

**Docket No. QO21010085, IN THE MATTER OF MODERNIZING NEW JERSEY'S
INTERCONNECTION RULES, PROCESSES, AND METRICS**

**Joint Comments of the Coalition for Community Solar Access, New Jersey Solar Energy
Coalition, Solar Energy Industries Association, and Vote Solar**

April 24, 2023

I. Introduction

The Coalition for Community Solar Access (“CCSA”), New Jersey Solar Energy Coalition (“NJSEC”), Solar Energy Industries Association (“SEIA”), and Vote Solar, collectively the “Clean Energy Parties”, appreciate the opportunity to provide feedback on proposed revisions to the interconnection (“IX”) rules (“Draft Rules”) at N.J.A.C 14:8-5.1 et seq. We applaud the Board of Public Utilities (“BPU”) for appropriately incorporating near-term and longer-term interconnection reform and grid modernization recommendations proposed by the Clean Energy Parties and other stakeholders. Such reforms are a critical step in meeting New Jersey’s clean energy goals affordably and on a timeline that will help New Jersey maintain its solar development workforce and achieve the goals set forth in the state’s Energy Master Plan.

CCSA is a national coalition of businesses and nonprofits working together to implement best practices for all community solar markets. Its mission is to empower all New Jersey households and businesses that seek home grown energy sources through community solar. CCSA works with customers, utilities, local stakeholders, allies, and policymakers to develop and implement best practices that ensure community solar programs provide a win-win-win solution. Member companies are solar industry leaders and are engaged at every step of development, ensuring these best practices are not theoretical but are applied and practiced. CCSA represents nearly 100 member companies, some who are headquartered in New Jersey and others who are investing in the state’s clean energy future.

NJSEC was formed to create public policy support for New Jersey’s solar industry. NJSEC works in legislative outreach, education, and the development of realistic public policy alternatives that align with the fiscal and social circumstances that are unique to New Jersey. NJSEC members include local and national developers, renewable energy credit market traders and analysts, engineers, and legal and accounting professionals supporting all phases of New Jersey’s solar industry.

SEIA is the national trade association for the United States solar industry. As the voice of the industry, SEIA works to support solar as it becomes a mainstream and significant energy source by expanding markets, reducing costs, increasing reliability, removing market barriers, and providing education on the benefits of solar energy. SEIA works with its 1,000 member companies and other strategic partners to fight for policies that create jobs in every community and shape fair market rules that promote competition and the growth of reliable, low-cost solar power. SEIA has more than 45 member companies located in New Jersey with many more national firms also conducting business in the state. Member companies range from manufacturers, residential, community solar, commercial, and utility-scale solar developers, installers, construction firms, investment firms, and service providers.

Vote Solar is a non-profit policy advocacy organization with the mission of making solar more accessible and affordable across the United States. The organization works at the state-level in

27 states to drive the transition to a just 100% clean energy future. Vote Solar is a team of solar advocates using a winning combination of deep policy expertise, coalition building, and public engagement to power just and equitable clean energy progress in states nationwide. Our team advances clean energy progress in state legislative and regulatory arenas, where most decisions about electricity are made. Since 2002, Vote Solar has brought our winning combination of deep policy and technical expertise, coalition building, and public engagement to drive meaningful progress.

In this filing, the Clean Energy Parties provide feedback to the Board's January 27, 2023, Draft Interconnection Rules ("Draft Rules"). While the Draft Rules incorporate many of the best practices for distributed energy resources ("DER") interconnection and include several groundbreaking regulations, the Clean Energy Parties respectfully submit these additional suggestions which in our view would ensure that New Jersey's interconnection policy represents the best-in-class in the nation, and which will contribute significantly to the state reaching its ambitious decarbonization goals.

I. The Clean Energy Parties' Statement of Support

The BPU's proposed changes to New Jersey's process for interconnecting distributed generation resources to the state's electric grid generally align with the joint comments submitted by SEIA, NJSEC, and CCSA in response to the BPU's Grid Modernization Study.¹ In particular, this includes 1) establishing a pre-application process, identified by the BPU as a pre-application verification/evaluation ("PAVE") process for projects equal to or in excess of 500kW; 2) requiring the EDCs to track and provide key information throughout the interconnection application process in order to streamline the application timelines; 3) improving the accuracy and usability of EDC hosting capacity maps; 4) increasing the Level 1 threshold to 25 kW, and 5) improving the efficiency of sequencing of interconnection studies. We appreciate the BPU's recognition of how data access and transparency of grid conditions—through pre-application reports, consistent and uniform approaches to calculating capacity headroom within hosting capacity maps across EDCs, and uniform unit cost guides for system upgrades—can provide early insight into the feasibility of projects and reduce the number of canceled interconnection applications.

The Clean Energy Parties also commend the BPU for incorporating new definitions and processes related to the accelerating decentralization of the electric distribution system driven by the increasing role of DERs. Specifically, we support the BPU's effort to create a more uniform, digitally based customer-facing system of interconnection through a common interconnection agreement process ("CIAP") and the establishment of clear, enforceable timelines for Level 3 Interconnection reviews. We also support the BPU incorporating innovative elements into these rules, such as mobile storage and the integration of SolarAPP+ into the utility portals.

The Clean Energy Parties endorse several additional aspects of the Draft Rules as described in more detail below.

¹ JOINT SEIA-NJSEC-CCSA COMMENTS, DOCKET NO. QO21010085, GRID MOD, July 19, 2022: https://publicaccess.bpu.state.nj.us/DocumentHandler.ashx?document_id=1269855

Level 1 Interconnection Review

The Draft Rules make several significant improvements for the Level 1 interconnection review procedures which will help reduce costs for consumers and accelerate the growth of DERs. Increasing the Level 1 threshold to 25 kW will streamline the process for more projects and is aligned with states like New York and Connecticut. A fully virtual CIAP portal will provide a consistent and better experience for developers and customers and will help avoid delays due to documentation, miscommunication, or the use of physical checks for payments.

We also support Draft Rules with regards to providing applicants clear information when a project fails screens and for providing the opportunity for the applicant to implement mitigation measures that would allow the project to move forward, including reducing export capability, use of smart inverter functionality, or other applicable means. Fully utilizing smart inverter functionality will be critical in a high-DER future while maintaining power quality and grid reliability.

Interconnection Reporting Requirements for EDCs and Customer Satisfaction Surveys

The Clean Energy Parties likewise applaud the BPU for the inclusion of what we believe to be best-in-class requirements for EDCs to provide information to the regulators and all stakeholders around the status of interconnection requests. These transparency requirements ought to be emulated in other jurisdictions to enable the development community, regulators and all interested parties to fully understand what is happening in the industry, how likely or unlikely the state is to be able to realize its decarbonization goals, what barriers or opportunities for improvement exist and how all stakeholders can assist in working collectively to accelerate the decarbonization of their state's electric generation, transmission and distribution sectors. The Clean Energy Parties look forward to collaborating with all interested parties to ensure that these new requirements are as effective as possible.

While the Draft Rules' requirements for NJ's EDCs to provide the BPU with critical information regarding the state of DER IX which will be instrumental in ensuring the state remains on track to realize its decarbonization goals, Staff's oversight of the industry will also benefit from insight into the experience of interconnecting customers of the utilities. The Clean Energy Parties, therefore, welcome the BPU's inclusion of customer satisfaction surveys in the Draft Rules. This requirement represents yet another innovation in IX regulation. The Clean Energy Parties believe that the development of customer satisfaction surveys is exactly the type of thing that the soon to be established IX Working Group can be instrumental in achieving, and we look forward to working collaboratively with NJ's EDCs, BPU Staff and other stakeholders to develop and refine the surveys in the Working Group.

Pre-Application Verification/Evaluation ("PAVE") Process

We strongly support the recommendation to implement a mandatory pre-application process for projects 500kW and above, and optional for other projects, and recommend that the BPU set a robust timeline for implementation within the next six months, if not sooner, to be aligned with the start of the community solar permanent program. As we noted in our comments to the BPU on the draft Guidehouse report in this docket, the community solar permanent program should be designed to incorporate a pre-application study. The report illustrates how a pre-application process will be useful to the community solar industry, and we agree that this process should be

required for all projects 500kW and above, and optional for other projects. Implementing a pre-application process for projects 500kW and above should be viewed as a prerequisite for a productive stakeholder process about ways to implement a uniform streamlined flexible queue process that supports viable projects and avoids clogging the queue and wasting valuable, limited EDC resources studying non-viable projects.

We also agree with the recommendation to structure the pre-application based on the existing application process so that the information filed in the pre-application can be seamlessly moved into the application form to reduce resubmission inefficiencies. As Guidehouse accurately notes in their final report, the use of preapplication reports are employed by at least twelve states and can save both developers and EDCs considerable time and effort later in the interconnection process, including a reduction in the inefficiencies resulting from late-stage interconnection application withdrawals.

Ideally, project developers will be able to use the recommended pre-application process as a screen to understand potential interconnection upgrade costs. However, for that to occur it is important that this process, as well subsequent impact studies, yield a durable estimate of the interconnection upgrade cost needed at a given site to safely connect the project. That is, in cases where preliminary assessments of costs are provided, the final costs should be within a reasonable range of the initial estimate (i.e., contingencies associated with cost estimates should not exceed 25%). Developers and customers make investment decisions based on an understanding of what the interconnection cost is going to be from the estimate provided by utilities. While we understand that costs can change throughout the construction process, it is imperative that EDCs are required to be precise in their estimates in order to ensure that projects ultimately aren't forced to pay for interconnection upgrades which make them uneconomic. Too often, developers run into issues where an infrastructure upgrade cost is identified, but final cost estimates or actual installation costs balloon to several times the initial estimate with little oversight, significantly impacting the economics of the project and in many cases causing the project to drop out of the queue. Thus, the implementation of a pre-application process coupled with uniform unit cost guides for system upgrades and a requirement that contingencies associated with cost estimates not exceed 25% will help ensure that infrastructure upgrade cost estimates are reasonable, directly related to the connecting project, and durable.

Hosting Capacity Maps

Hosting capacity analysis ("HCA") maps can be a useful tool to indicate where new DERs can likely be connected without triggering significant distribution system upgrades. However, through SEIA, NJSEC, and CCSA member participation in hosting capacity conversations in multiple other states, not all models are created equal and certain hosting capacity map functionality, if not enabled, can render hosting capacity maps nearly useless. Thus, we strongly support updating N.J.A.C.14:8-5 to require uniform data granularity and update frequency for hosting capacity maps.

The Clean Energy Parties also support the updating of capacity maps based on changes in feeder load and generation of specified amounts. We recommend that the IX Working Group should discuss the most appropriate update schedule (which should certainly be more frequent than yearly, and which ideally would be as near real-time as possible). This would align with what is articulated in the IREC reports cited in Guidehouse's proposal. According to the IREC

report "Data Validation for Hosting Capacity Analyses," for interconnection, "the more closely HCA results resemble actual conditions on the feeder, the better the HCA can be used to achieve the desired goal of streamlining project approvals." With the state's new and aspirational renewable energy targets, it is important that hosting capacity analyses are conducted with the timeliness that reflects the need for coordinated and efficient DER uptake.

Furthermore, because capacity map updates will also be triggered by changes in feeder generation and load of certain thresholds, costs incurred to EDCs around more frequent updates would be minimal. As the aforementioned IREC report notes, "Because updates are incremental and not all feeders see multiple significant changes a year, a more frequent HCA update cycle does not need to entail performing significantly more work than a less frequent cycle. For example, suppose five feeders meet the threshold for updates in January, a different set of five feeders satisfy the threshold in February, and a different set of five feeders satisfy the threshold in March. The cost and time associated with updating the HCA across these 15 feeders would be similar regardless of whether HCA updates are performed quarterly or monthly."

Dispute Resolution

We applaud the BPU for creating an interconnection ombudsperson role at the BPU and requiring the EDCs to likewise create in-house interconnection ombudsperson roles. The BPU ombudsperson will serve a critical role as a neutral third party to help resolve and mitigate interconnection disputes more efficiently. A fair and efficient dispute resolution process can help address interconnection challenges and avoid the need for more time-intensive complaints before the BPU. In some cases, an ombudsperson is a technical expert and can help resolve disputes related to engineering questions that may arise in the interconnection process. The EDC ombudspersons will help to streamline the utility's interaction with the development community, by serving as a single point of contact for issues requiring escalation. In other markets, EDC ombudspersons have also been instrumental in the success of IX Working Group meetings with their ability to provide crucial insights given their full-spectrum view of the state of DER IX at their respective utilities.

Proactive System Upgrade Planning

Finally – and most crucially– the Clean Energy Parties strongly support the proposed concept of bi-annual Proactive System Upgrade Planning ("PSUP") filings for each EDC and note that several other states are in the process of developing similar processes. We generally agree that the PSUP can encourage a departure from responding to individual interconnection requests and associated grid upgrade costs on a project-by-project basis and toward a methodology of forecasting DER growth and planning for grid upgrades. Ideally, this would allow EDCs to consider proactive grid modernization upgrades that can simultaneously accommodate load growth (including the beneficial electrification of buildings and transportation) and allow higher penetration of DERs, benefiting not just interconnecting customers but also ratepayers at large. In fact, there is increasing recognition of the wider societal benefits of rapidly decarbonizing our electric generating sector, and that it is appropriate that there be wider sharing of the costs of those system upgrades beyond interconnecting generation facilities. All New Jerseyans can benefit from innovations in distribution system planning in other jurisdictions undertaking similar efforts.

II. The Clean Energy Parties' Recommended Amendments to the Draft Interconnection Rules

Below, the Clean Energy Parties provide specific commentary regarding the Draft Rules, including:

- Suggested required information for inclusion within the EDCs' publicly available interconnection queues, which will enable the development community to make informed decisions and will result in fewer speculative projects requesting interconnection.
- Improvements to review processes through the addition of timeline enforcement mechanisms.
- Recommendations to ensure the dispute resolution process is effective and efficient.
- Commentary on deposits and facility payments, informed by experience in other states.
- Support for creation of a standard unit cost guide.
- Response to the proposed PSUP process including insights from other jurisdictions undertaking similar reforms.

Creating a Best-in-Class Publicly Available Interconnection Queue

Based upon the extensive experience that SEIA and CCSA member companies have in a variety of early-mover jurisdictions, there can be no question that the creation of (and regular updates to) a publicly available interconnection queue is a prerequisite for maintaining a well-functioning marketplace. The Draft Rules' mandate that going forward, all NJ EDCs be required to provide this critical tool, will demonstrably improve the state's renewable energy sector.

While the Draft Rules include specific requirements around several other aspects of market transparency regarding timing, the Clean Energy Parties note that there appears to be no requirement for the utilities to update the queue on a defined schedule. NJSEC, SEIA and CCSA members believe that it is important for a public interconnection queue to be updated at least monthly in order to provide stakeholders with sufficiently actionable intelligence as to where their projects stand.

Based on SEIA and CCSA member companies' experience in other markets, the Clean Energy Parties recommend that the following data points be required of each NJ EDC in their new Interconnection Queues:

- Application #
- Name of applicant
- Applicant contact information (with applicant permission)
- Application status (including withdrawn, which should remain in the queue)
- Application step
- Circuit and substation ID numbers (and transformer ID if applicable)
- Proposed AC system size
- Application date (date of utility "acceptance", or "deemed complete")
- Date of scoping meeting
- Must proceed with system impact study by date
- Date of system impact study start
- Date of system impact study completion
- Must execute interconnection agreement by date

- Date of interconnection agreement execution
- Must make interconnection deposit by date
- Date of interconnection cost deposit payment made
- Must make full interconnection cost payment by date
- Date of full payment of interconnection cost
- Date of project construction start (issuance of building permit)
- Date of utility construction start
- Utility estimated date of utility construction complete (utility ready for witness test)
- Date of witness test
- Date of issuance of permission to operate (“PTO”)

Incorporating Timeline Enforcement Mechanisms

The Clean Energy Parties applaud the BPU for proposing best-in-class revisions to interconnection rules and the attention to detail and clarity regarding review timelines. We support the inclusion of timelines and propose herein some language to ensure they are enforceable and hold utilities accountable for non-performance. Accountability of timelines is critical for the developer community to be able to manage project investment and development. Without enforceability and clear adherence to interconnection review timelines, developers will avoid investing in the market or increase the costs of projects in order to adequately capture the higher costs associated with the risk. The Clean Energy Parties propose the following recommendations related to timeline enforcement.

- Within the annual reports required by the Draft Rules, BPU should also require EDCs to include a calculation that compares the following:
 - the aggregate average time measured in business days necessary to execute a final Interconnection Service Agreement, commencing from the date an application is received, for each interconnection level;
 - the total aggregate number of business days allowed by the Interconnection Rules to issue a final Interconnection Service Agreement, commencing from the date an application is received.
- BPU should be authorized to issue penalties to EDCs for failure to adhere to timelines consistent with the administrative penalties allowed under N.J. A.C. § 14:5-8.13. Penalties should be considered at the Board’s discretion or by petition from stakeholders.

The Clean Energy Parties strongly support the establishment of clear, enforceable timelines for Level 3 Interconnection Reviews, which is a standard practice across most markets and brings New Jersey in line with other states. It is critical that there be an understanding of how long it will take to traverse the IX process. Specifically, we applaud the BPU for including the requirement that for Level 3 Reviews, once an applicant executes a Facilities Study Agreement and pays the EDC pursuant to the terms of that agreement, that the EDC conduct a Facilities study that includes a detailed list of necessary electrical power system upgrades and an itemized cost estimate, breaking out equipment, labor, operation and maintenance and other costs, including overheads, for completing such upgrades. Finally, we support the BPU’s proposal that requires that Facilities Studies which are accepted and contracted by Applicants must not exceed 125% of cost estimates made by EDCs.

Clarifying the Proposed Dispute Resolution Process

A clear, efficient and fair dispute resolution process (“DRP”) can reduce the cost and time requirements of interconnection for the BPU, utilities, and developers. The Draft Rule incorporates a dispute resolution process in Section K that makes use of the new DPU Ombudsperson to mediate, but which could benefit from additional details to clarify processes, timelines, and roles of each party. The Clean Energy Parties provide the following information with regard to DRPs in other jurisdictions for the Board’s consideration. We believe that the IX Working Group is an ideal forum for the EDCs, the development community and Staff to collaborate on an effective DRP for NJ.

Maine

Maine’s Chapter 324 IX rules Section 15 outlines the state’s DRP. Maine asks that parties first undertake bilateral Good Faith Negotiations to resolve the issue. Within 5 business days (“BD”) of receipt of a request for a GFN, an officer or executive with sufficient authority to negotiate in good faith from each company shall meet. If within 8 calendar days of commencing GFNs, negotiations fail to resolve the dispute, either party can commence Informal Dispute Resolution (“IDR”) by sending a notice to PUC Staff. Within 10 business days of said notice, the other party must submit their perspective in writing. PUC Staff must mediate a meeting with the parties within 20 business days of receipt of the response submission. Either party may elect to withdraw from the IDR at any point via written notice and request a formal adjudicatory proceeding, governed by Maine’s Chapter 110.

Massachusetts

The Commonwealth’s rules governing the DRP are outlined in Section 9 of their IX Procedures. An interconnecting customer can commence the GFN by sending a letter in writing that they are initiating Section 9.1 of the dispute resolution process. The dispute must be elevated to a Vice President or senior manager with enough authority to make a decision. The DPU hosts an online form for developers to fill out which requires the interconnecting customer provide: 1) the rule, regulation or tariff provision you believe the EDC violated; 2) a concise and comprehensive recitation of the facts of the dispute and 3) a clear statement of the remedy sought. The DPU’s Ombudsperson has 10 business days to respond with next steps which may include more written comments or a conference call. If after 8 days from receiving the Ombudsperson’s proposed resolution, the dispute is not resolved, parties may proceed to mediation by one of the DPU’s list of qualified mediation neutrals or any other mutually agreed upon neutral. If mediation fails, a request for an adjudicated proceeding at the DPU may be requested in writing to the DPU Ombudsperson.

New York

New York’s DRP is outlined in the Standard Interconnection Requirements (“SIR”), Section 6. Parties have a responsibility to try to resolve all disputes through a GFN. If the issue cannot be resolved within 10 business days of written notice of the dispute, parties will submit to a mutually acceptable mediator in accordance with the then current CPR Institute for Dispute Resolution Mediation Procedure or by a mediator provided by the PSC. Parties agree to participate for a period of up to 90 days. If the Parties are not successful in resolving their disputes through mediation, then the parties may refer the dispute for resolution to the PSC.

Simplifying the Deposit and Interconnecting Facility Payment Structure

The Clean Energy Parties appreciate that the Draft Rules establish a general payment schedule for interconnection costs for Level 3 projects. We recommend simplifying this structure, however, and instead consider best practices of states like New York, which apply a “25/75 percent” approach. In that structure, 25% of estimated costs are due within a set period from the execution of the interconnection agreement (for example, 90 business days in New York). The remaining 75% is then due at a later date (120 business days from the 25% payment in New York). If for whatever reason the project is removed or withdrawn from the interconnection queue, any unspent portion of the 75% payment is returned to the project. The Clean Energy Parties strongly recommend that the Board consider adopting a similar approach here, which is easier to implement than monthly payments. These types of gated deposits that increase as the project moves through the review period and clear rules regarding refundability will help establish a “first-ready, first-served” queuing process.

The Clean Energy Parties, and CCSA in particular, also recommend that the Board consider the implications for future community solar projects under these draft rules. While it is just in the “straw” phase, the Staff has proposed requiring community solar projects in the permanent program to have an executed interconnection agreement in order to register with the ADI administrator and secure capacity. CCSA supports this approach, but notes that for simplicity, the 75% payment to the utility should come due at the time the project registers with the ADI administrator.

The Clean Energy Parties recognize that in some cases when estimated costs are low, this payment structure may not be necessary. The Clean Energy Parties recommend applying this structure to only Level 3 customers or at a certain dollar threshold. For example, New York uses a \$10,000 threshold.

Creating a Unit Cost Guide

The Clean Energy Parties also strongly endorse the concept of displaying a uniform unit cost guide for system upgrades on hosting capacity maps or on an EDC’s website. We recommend that these guides are updated at least annually, or as costs change.

Based on our members’ experience, utility cost estimates do not often correspond to market prices for materials or labor and therefore transparency into unit costs would provide needed insight into how EDCs arrive at their cost estimates. Making information about infrastructure costs for all types of projects accessible to developers will also ensure that cost estimates are reasonable, transparent, and reflect the costs needed to connect safely to the grid. While developing a uniform unit cost guide for system upgrades will be tremendously useful to interconnection customers, it will also help educate the market about system needs, as well as provide more useful information to the BPU about the state of New Jersey’s grid itself.

The Clean Energy Parties would like to point out the fact that the need for uniform cost guides demonstrates the important differences between EDC upgrades that are rate based and those that are not, which provides further justification for multi-beneficiary cost sharing, which we will discuss in further detail below. When a utility needs to demonstrate to its regulator the reasons for and legitimacy of proposed system upgrades, the very fact that there *is* scrutiny inevitably results in lower costs.

Improving the PSUP Proposal

Background

The PSUP is a much-needed standalone planning framework that can be implemented rapidly and incorporated into any future Integrated Distribution Planning process. As mentioned above, a variety of states with mature community solar markets (and thus facing increasingly high DER penetration) are beginning to reconsider how to allocate the costs of upgrading the distribution system to allow for the truly multi-directional grid that is required for the beneficial electrification of buildings and transportation and for the interconnection of increasing amounts of DERs. It has become clear over the past half a decade or more that the old way of doing things is not merely incompatible with the high-DER, decarbonized future we are seeking to build but is actually the main impediment to its realization. In state after state, we have seen the system seize up due to the application of a regulatory regime that was designed to govern, and which grew up over decades in response to the old, centralized fossil-fuel-fired electricity generation, transmission and distribution industry we are seeking to replace.

One of the most generally accepted regulatory constructs in our industry is that of Cost Causation, which posits that the entity that triggers a system upgrade should pay for the costs. This principle served stakeholders well for decades in that old, centralized construct and was developed as a perfectly reasonable response to how the industry evolved in that context. In that old world, substantial upgrades to the system were infrequent and when they were necessitated, it was to interconnect either a large new load in the form of a factory or a new expensive large generating asset. These new facilities typically had large budgets which were able to easily absorb multi-million-dollar interconnection costs, and they were in almost every case the clear sole beneficiaries of the interconnection to the grid. In such a construct, it is perfectly reasonable to develop a policy of “beneficiary pay” in the form of Cost Causation was implemented.

Over the course of the last decade, stakeholders have seen the consequences of applying Cost Causation to the DER segment. Cost Causation has effectively turned interconnecting DER to the grid into a game of Russian Roulette. Substantially identical projects can receive interconnection bills which vary wildly based upon nothing more than the luck of the draw as to the available capacity on a given substation. This has resulted in the seizing-up of DER markets mentioned above, where projects are assessed system upgrade costs which could be borne by a large, coal-fired power plant but which render their economics unfeasible.

It is important to recognize, though, that the issue is not merely one of economics, but one of fairness. What DER projects have seen across a variety of markets is that the System Impact Studies that they receive from the EDCs include within them line items such as “Reconducting X miles” of the distribution system. While it was clearly the case under the old industry paradigm that the costs of a utility stringing 6 new miles of wire to a coal power plant in the middle of nowhere benefitted that power plant (and thus as the sole beneficiary, that interconnecting customer should pay for those costs), it is difficult to argue persuasively in the context of Beneficial Electrification and the need to create a truly multi-directional grid to decarbonize our electricity grid that reconducting miles of the distribution system are solely for the benefit of a Community Solar project.

Frustrated with increasingly long and seemingly intractable IX-related delays and project cancellations due to those delays and/or unfinanceable distribution system upgrade costs, several states – most notably Massachusetts and New York – are in the process of implementing solutions to this problem grounded in integrated system planning and grid modernization principles. CCSA, SEIA and their member companies have been active in those discussions and other open dockets and proceedings throughout the country and seek to provide some context and learnings that may be helpful to the Board and other stakeholders in New Jersey as relates to this critical issue.

The Clean Energy Parties commend the BPU for doing likewise with its inclusion of the PSUP within the Draft Rules but are unclear as to the applicability of rate basing costs within the PSUPs. Subsection (b)d. mentions upgrades in excess of \$2M that would be “unlikely to be funded on a participant-funded basis” but then indicates that PSUP upgrades will be paid for on a \$/kW basis with no provision for upgrades whose capacity is not subsequently used by future interconnecting customers. This was explicitly addressed in New York’s Cost Sharing 2.0 Order in which it was decided that after a period of time, remaining upgrade costs would be included in an EDC’s subsequent Rate Case. The Clean Energy Parties submit that the PSUP needs to explicitly address how upgrade costs will be handled beyond the \$/kW charge outlined and that the lack of consideration of Cost Allocation alternatives would limit the PSUPs effectiveness. We urge the Board to modify the plan to include some form of multi-beneficiary cost sharing, as is being developed in Massachusetts, New York, and was approved in New Mexico’s Community Solar Order.

The Clean Energy Parties further point out the troubling disconnect between the need for states with aggressive greenhouse gas (“GHG”) reduction goals to upgrade their distribution system and stakeholder objections to implementing alternatives to Cost Allocation in light of the foregoing, in the name of ratepayer impact. New Jersey’s voters have demonstrated their commitment to decarbonization by electing legislators who passed some of the most progressive legislation with regard to GHG reduction and a Governor who signed it into law. In the Clean Energy Parties’ view, the critical examination that the state’s electric industry regulatory regime is undergoing must include an assessment of whether continued adherence to the cost causation principle is appropriate.

It should also be recognized that there is an interrelationship between interconnection costs and the structure of ADI incentives. As interconnection costs continue to rise, the only way to maintain any reasonable continuing level of solar development is to cover these cost increases with higher incentives. Essentially, this creates the Hobson’s Choice of saving ratepayers the cost of interconnection expenses only to see these same savings spent on higher incentives.

Below, the Clean Energy Parties provide updated information with regard to the above-mentioned proceedings.

Current State of Innovation in Distribution System Planning

Massachusetts

As described in “Joint Comments of the Solar Energy Industries Association, New Jersey Solar Energy Coalition, and Coalition for Community Solar Access” submitted on July 19, 2022 in this docket, Massachusetts has adopted a provisional cost sharing mechanism, known as the Capital Investment Plan (“CIP”) program framework, that serves as an example of how the BPU

might further facilitate the timely and cost-effective interconnection of DERs and apportion costs to both interconnecting customers and customers at large. This mechanism came out of the DPU 20-75 proceeding in Massachusetts which was instituted to solve the evident challenges of interconnecting Community Solar facilities in the Commonwealth's SMART program.

In late 2022, the DPU approved the first filing under its CIP program framework which, after detailed analysis by Eversource and an adjudicated proceeding with rounds of discovery, determined that an appropriate allocation of the proactive system upgrade costs would be a 55%-to-45% split between the EDC's Rate Base and the interconnecting facilities, respectively. In making that determination, the DPU cited the fact that the proposed upgrades would result in fewer service disruptions and serve future load from electrified buildings and transportation.² The clean energy parties believe that the BPU should adopt a similar multi-beneficiary cost sharing framework within the PSUP process and have proposed revisions to the Draft Interconnection Rules accordingly.

This Massachusetts example may offer the BPU insight into how to structure a framework for multi-beneficiary cost sharing that apportions upgrade costs to both interconnecting DERs and customers at large when such upgrades contribute to decarbonization goals and utility system planning objectives. However, it is important to note that the DPU's November 24, 2021 Order also offers the BPU insight into how to act on an interim basis, even if BPU feels that it needs further evidence and stakeholder engagement to arrive at a permanent solution to addressing the current unfair cost allocation problem.³ Clearly, time is of the essence and we believe that the pending interconnection reform legislation with BPU input and support and the insights offered by the Massachusetts example pave a near-term path forward to resolving an approach to interconnection cost allocation that threatens New Jersey's ambitious clean energy goals. Similar to existing or processes under consideration in Massachusetts, New York, and Maryland, Level 1 should be exempt from cost allocation PSUP rules.

New York

New York currently has an open proceeding in which it is establishing a Coordinated Grid Planning Process ("CGPP") in which the Joint Utilities have filed a proposal which would create an iterative, 3-year planning process for bulk, local transmission, and distribution system upgrades in order to meet the state's aggressive CLCPA decarbonization goals. This proceeding was a result of the industries' request for improved integration between distribution planning and a robust stakeholder process that ensures industry feedback is given full consideration. The proposal envisions an iterative approach in which each iteration is informed by and improves upon the previous cycle, and which would be comprised of approximately 2 years for system study followed by 1 year for Commission approval. Industry submitted initial comments calling for an acceleration of the process, wherever possible, more participation by industry and other stakeholders, ensuring storage is included and a variety of specific recommendations in each of the proposed stages of the CGPP.

New Mexico

² See DPU Order 22-47. Marion-Fairhaven Order, at p. 88. December 30, 2022.
<https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/16827728>.

While New Mexico is not yet undertaking coordinated planning or proactive system upgrades and is only beginning its Grid Modernization discussions in the wake of the passage of HB 233; in its October 21, 2021 Order in Docket 21-00112-UT, the Public Regulatory Commission ordered that it would “determine on a case-by-case basis whether the costs of distribution system upgrades necessary to interconnect one or more community solar facilities may be eligible for some form of cost sharing” not only among the interconnecting facilities but also among rate payers.⁴

Conclusion

In addition to these various regulatory proceedings, the issue of controlling distribution system upgrade costs is also being addressed legislatively both in Massachusetts and here in New Jersey with Senator Smith’s Bill S-431, which has already passed the Senate and is awaiting hearing in the Assembly.

Investing in grid modernization and integrating far higher levels of intermittent renewable resources into the grid will not be inexpensive, nor can it be done solely through fees assessed solely to interconnecting customers or by attempting to achieve perfect levels of equity in cost allocations. More needs to be discussed by stakeholders around these important issues, and comprehensive grid modernization ought to be a part of a wider climate change discussion. But it has been clearly demonstrated in a variety of states that the “business as usual” approach simply will not enable us to build out a grid that can support our appropriately aggressive goals, and that an integrated and comprehensive approach along the lines of the PSUP but with some form of Multi-Beneficiary Cost Sharing will be required.

III. Clean Energy Parties’ Technical Recommendations

The Clean Energy Parties applaud the BPU for incorporating several new or revised definitions related to the accelerating decentralization of the electric distribution system driven by the larger role of DER in achieving our EMP goals. However, we recommend the following improvements, consistent with efforts to ensure that N.J.A.C.14:8-5 avoids overly conservative interpretations and ensures technical criteria is not based on outdated interpretations or creates a technically unnecessary, unfriendly customer experience.

Definitions

The Clean Energy Parties recommend redefining net export capacity given its utilization within the technical screening processes. We therefore propose “Net export capacity” means the total export capacity at a point of common coupling of a small generator facility as measured by the nameplate capacities of all power production units and energy storage devices minus their consumption of electrical power, if applicable, as limited through the use of a control system, power relays, or other similar device settings or adjustments. For determination of resource Level, we recommend considering adding and addition definition for “nameplate capacity” means the maximum rated output of a generator at a point of common coupling of all electric power production equipment or energy storage devices under specific conditions designated by the manufacturer that is usually listed on a nameplate physically attached to the equipment.

⁴DOCKET NO. QO21010085, DRAFT INTERCONNECTION RULES. See Page C3.
https://publicaccess.bpu.state.nj.us/DocumentHandler.ashx?document_id=1269855

Similarly for completeness and the utilization of aggregate generation capacity within the review screens, we recommend an additional definition for “aggregate generation” means the aggregated net export capacities of all small generator facilities across multiple points of common coupling. In consideration for “hosting capacity” and coordination with PSUP, we recommend including “reserve hosting capacity” means the amount of hosting capacity reserved for small generator facilities on an electric distribution system circuit. Typically rules allowing for limited export better define allowance, or call out allowances for “inadvertent export” means the unscheduled export of power from a small generator facility, beyond a specified magnitude and for a limited duration, generally due to fluctuations in load-following behavior.

14:8-5.2 General interconnection provisions

The Clean Energy Parties are unsure why system sizing is being measured based on direct current. We are unaware of any other jurisdiction’s rules that establish system sizing criteria based on direct current. Direct current rating also serves no purpose within the interconnection review processes. We recommend replacing the use of direct current with either Nameplate capacity or Net export capacity.

14:8-5.4 Level 1 interconnection review (c)

The Clean Energy Parties question the need for technical review of the 10 percent of the distribution circuit’s maximum fault current. California and others states no longer require this review screen for small DERs and recommend its removal from the rule for Level 1 resources.

14:8-5.4 Level 1 interconnection review (e)

The Clean Energy Parties question the need for technical review of the 15 percent of the distribution circuit’s total annual peak load. California no longer requires this review screen for small DERs 30 kVa or less and numerous states such as Illinois instead utilize 100% of minimum load accounting for aggregate generation of any existing distributed generating facility export capacity already reflected in the minimum load data. We believe following California Rule 21 is a best practice, but believe either approach would be beneficial for New Jersey.

14:8-5.4 Level 1 interconnection review (f)

While we appreciate a threshold increase to 30 kVa for aggregate generation on a shared secondary, this is still an arbitrary threshold that may trigger screen failure when there is no technical justification. The Clean Energy Parties therefore recommend 30 kVa be replaced with may not exceed nameplate rating of utility infrastructure.

14:8-5.5 Level 2 interconnection review (f)

The Clean Energy Parties question the need for technical review of the 15 percent of the distribution circuit’s total annual peak load. Numerous states such as Illinois instead utilize 100% of minimum load accounting for aggregate generation of any existing distributed generating facility export capacity already reflected in the minimum load data. We recommend that same for New Jersey.

14:8-5.5 Level 2 interconnection review (i)

While we appreciate a threshold increase to 30 kVa for aggregate generation on a shared secondary, this is still an arbitrary threshold that will trigger screen failure when there is no

technical justification. Additionally, many Level 2 resources will not be connected to a shared secondary service. The Clean Energy Parties therefore recommend 30 kVa be replaced with may not exceed nameplate rating of utility infrastructure as well as removal of shared secondary and replace with secondary.

Meter Collar Adapters

The infrastructure we rely on to connect EV's, solar, batteries and heat pumps may be limited creating a roadblock to full electrification since approximately 50% of residential service panels require an upgrade at a cost of \$2,500-\$5,000 each.

To eliminate this roadblock, there are now several manufacturers that have developed plug-in adapters that use meter sockets instead of service panels, thereby eliminating the need for service panel connections or replacements. These meter collar adapters plug into the socket where electrical meters connect to buildings. These devices serve as a connection point for EV chargers, DERs and heat pumps, allowing installers to avoid costly circuit-breaker panel upgrades and time-consuming wiring work.

The Clean Energy Parties recommend authorization for installation and operation of meter collar adapters on residential electric meters, under certain conditions.

- An electric public utility shall authorize the installation and operation of a meter collar adapter, whether owned by a residential customer or by a third-party, provided the meter collar adapter meets the following criteria:
 - the meter collar adapter is qualified to be connected to the supply side of the service disconnect pursuant to the applicable provisions of the National Electric Code;
 - the meter collar adapter is approved or listed by a nationally recognized testing laboratory and is rated appropriately for the meter socket into which it is intended to be installed;
 - the meter collar adapter is certified to meet all applicable standards, as determined by a nationally recognized testing laboratory; and
 - the meter collar adapter does not impede access to the sealed meter socket compartment or the pull section of the service section of the electric meter or switchboard, as applicable.
- A manufacturer of a meter collar adapter, a third-party, a residential customer, or an electric public utility shall all be allowed to install, maintain, or service a meter collar adapter or associated equipment.
- An electric public utility shall modify its electric service requirements as necessary to implement the provisions of this section immediately after the effective date of this section.
- An electric public utility shall approve or disapprove a meter collar adapter for installation in its service area no later than 60 days after a manufacturer or third-party submits a request for approval of the meter collar adapter. An electric public utility shall provide public notice of all decisions approving a meter collar adapter, including by posting the information on the utility's Internet website. Should an electric public utility disapprove a

meter collar adapter, the electric public utility shall provide an explanation to the requesting vendor enumerating the reasons the application was denied.

- Creation of a new definition: "Meter collar adapter" means an electronic device that is installed between a residential electric meter and the meter socket, for the purpose of facilitating the deployment of customer-owned or customer-leased technology.

IV. Conclusion

As in many states that are increasingly decarbonizing their electric generating sector, there is a need to rethink the traditional distribution planning process in New Jersey. It is important to recognize that if New Jersey is going to reach the Energy Master Plan goals of 5.2 GW of solar by 2025, 12.2 GW by 2030, and 17.2 GW by 2035, the BPU must adopt key interconnection reforms as soon as possible. To ensure the ongoing Grid Modernization stakeholder proceeding is effective at implementing the strategies established in its energy master plan, the BPU will need to provide additional clarity and detail concerning several recommendations and set a robust timeline for implementation. The Clean Energy Parties again express our appreciation for the opportunity to provide our input on the Board's Draft Rules, and of the Board's innovative approach to key aspects of the interconnection process.

Respectfully submitted,

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