeholders to offset costs for developers in order to spur the clean energy market, it is worth noting that the BPU's primary mandate is to regulate utilities on behalf of ratepayers, not developers.

2. How should the state incorporate emerging and existing technologies such as long-duration energy storage, clean hydrogen, and demand response in net-zero emission modeling scenarios that align state emission reductions with the Global Warming Response Act of 2009?

Long duration storage is critical to the clean energy transition. However, since energy storage can be used to meet a variety of needs – including ancillary services like frequency regulation – and their location on the grid can also modulate their impact on the grid, it is possible for storage projects to be deployed in ways that have a minimal or even detrimental impact on overall emissions levels. Incentives for energy storage should be calibrated to the overall grid and environmental benefits that a storage project affords.

Energy efficiency, demand response, and the use of virtual power plants are similarly critical, and have the ability to displace peaker plants and the health-harming pollution that comes with them. We urge the

2 "Interconnection Grade Criteria," *Freeing the Grid*. https://freeingthegrid.org/criteria/

3 See for Con Edison's Distributed Energy Resources Make-Ready Incentive

https://www.coned.com/en/save-money/using-private-generation-energy-sources/distributed-energy-resources-make-ready-incentive

Board to design energy efficiency and energy assistance programs in a way that maximizes benefits for overburdened communities. We also urge the codification of the BPU's Office of Clean Energy Equity, in order to help prioritize equity in all of the BPU's programs, and that the office be fully funded with a dedicated budget of at least $50 million annually.

The state should model a variety of scenarios with long duration storage, energy efficiency, distributed solar, and demand response paired with EVs. These various scenarios should examine the degree to which emissions reductions are achieved across different time periods based on the proportion of each intervention that is deployed. This modeling would then help to chart a path forward for how emerging and existing technologies can be incentivized and under what conditions. This modeling should be done with demographic and geographic disparities in mind, with emissions reductions observed based on where they are most concentrated and prioritizing reductions where they have the most impact on health and well-being due to demographic indicators.

New Jersey should refrain from making investments in hydrogen as a fuel source. Hydrogen can lead to dramatic increases in emissions – especially when it is created using dirty fuels like fracked gas. Even when hydrogen is created using clean energy, due to its inefficiency as a fuel source, its volatility when stored in any form other than fuel cells, and the potential for highly polluting end uses such as co-firing with natural gas, it is an unhelpful addition to the clean energy conversation, and one which puts the health and well-being of communities across the state – especially environmental justice communities – at risk.

Hydrogen should not be considered in modeling for residential heating or electricity generation, especially because it is a far more inefficient and cost-intensive process than harnessing truly renewable energy sources. The only form of hydrogen that reliably avoids emitting pollutants is green hydrogen, but even this category is highly inefficient relative to other standard renewable energy sources. Hydrogen, particularly green hydrogen, should only be considered for hard-to-electrify sectors such as facilities that rely on high-heat industrial processes, and only after consideration has been properly given to more efficient renewable energy. We recommend that hydrogen be deprioritized, and for green hydrogen to only be considered for highly niche applications. Other categories (ex. Blue, gray, and brown) should not be included in any climate and clean energy strategies or projections of emissions reductions.

Similarly, it is critical that any energy produced by polluting facilities such as incinerators, along with RNG – the misleadingly named "Renewable" Natural Gas – have no role in our energy future. Anything that releases co-pollutants into our communities and harms public health is unacceptable for those who care about an equitable clean energy transition.

Strategy 6 of the 2019 EMP:
1. How can current workforce development programs be further optimized or new programs designed to engage and increase participation from residents in LMI communities? How can the State ensure LMI communities have access to and can afford clean energy and energy efficiency measures, and other "bridge" programs (for example: home remediation or other financing)?

Expanding pathways to jobs and training within the clean energy workforce is a critical component of a people-first energy transition. The NJ Department of Labor and Workforce Development should establish a robust network of workforce development programs across the state, in close consultation with the BPU's Office of Clean Energy Equity and community and environmental justice leaders. The Department should issue grants to community-based, diversity-focused nonprofit organizations, community colleges,

pre-apprenticeship and apprenticeship programs, and vocational-technical schools to develop solar energy or clean energy paid workforce training programs. These grants should also support a network of regional Clean Energy Jobs Workforce Hubs, administered by local community-based organizations, to direct recruits from disadvantaged communities towards resources and skills training for jobs in clean energy industries, as well as critical wrap-around services to make clean energy jobs more accessible.

The state should develop and widely circulate a map of clean energy jobs, both existing and projected, across New Jersey. The map should include information on job type, duration, prevailing wage, and training requirements so that regional workforce development efforts can be aligned with existing and future availability of jobs.

It is similarly critical to ensure that all jobs in the clean energy industry are life-sustaining, with strong worker protections both mandated and enforced. In collaboration with impacted communities and immigrant advocates, NJ should develop, implement, and robustly enforce a Clean Energy Worker Bill of Rights and High Road Employer Standard to ensure that all participants in the clean energy workforce are treated with the respect and dignity they deserve. Special attention should be paid to protecting immigrant workers, and enforcement should extend to sub-contracted and part-time positions.

At least 40% of all state deployment of clean energy, resiliency, and efficiency programs should be directed to benefit overburdened communities, with the goal of reducing these households' average energy burden to below three percent of household income. It is important that these funding be distributed through programs and initiatives that accommodate renters, which make up a significant portion of the LMI population.

The BPU should collaborate with other state agencies to ensure clean energy and energy efficiency programming complements other forms of public assistance, thus ensuring households are not disqualified from other forms of public assistance should they elect to participate in a clean energy or energy efficiency program. Additionally, cross-sector collaboration can help ensure retrofits and new construction for affordable housing can also incorporate solar readiness as part of a holistic package of building interventions.

Funding and implementation of energy efficiency should be expanded across the state. The Board should provide outreach and recruitment campaign grants to community-based organizations to increase participation by residents of overburdened communities in clean energy and energy efficiency programs by hiring residents to conduct outreach and public education in those communities. These community-led efforts would be more accessible, as they could be catered to local conditions around language access and when community members are available outside of work hours. Community-led outreach should help clarify how participation in state clean energy and energy efficiency programs may or may not impact LMI eligibility for other forms of public assistance.

The Board should rapidly review and publish the findings from the Whole Home Retrofits pilot, and fully fund a robust statewide permanent program.

2. How can the State further encourage county, municipal, and other jurisdictional participation in making climate investments and advancing the clean energy transition?

Many local governments would be more inclined to participate in the clean energy transition with support around how to navigate rapidly changing regulatory and market conditions. Furthermore, local

governments that serve disadvantaged communities are often under-resourced and unable to embrace clean energy despite standing to benefit the most from its deployment in their jurisdictions. The state should establish a one-stop clean energy hub whose primary function would be to provide technical assistance to local governments in developing clean energy initiatives such as local project development, power purchase agreements, municipal aggregation, and beyond. Furthermore, this hub could assist local governments with applying for new state and federal funding to advance the clean energy transition, such as the Energy Efficiency and Conservation Block Grant (EECBG) Program. Once technical assistance for local governments is centralized with adequate resources and staffing, the BPU can then work with other state agencies around outreach and publicizing these services. For example, the BPU could partner with the NJ Economic Development Authority, where already existing engagement is happening with local governments in disadvantaged areas, such as through the Urban Investment Fund Grant Program, around economic development opportunities.[4]

Additionally, the state should support the use of SolarApp+. This platform streamlines project permitting processes through automation, providing a seamless way for local governments to access clean energy opportunities.

Strategy 7 of the 2019 EMP:
1. As New Jersey continues to invest in building a clean energy workforce, how best can community-based partners such as non-profits, social service organizations, vocational schools, and county colleges play a role in preparing New Jersey residents for clean energy occupations?

We recommend that the BPU convene an advisory working group to engage on these important issues and oversee new workforce development initiatives. It is imperative that the state commit to a just transition, where historic harms resulting from the traditional fossil fuel energy economy are meaningfully addressed and repaired through the burgeoning clean energy economy. As such, leadership must be deferred to environmental justice voices as well as labor around the important questions and decisions that must be grappled with in order to ensure the state's clean energy workforce aligns with principles of equity and justice.

What emerging or existing clean energy technologies offer the biggest opportunity for near-term job training and placement?

Community solar offers a significant opportunity for near-term job training and placement. New Jersey's community solar program is relatively new, and so the program is still in the process of getting implemented and reaching its full potential. Under these conditions, it will be easier for new workforce development initiatives to fold into the state's evolving community solar programming. This would be a more seamless incorporation of ancillary workforce development opportunities than an already established clean energy program.

Furthermore, community solar is an excellent prospect for near-term job training and placement. This is because community solar projects are large enough to require a substantial workforce development commitment, while still being small enough that they can advance quickly through the application and approval process relative to grid-scale projects that require PJM interconnection approval. Job training with community solar can happen in a streamlined fashion that would also provide trainees with enough of

4 See for NJ Economic Development Authority's Financing and Incentives Programs https://www.njeda.gov/financing-and-incentives/

a foundation to then elect to expand their portfolios with other forms and scales of solar technology, such as utility-scale solar and resilient solar paired with storage.

Community solar projects also lend themselves to local hiring and workforce development in target communities. Because the state's community solar program is admirably set up to prioritize LMI subscribers, many projects will either be sited in or in service to households from disadvantaged communities. Therefore, workforce recruitment can intuitively happen in the very same communities these projects will be serving, making for streamlined processes of subscriber acquisition and workforce recruitment. The state also committed to utilizing Solar for All funding to bolster its community solar program and its equity-focused priorities, and this additional funding source can be used creatively to ensure program expansion is supplemented with further economic benefits through workforce development.

2. As New Jersey establishes policies and programs to develop an in-state clean energy supply chain, what else could the State be doing to support the development of the clean energy supply chain in New Jersey?

The state should complement its workforce development efforts with supply chain development that prioritizes environmental justice and a just transition. It can do this by partnering to repurpose industrial and brownfield areas for renewable energy development and distribution, resulting in jobs being available in the same communities where workforce development efforts are underway. The state should also provide support for worker-owned enterprises and minority and women-owned companies around technology and business model incubation and workforce development, particularly those businesses located in or serving disadvantaged communities.

New Jersey is geographically situated at the crossroads between major urban centers that span the Northeast megalopolis, and is home to one of the world's busiest ports, making the state uniquely positioned to be a significant national and global hub for the clean energy supply chain. This potential emergence as a national and global leader in the clean energy economy can also facilitate a just transition, where disadvantaged communities at the frontlines of the climate crisis and fossil fuel extraction can now be at the forefront of the new clean energy economy. It will be important for the EMP to account for these conditions to properly harness the full potential for economic development while the state pursues its clean energy target of 100% by 2035.

The state witnessed a proliferation of warehouse construction as a result of pandemic-related economic revitalization, however much of this newly constructed warehouse space has witnessed increased vacancy rates as the market recalibrates.[5] The state can work with environmental justice organizations, commercial real estate stakeholders, and the NJ Economic Development Authority to create incentives for clean energy industries to take advantage of vacant warehouse space, repurposing these vacant spaces for clean energy supply chain needs and provide economic benefits to local communities. Where there is vacant or underutilized industrial and warehouse space in disadvantaged communities, the state should require clean energy industries to commit to stringent local hiring and community benefits agreements developed in consultation with environmental justice organizations and stakeholders.

5 See for more information on NJ warehouse industry trends: "Warehouse industry reports possible slowdown" *NJ Spotlight News.* https://www.njspotlightnews.org/2024/04/data-suggests-possible-new-jersey-warehouse-development-slowdown/

The NJ Economic Development Authority already has pursued initiatives aimed at community revitalization such as the Asset Activation Planning Grant Program and the Aspire Program.[6] The Board should collaborate with the NJ Economic Development Authority to examine how existing economic development programs could be reformed to further incentivize clean energy supply chain development where appropriate. This could result in cross-agency collaboration and a more holistic approach to supply chain planning and economic development that better aligns with the state's goal to be a national leader in clean energy.

Conclusion

Vote Solar is grateful for the opportunity to comment on this important and timely update to the New Jersey EMP. For all of the above, we encourage the Board to include a robust stakeholder engagement process that invites communities to participate in the shaping of the policies and programs that will impact their lives – especially communities of color and low-income communities, who have historically been excluded from these conversations. In particular, we urge the Board to prioritize language access, meetings outside of traditional work-hours, partnering with trusted community messengers, providing multiple options for how to engage, and robust outreach, with the understanding that meaningful and representative community participation is among the basic criteria for a successful program that puts people first.

We encourage the Board to reach out to us with any follow up questions regarding our responses above, as well as the oral testimony we provided at EMP public hearings 1 and 3. We also would like for Board staff to include us in further stakeholder discussions that are planned as follow-up to this initial round of public input. We look forward to working together to make New Jersey a leader in our urgently needed clean energy transition.

Thank you for your time and consideration.

Sincerely,
/s/ Kartik Amarnath
Kartik Amarnath
Mid-Atlantic Regulatory Director
Vote Solar

6 See for NJ Economic Development Authority's Financing and Incentives Programs https://www.njeda.gov/financing-and-incentives/