Docket No. QO22080540, IN THE MATTER OF THE NEW JERSEY ENERGY STORAGE INCENTIVE PROGRAM

Joint Solar Energy Industries Association - New Jersey Solar Energy Coalition Comments

December 12, 2022

I. Executive Summary

The Solar Energy Industries Association (SEIA) and the New Jersey Solar Energy Coalition (NJSEC) appreciates the opportunity to offer input to the New Jersey Board of Public Utilities (BPU or Board) regarding the New Jersey Energy Storage Incentive Program (NJ SIP) Straw Proposal (Straw).

The Solar Energy Industries Association (SEIA) is the national trade association for the United States solar and energy storage industries. With more than 1,000 member companies nationwide, SEIA is leading the transformation to a clean energy economy, creating the framework for solar to achieve 30% of U.S. electricity generation by 2030. 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 that is increasingly paired with energy storage. SEIA has more than 45 member companies located in New Jersey with many more national firms that are either already conducting business in the state or considering investing in in New Jersey.

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 development, renewable energy credit market traders and analysts, engineers, legal and accounting professionals supporting all phases of New Jersey's solar industry.

We appreciate the hard work and leadership from BPU Staff in developing this thoughtful straw proposal. We further appreciate the open dialogue with staff throughout this process and share the goal of working together to achieve New Jersey's statutory mandate for 2,000 megawatts (MW) of installed energy storage by 2030.

Energy storage plays an important role in the further advancement of solar and SEIA and NJSEC increasingly represent companies that have installed, or are installing, both solar + storage assets and stand-alone energy storage devices across North America. Our comments reflect the on-the-ground experience our members have developing energy storage assets across the United States and are

organized with an opening narrative section explaining our perspective on the preliminary recommendations and options for the design and implementation of the NJ SIP, including areas where we feel the Straw Proposal can be improved.

SEIA and NJSEC generally support the Straw Proposal, which reflects our preferred approach to energy storage deployment, combining upfront incentives to residential and commercial customers, as well as grid-connected assets, for every kilowatt-hour of energy-storage capacity they install with performance payments for using energy storage in a way that is smart and provides benefits to both the grid and NJ ratepayers at large.

Specifically, SEIA and NJSEC supports many elements of the Staff Straw proposal, including:

- A Storage business model that encourages private ownership and operation of energy storage devices, consistent with New Jersey's restructured competitive market structure
- Making NJ SIP incentives available to energy storage devices that are located either in-front-of-the meter (FTM or Grid Supply) or behind-the-meter (BTM or Distributed)
- Structuring part of the NJ SIP Incentive as a declining block fixed annual incentive, paid in $ per kWh for a contract length of between 10 and 15 years
- Structuring part of the NJ SIP Incentive through a pay-for-performance mechanism tied directly to the grid and environmental benefits created by the operation of a battery storage project
- Ensuring that a portion of the NJ SIP is reserved for projects located in, or directly serving, overburdened communities
- Making the NJ SIP a first-come, first-served program
- A broad definition of energy storage that is technology neutral and based only on meeting functional requirements in a cost-effective matter
- Aligning adjustments to the NJ SIP at the same time and general manner as adjustments to the Administratively Determined Incentive (ADI) program

However, to facilitate an optimal investment environment that encourages investment of at-risk private capital in New Jersey relative to other emerging energy storage markets, SEIA and NJSEC make the following high-level recommendations, which our comments will further elaborate on:

- Clarify that a solar+storage project with less than 5 MWac of solar paired with storage can participate in both the ADI and the NJ SIP
- Clarify that any site with an existing solar installation can add storage under the SIP
- In order to provide greater certainty on revenue streams for a diversity of different types of energy storage projects in New Jersey, start with bigger capacity blocks for all market segments, including at least 100 MW of capacity for front-of-the-meter storage and 10 MW of residential storage, even if that means moderately reducing the initial upfront incentive
- Do not structure the block program with three small intra-year capacity blocks, even if that means moderately reducing the initial upfront incentives and/or moderately increasing the $/kWh decrease in annual payments between each block

- Create specific capacity carve-outs for residential and non-residential BTM storage, as well as reserved capacity for low-income customers and customers in underserved communities
- Establish an adder ($/kWh) to the fixed portion of the incentive for low-income customers and customers in underserved communities
- Do not limit participation in a pay-for-performance mechanism to only new projects that reserve capacity in the declining block fixed incentive (i.e., allow existing storage resources to participate in the pay-for-performance mechanism)
- Be more proscriptive with EDCs regarding their filings for establishing a performance-based incentive for behind-the-meter storage, and make sure such filings are subject to stakeholder feedback
- Direct Electric Distribution Companies to file tariffs and a new rate design for front-of-the-meter energy storage systems based on the actual costs imposed on the distribution system
- Instead of immediately pegging FTM performance to marginal emissions, focus on peak reduction and use the first three years of the program to review the emissions data of grid supply projects deployed in the program before making a determination on whether the grid supply performance incentive should be pegged to an emissions signal
- Additional analysis and stakeholder input with industry and the Program administrator is necessary to evaluate a specific peak targeted (i.e., system peak, net peak) for the performance incentive, as well as whether a separate performance incentive structure is necessary for distribution-connected FTM storage and transmission-connected FTM storage
- Reconsider the recommendation that extensions are not allowed under the proposed NJ SIP, and instead adopt a streamlined process for projects that received a notice of conditional registration to request one six-month extension to their registration expiration date, consistent with the ADI and CSI Program Extension policy

Collectively, these recommendations will accelerate New Jersey's ability to achieve 2,000 megawatts (MW) of installed energy storage by 2030 and establish an optimal investment environment that encourages investment of at-risk private capital in New Jersey relative to other emerging energy storage markets.

II. Private Ownership Will Allow for Greater Competition and Consumer Benefits

New Jersey should align its emerging market for energy storage deployment with New Jersey's pro-competitive electricity markets. Competitive markets and risk-based capital remain foundational principles of New Jersey's electricity policy, and the deployment of energy storage should be subject to the same restrictions on utility-ownership as were established when New Jersey passed the *Electric Discount and Energy Competition Act* in 1999.

While SEIA and NJSEC are open to future proceedings regarding utility ownership of storage if it is used exclusively as a distribution asset, we agree with Staff's recommendation that the NJ SIP adopt a storage business model that encourages private ownership and operation of energy storage devices, consistent with New Jersey's restructured competitive market structure.

While New Jersey's EDCs should be allowed to explore innovative programs and encouraged to consider distribution-level non-wires solutions before making a traditional investment in aging infrastructure, New Jersey EDCs should be precluded from receiving incentives for energy storage.

It is critical to remember that energy storage facilities can serve a generation function by shifting load when they discharge energy to be sold as energy or ancillary services at wholesale. While this type of versatility is in part what makes energy storage assets tremendously valuable, allowing utilities to own a dispatchable resource that could be in direct competition with independently owned energy resources would create an unlevel playing field that would discourage private investment. Indeed, New Jersey utilities are fully funded by their captive customers – New Jersey's ratepayers – including a guaranteed return on investment (ROI) for their investments.

In contrast, adopting Staff's recommendation for a storage business model that encourages private ownership and operation of energy storage devices also means that competitive markets and risk-based capital will primarily fund energy storage development. As a result, Staff's recommendation rightfully means that the commercial and operational risks for achieving New Jersey's statutory mandate of 2,000 MW of installed energy storage by 2030 will largely be borne by private investors instead of ratepayers.

Furthermore, an important fact that cannot be overstated is that New Jersey's electric distribution companies currently have a critical role in fulfilling the goals of New Jersey's Energy Master Plan. Rather than attempting to expand utility participation into work that the private industry is prepared to engage in, New Jersey's electric distribution companies should remain focused on planning, upgrading, and operating the distribution and transmission system to accommodate deep penetration of competitive solar and storage resources. Indeed, refocusing EDC dedication to this critical existing work is in the interest of ratepayers and paramount to New Jersey's ability to achieve its ambitious clean energy goals in a way that is consistent with New Jersey's competitive electricity markets.

III. The NJ SIP Program Design Smartly Focuses on the Deployment and Optimization of Energy Storage

SEIA and NJSEC strongly support the general framework of the NJ SIP, which combines upfront incentives to residential and commercial customers, as well as grid-connected assets, for every kilowatt-hour of energy-storage capacity they install with performance payments for using energy storage in a way that is smart and provides benefits to both the grid and NJ ratepayers at large.

This combined approach reduces the upfront cost of the emerging technology, normalizes and expands solar+storage and standalone storage as a product offering in the market, and achieves soft cost reduction and institutional learning through economies of scale. Furthermore, structuring part of the NJ SIP Incentive as a declining block fixed annual incentive, paid in $ per kWh for a contract length of between 10 and 15 years, will contain ratepayer costs, declining over time as more energy storage is deployed and energy storage technologies become cheaper.

Structuring part of the NJ SIP Incentive through a pay-for-performance mechanism tied directly to the grid and environmental benefits created by the operation of a battery storage project is also a smart approach that is designed to achieve ratepayer benefits and grid benefits through optimal dispatch of energy storage resources. By paying only for performance, there is no ratepayer risk of stranded assets or payment for non-performance.

Primary barriers to deploying storage at scale include cost and related financing and market barriers. By combining an upfront incentive with a performance payment, New Jersey will reduce the initial upfront cost barrier to energy storage deployment, provide predictable revenue streams for investors and developers, and direct battery services to times when they provide the most benefit to the grid and New Jersey ratepayers.

IV. An Effective Declining Block Program Requires Larger Initial Block Sizes

SEIA and NJSEC share the BPU's goal of supporting the deployment of energy storage devices interconnected to the transmission or distribution system of a New Jersey EDC and doing so by promoting the deployment of private capital by establishing a stable market that attracts low-cost capital. We also agree with staff's recommendation that energy storage be broadly defined, technology neutral, and based only on meeting functional requirements in a cost-effective matter.

SEIA and NJSEC agree that setting installed energy storage targets that increase over time can create a compelling opportunity for energy storage developers to build and invest in New Jersey's economy. However, we are concerned by the size and cadence of the proposed targets in the form of annual targets with small intra-year capacity blocks and that the straw backloads most of the program's capacity to later years and later blocks.

While having blocks within each energy year addresses annual cost controls, over-engineering this design with such small capacity blocks as well as annual capacity targets will eliminate the virtue of a pure declining block structure, which is to create a progression from one price level to another based on the response of the market.

A declining block structure for an upfront incentive is appropriate for new energy storage technologies that are expected to realize significant cost reductions over the coming years. When paired with a performance payment, it is an overall market design that provides maximum benefit to ratepayers at the lowest cost. However, for the declining block program to be effective it is critically important that the blocks be large enough to be both meaningful with regards to providing predictability for the market and to reflect real cost reduction. It is also critical that the blocks always be available for new applicants in order to provide certainty for customers as to what incentive level they will qualify for. One of the primary challenges with the SGIP program in California has been the opening and closing of blocks with waiting periods and uncertainty on which category customers would end up qualifying for. We recommend the BPU avoid that flaw and ensure continuity between blocks by not arbitrarily pegging blocks to the start and end of a particular energy year. Instead we recommend that when on capacity block is exhausted, the next block opens immediately.

While 10 MW at a 4-hour rating may be sufficient for a residential only block, any commercial participation in an initial 10 MW tranche makes the 10 MW capacity far too low, as a single large BTM commercial energy storage project may eat up the entire capacity of the first several blocks proposed in the Straw. For example, under the design of the straw proposal a hypothetical 30-megawatt BTM commercial energy storage project would exhaust the first 9 BTM capacity blocks, creating a situation in which a) that 30 MW commercial project must accept a blended offer for their incentive based on the first 9 blocks (accounting for the proposed $2/kWh decrease in annual payments between each block)); and b) New Jersey homeowners considering residential storage would immediately go from a $40/kWh incentive to $24/kWh and need to wait several years to even reserve capacity in the program if that hypothetical 30-megawatt BTM commercial project reserved its capacity first.

Likewise, beginning with only 30 MW of capacity for front-of-the-meter storage, subdivided into smaller 5, 10, and 15 MW capacity blocks, creates a scenario in which a single grid supply project could exhaust the entire capacity intended for a year, with an administratively confusing incentive level set at the weighted average of the affected blocks. These two hypothetical scenarios underscore the need to give as much weight to the size of a declining block program as the price.

Blocks are intended to create a progression from one price level to another based on the response of the market. If the capacity of a given block is too low, or can be exhausted by so few projects, the program will fail to give clear guidance for developers on the incentive level they can expect and increases financial uncertainty around any given project. Experience in the storage incentive programs in other states has shown that small initial capacity blocks / incentive budgets can result in failing to meet two other market development objectives: soft cost reduction and supplier diversity. Small initial blocks do not provide the early deployment scale that can meaningful reduce local soft costs in permitting, interconnection and financing. Furthermore, if only a handful of projects are built initially, the market signal will be too weak to attract a diversity of storage project suppliers / developers.

As a result, SEIA and NJSEC recommend eliminating the series of three, small intra-year capacity blocks, and starting with bigger capacity blocks for all market segments, including at least 100 MW of capacity for front-of-the-meter storage and 10 MW of residential storage, even if that means moderately reducing the initial upfront incentive. We further recommend delineating between residential and non-residential BTM storage capacity, as the BPU does in the ADI program for solar, as well as reserving dedicated blocks of capacity for low-income customers and customers in underserved communities.

These recommended changes around initial capacity blocks will provide greater certainty on revenue streams for a diversity of different project types in New Jersey and better ensure what BPU staff noted in the Straw was their intention: developers having a clear line-of-sight to the size of the incentives and providing developers a clear understanding of what incentive rate they would qualify for.

V. Behind-The-Meter Performance-Based Incentives and Performance Metrics

SEIA and NJSEC strongly agree with Staff's proposal to direct each EDC to establish a performance-based incentive, in $/kWh, that would be provided to storage resources operating during specific call hours. We

agree that by embracing the programmatic elements of the ConnectedSolutions program utilized in Connecticut and Massachusetts, EDCs should reasonably be able to implement an easy-to-understand incentive for BTM energy storage resources that provides a $/kWh payment for providing EDCs stored energy from customer-sited, third-party or customer-owned batteries during a limited number of high-impact events, known as performance hours.

A recent report aimed at informing state policymakers and regulators on energy storage best practices emphasizes how this ConnectedSolutions model (1) allows for both customer and third-party ownership, (2) gives utilities some control over patterns of battery dispatch at times that are most valuable for all ratepayers, and (3) offers customers a way to pay for behind-the-meter battery storage, providing home or commercial property owners resilience and reduced energy costs without shifting costs from battery owners to other ratepayers.[1]

As a result, SEIA and NJSEC agree with Staff's recommendation to require each EDC storage filing to address program call hours, an incentive payment for calls, payments to resource owners, and a mechanism for calling resources. However, we recommend that the BPU establish a consistent methodology by which the EDCs calculate their performance payment values, that such filings be subject to stakeholder feedback, and that the incentive payments for calls not vary within an EDC service territory, at least initially, to limit program complexity.

Having a consistent methodology that fully reflects the value provided by the energy storage systems is critical to ensure development in all EDC territories. For example, the Connecticut program's cost-benefit analysis includes avoided energy and capacity costs, energy and capacity demand reduction induced price effects ("DRIPE"), avoided transmission and distribution capacity proxy values from their Conservation & Load Management Plans, and reliability.[2] One way to ensure a consistent methodology that fully reflects the value provided by the energy storage systems is for the BPU to contract this work to a consultant, as Connecticut did.

Additionally, the NJ SIP should state explicitly that measurement of performance for the BTM performance incentive is done at the storage inverter, not the utility meter. Experience in other states has shown that data quality problems as well as extra time and expense of dealing with utility billing systems can cause extreme delays and costly red tape which diminish the effectiveness of the program and wastes ratepayer money.

The EDCs and/or a BPU consultant should also be required to provide an estimate of their performance payments, based on the standardized methodology, during this proceeding to ensure that the fixed incentives are not too high or too low.

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[1] Energy Storage Policy Best Practices from New England: Ten Lessons from Six States, via https://www.cesa.org/wp-content/uploads/Energy-Storage-Best-Practices-from-New-England.pdf

[2] The initial program Cost-Benefit Analysis is available in Docket 17-12-03RE03, available at: https://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/893b748e925bca1c85258761006e4b61?OpenDocument

Additionally, while we understand why staff wants to ensure that storage devices do not remain off-line or uncharged for extended periods of time, SEIA and NJSEC recommend making the fixed incentive for BTM storage exempt from an availability performance requirement to limit program complexity and not dissuade customer-sited storage adoption. The performance payments and desire for backup power will provide a strong incentive for customers and developers to ensure their systems are online and available as much as possible without the need for an administratively burdensome process for verifying availability for each system participating in the program.

Furthermore, the intention behind a pay-for-performance storage mechanism is to leverage customer-sited resources for the benefit of the grid while simultaneously providing an incentive for customers to purchase and own storage. Storage can provide immense value in bringing stability and reliability to the grid, while allowing energy generated by renewable resources to be dispatched during peak hours. If New Jersey limits participation in the pay-for-performance incentive only to customers that received the fixed incentive, the state will be leaving significant value on the table and will end up employing only a small fraction of customer-sited BTM resources for the benefit of the grid. As a result, SEIA and NJSEC recommend that the BPU not limit participation in a pay-for-performance mechanism to only projects that reserve capacity in the declining block fixed incentive.

Finally, SEIA and NJSEC recommend that if a GHG emissions reduction performance incentive is established as a price signal it be made optionally available to BTM storage projects also. If the BTM storage asset operator has the capability to "value stack" this revenue stream with other BTM storage values, the state should encourage that behavior.

VI. Front-Of-The Meter Performance-Based Incentives and Performance Metrics

SEIA and NJSEC appreciate the BPU's project design objective of ensuring that energy storage devices are deployed in a manner that decreases greenhouse gas (GHG) emissions. The current straw proposal does so by tying the project's operations to the pay-for-performance metrics. For front-of-the-meter projects, the straw proposal recommends that the payment be based on the amount of carbon emissions abated by the device, which would be calculated using PJM's marginal carbon intensity at the project's node. This proposal borrows from California's SGIP program.

However, SEIA and NJSEC note that there may be a premium to projects that are dispatched based on emissions signals rather than strictly economic signals. Energy storage devices are entirely controllable and their carbon emissions profile can be altered; they can be deployed anywhere and can change their charging and discharging behavior at any point in time. A requirement to respond to emissions dispatch signals rather than economic dispatch signals can be done, but it does impact the other revenue streams available to the project and, thus, the level of compensation needed to provide the emissions benefit.

SEIA and NJSEC respectfully suggest that the BPU consider deploying these assets like any other capacity products at the onset of the program, using the first three years of the program to review the emissions data of projects deployed in the program before making a determination on whether the performance incentive should be pegged to an emissions signal. We do not have enough data at this time to determine

whether there is misalignment. As the PJM grid changes its profile and more renewable energy projects are deployed, the emissions profiles of energy storage assets will also change. Given the new nature of the data provided by PJM, SEIA and NJSEC would be supportive of incorporating emissions consideration into the review process.

Instead of pegging performance to marginal emissions, SEIA recommends that the BPU focus on peak reduction. Study after study has highlighted the immense value that energy storage can provide to ratepayers by reducing peak demand. As the Massachusetts energy storage cost-benefit study *State of Charge* notes, the top 10% of hours during the years 2013-2015 accounted for 40% of the annual electricity spend, or over $3 billion.[3] Storage asset performance would be pegged to the storage asset's ability to shift energy from low peak hours to high peak hours. The specific peak targeted (i.e., system peak, net peak) for the performance incentive, as well as whether a separate performance incentive structure is necessary for distribution-connected FTM storage and transmission-connected FTM storage, should be subject to additional analysis and stakeholder input with industry and the Program Administrator.

SEIA and NJSEC also appreciate that BPU seeks to ensure that storage devices do not remain off-line or uncharged for extended periods of time, and agree that the PJM Equivalent Forced Outage Rate (EFORd) is a reasonable a metric for grid supply projects, if the BPU prefers to create a decreased fixed incentive level based on storage unavailability. However, this administrative complexity may not be necessary. Indeed, grid supply storage operators that leave their storage device off-line or uncharged for significant amounts of time aren't earning revenue. Unless the upfront incentive is covering the entire cost of the installation, which is not the case under the straw proposal, such a decision would be uneconomic. Thus, if the intent is that resources are participating in the PJM market but that storage device owners can manage their own participation and risk in the wholesale market, it may not be necessary to make the fixed annual incentive contingent on satisfactory up-time performance metrics like EFORd at all.

As a result, though SEIA and NJSEC are not opposed to staff's proposal that a resource with an EFORd of less than 95% receive a lower fixed payment according to the formula Adjusted Payment = (Fixed Payment)*(1-EFORd), we recommend using the first three years of the program to review the use of EFORd before incorporating into the review process whether an availability level of less than a certain percentage should result in a project being investigated and potentially terminated from the program.

Furthermore, if the BPU decides to focus on peak reduction, SEIA and NJSEC are supportive of using performance hours as the driver of storage asset behavior at the onset, with an understanding that the performance hours create a sufficient starting off program structure that can be modified as more data on emissions performance is available. However, if the BPU prefers to focus on emissions reductions, including administratively set performance hours would make it more difficult and costly to deploy projects, as there is no guarantee those performance hours will align with the emissions signal.

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[3] *State of Charge: Massachusetts Energy Storage Initiative xiii* (2016), https://www.mass.gov/media/6441/download (

In terms of determining the exact performance incentive rate, we agree that the Program Administrator should work with stakeholders to develop the specific calculation. While our recommendation is to focus on peak reduction, if the BPU establishes a GHG emissions signal performance incentive, it should be established as a price signal that provides compensation for reduced GHG emissions but does not have a threshold minimum reduction amount (i.e., any emissions reductions greater than zero should be compensated).

However, SEIA does not recommend treating storage resources "charging directly" from a co-located power source differently with respect to performance compensation. When measuring GHG emissions impacts from storage dispatch, one calculates the benefit based on the grid's marginal emissions factor (i.e. what is the impact of the storage dispatch on the marginal generator used to meet demand). Under this framework, it does not matter if the storage is charged directly from the solar or not as the impact on the marginal resource needed to meet total customer load plus storage charging is the same. Since the NJ SIP's primary purpose is incentivizing stand-alone energy storage, a preference or priority for co-location tied to performance compensation is unnecessary.

Finally, because energy storage is a dynamic resource that both purchases and sells electricity, traditional utility rate structures may not best accommodate distribution connected FTM storage and can render projects cost prohibitive. For example, SEIA and NJSEC members report that other states have treated distribution connected front of the meter storage as just a load, where they are assigned rates for large commercial and industrial customers that end up unreasonably expensive for whenever they charge and discharge even if its beneficial to the grid. As a result, we recommend that the BPU direct New Jersey Electric Distribution Companies to file revenue-neutral tariffs for front-of-the-meter energy storage systems based on a thorough examination of the costs and benefits that a FTM electric storage system incurs on the distribution system, and that these tariffs exempt front-of-the-meter energy storage systems from charges intended for customers who consume electricity (as storage is not consuming energy, but participating in a sale for resale). In doing so, the BPU will help steer New Jersey EDCs toward devising rate designs that account for the unique operating profiles and associated distribution system costs and benefits of energy storage systems.

VII. Program Eligibility, Adjustment Mechanisms, and Project Maturity Requirements

SEIA and NJSEC understand why Staff proposes that storage developers must select between the NJ SIP or the forthcoming Competitive Solar Incentive Program (CSI), given that the CSI program is designed to incentivize solar-plus-storage projects. However, the ADI program contains no incentive for energy storage. Thus, we ask BPU to clarify that a project with less than 5 MWac of solar paired with storage can participate in both the ADI and the NJ SIP, with the ADI program providing incentives for the solar portion of the solar+storage project and the NJ SIP providing incentives for the storage portion of the solar+storage project. Additionally, SEIA and NJSEC request that BPU clarify that any site with an existing solar installation can add storage under the SIP. Indeed, there are existing solar assets from prior to the ADI program that can be retrofitted with energy storage under the SIP to help meet NJ's energy storage target.

To achieve the energy storage goal of 2,000 MW of installed energy storage by 2030 and further encourage storage deployment that accelerates the clean energy transition, including the adoption of electric vehicles, SEIA and NJSEC recommend not limiting participation in a pay-for-performance mechanism to only projects that reserve capacity in the declining block fixed incentive. This is of particular importance if the BPU does not increase initial capacity size or carve-out capacity for the residential market segment, as customers foreclosed from the fixed upfront incentive may still be interested in participating a pay-for-performance mechanism patterned off of the ConnectedSolutions program utilized in Connecticut and Massachusetts.

Additionally, Staff recommends a $2/kWh decrease in annual payments between each block. In a vacuum, SEIA and NJSEC does not oppose this. However, while Staff notes that by starting with relatively small blocks the NJ SIP can protect against excessive rate impacts, we note that an adjustment mechanism designed to decrease annual payments by $2/kWh in between each block, coupled with a program design that embraces small intra-year capacity blocks, may result in developers not having a clear understanding of what incentive rate they would qualify for. SEIA and NJSEC would prefer larger blocks, even if that means moderately reducing the initial upfront incentive and/or moderately increasing the $/kWh decrease in annual payments between each block, such as a $5/kWh reduction between blocks.

Furthermore, SEIA and NJSEC agree that a declining block incentive provides the Board flexibility to establish block sizes, reset incentive levels (if necessary), and adjust programmatic elements on an annual basis, as needed, to meet policy goals and cost considerations. We agree with Staff's proposal that any adjustment to the NJ SIP program be made at the same time as adjustments to the ADI Program and that the NJ SIP go through a One-Year Check Up, similar to the Year 1 Review process for the ADI Program, to review the performance of the NJ SIP twelve months after initiation to ensure progress is being made toward the state's goal to achieve 2,000 megawatts (MW) of installed energy storage by 2030.

SEIA and NJSEC agree with the proposal to implement a non-refundable $1,000 per MW of nameplate capacity participation fee but recommend exempting projects serving low-and-moderate income (LMI) customers in addition to projects serving public entities. We also agree that projects be required to meet one of the following criteria at the time they reserve MW capacity in a block: (i) demonstrate a sufficiently advanced position in the PJM queue (taking into account the realities of the ongoing PJM interconnection reform process, we recommend having commenced a System Impact Study from PJM or the equivalent of an Impact study analysis under PJM's queue reform), (ii) demonstrate a comparable interconnection position in a state-jurisdictional queue, or (iii) for BTM projects, demonstrate conditional approval of their utility interconnection request, along with a signed letter of intent with the host location.

However, as was noted in Docket No. QO21010085, N.J.A.C. 14:8-5 was also not designed with storage in mind. Therefore, we recommend that the NJ Grid Mod Initiative explicitly incorporate findings from the Building a Technically Reliable Interconnection Evolution for Storage (BATRIES) Toolkit and Guidance for the Interconnection of Energy Storage and Solar-Plus-Storage (Toolkit), which was released on March 28,

2022.[4] The BATRIES project convened utility and energy storage stakeholders from across the country to identify the key barriers to energy storage interconnection and develop consensus based recommendations for how to address those barriers in interconnection procedures. Revising N.J.A.C. 14:8-5 to incorporate best practices from the BATRIES toolkit should result in standard interconnection applications for energy storage projects and provide standardized equipment requirements as well as commissioning/interconnection approval process including timeline and costs.

However, SEIA and NJSEC recommends that the BPU also allow distribution connected FTM storage interconnection to go through a process managed by the EDC's. FERC has already set a precedent for this, ruling that certain distributed energy resources do not need to go through ISO interconnection.[5] Given ongoing delays at PJM and the recent precedent at FERC, the BPU should consider a mechanism that allows for a larger quantity of the Grid Supply portion of the NJ SIP to come online quicker.

Finally, we recommend that there be no prohibition on commencement of construction of the storage project contingent on receiving the NJ SIP to avoid further lengthening of the project development cycle. There will undoubtedly be approval delays when the SIP becomes available and those should not gate projects from being able to be built. Connecticut initially required program approval prior to installation, but removed that requirement during the first year due to the delays it was causing for customers.

Energy Storage for Low-and-Moderate Income Customers and Customers in Overburdened Communities

SEIA and NJSEC strongly support designing the NJ SIP to increase access for low-and-moderate income customers and those in overburdened communities. LMI customers and overburdened communities often experience more frequent, and longer-duration, outages than wealthier areas. Additionally, they are less able to mitigate the financial and health impacts of frequent or prolonged power outages. To reach these populations, the SIP program design must be intentional in overcoming barriers to participation so that low-income ratepayers are able to actually benefit from the programs they are contributing to.

The BPU should set a target for LMI and Overburdened Community participation. Setting a target is important to create a clear metric by which success can be determined. The target should be set to be aligned with state energy goals. Measuring performance against the target will be helpful during program reviews to determine whether the incentive levels are adequate, if barriers to participation remain, and if the market is adequately serving these communities.

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[4] Interstate Renewable Energy Council, et. al, *Toolkit and Guidance for the Interconnection of Energy Storage and Solar-Plus-Storage* (March 2022) (Toolkit), downloadable at https://energystorageinterconnection.org/.

[5] See *ISO New England Inc.*, 180 FERC ¶ 61,129 (2022), Order Accepting Tariff Revisions re ISO New England Inc. et al. under ER22-2226, https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20220826-3066&optimized=false

The SIP should have a separate capacity block for LMI customers and Overburdened Communities. Providing energy storage to LMI customers and Overburdened Communities is challenging and will likely take longer for the market to develop. A separate capacity block reserved for these customers will provide sufficient runway so that developers can adjust their business models and ensures that LMI customers are able to access appropriate incentives. It is critical that the LMI customer and overburdened communities block, as well as the base residential incentive blocks, are always open for applications.

Without a separate capacity block, higher income households will reserve the initial capacity in the program leading to reductions in the incentive amount for both standard and LMI residential customers—even if there was no participation from LMI customers. Each reduction in the incentive level will make it harder for LMI customers to participate and ultimately will result in LMI customers having to wait years for the cost of energy storage to come down before being able to benefit from the program that they are contributing to. It is important that the LMI incentive is reduced over time based on actual LMI participation, and not based on the participation of non-LMI customers. Finally, reserving capacity specifically for LMI customers will help ensure that New Jersey is able to achieve its energy equity target discussed above.

The fixed incentive level for LMI customers should be approximately twice the value of the base residential incentive. In addition to a capacity set aside, LMI customers will require a higher incentive in order to participate in the SIP. Serving LMI customers is more expensive due a number of factors including increased structural costs, electrical panel upgrades or bringing the home up to code, higher financing costs, customer credit worthiness, and marketing challenges.

Additionally, energy storage, while saving customers money in the long run, often has high upfront costs even after accounting for federal and state incentives. Higher-income households are able to bear the higher initial cost and deferral of savings in order to receive the value of backup power. That is not true for LMI households. LMI households typically install solar in order to achieve immediate savings on their utility bills and if storage cannot be added while still providing some savings, they will be unlikely to do so. In most cases, LMI customers are only able to qualify for solar based on their expected savings because they would not qualify under traditional underwriting standards.

Under the fixed incentive framework presented in the Straw Proposal, we recommend that the incentive value for LMI customers be set at twice the initial residential fixed incentive rate. This would align with the program design in the Connecticut Energy Storage Solutions program. Additionally, we recommend that for LMI customers the fixed incentive be paid all upfront at an equivalent value instead of over 10 or 15 years. Providing the incentive all upfront would be ideal to overcome the cost barrier for low-income customers and ensure the full value of the incentive can be passed through to customers.

The SIP should have clear and reasonable criteria to ensure that the higher incentives are for projects actually serving LMI customers. Requiring individual household income verification has been shown to be a challenge in solar and energy storage programs across the country, particularly when tax returns or other statements of income are required. Some programs allow the use of award letters from other income-eligible assistance programs which does reduce the administrative burden for customers,

developers, and program administrators. Finally, some programs identify specific geographic areas which are eligible for the higher incentive such as the Connecticut Energy Storage Solutions and Residential Renewable Energy Solutions Programs. However, the broader a geographic area is, the less certain the benefits are actually being provided to LMI customers.

We recommend that there be three pathways to qualify for an LMI and Overburdened Communities Adder ($/kWh) to the fixed portion of the incentive for low-income customers and customers in underserved communities. First, projects should be able to qualify based on being located in certain census tracts that are designated as Overburdened Communities. These could be based on the census tracts that are eligible for the Investment Tax Credit Low Income adder or some other state-specific list. The qualifying census tracts should be publicly available so that it is clear whether a project would qualify. Second, LMI customers across the state should be eligible for the adder if they participate in other income-eligible programs or utility programs. This would ensure that all LMI customers across the state are able to participate. Third, there are ongoing conversations with the BPU and legislature about allowing LMI residential customers to self-attest to income for participation in community solar programs. If this policy is adopted, this same mechanism of self-attestation should be allowed to qualify for an LMI energy storage adder.

It is premature to allow EDC ownership of behind-the-meter storage for LMI customers and Overburdened Communities. Several commentors during the stakeholder workshops suggested that the EDCs could play a role in owning behind-the-meter storage for LMI customers and Overburdened Communities. This allowance is unnecessary, particularly at the start of the program, given the potential support provided by the SIP and the federal investment tax credit bonus credits. It should not be assumed the market will fail to serve these customers before the program has even begun, and EDC involvement could have a chilling effect.

Additionally, energy storage projects for LMI customers should be exempt from the non-refundable participation fee of $1,000 per MW of nameplate capacity to not dissuade LMI customer-sited storage.

VIII. The NJ SIP Should Include an Extension Policy Modeled After the ADI and CSI Program

Staff proposes that Grid Supply storage projects be required to reach commercial operation within three years, that distributed storage projects receive 18 months to reach commercial operation, and that extensions are not allowed under the proposed program. While the combination of maturity requirements and commercial operate date requirements proposed in the straw is reasonable, precluding the opportunity for good-faith extension requests will result in higher financing costs and business uncertainty.

The failure to include an extension policy is also imprudent in light of supply chain issues already constraining US energy storage industry growth and PJM Interconnection Queue Reform's slow pace of progress. Rolling forward projects not completed on time for legitimate reasons will impact project economics negatively, especially if the BPU does not increase the size of the capacity blocks and late projects face a steep decline in their incentive relative to what they had initially planned to receive. Put

simply, the lack of an extension policy will erode confidence in program participation and undermines the BPU objective that developers having a clear line-of-sight to the size of the incentives and a clear understanding of what incentive rate they would qualify for.

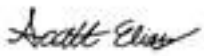
Moreover, the failure to include an extension policy is also likely to result in ad-hoc individual petitions before the board, leading to increased and inefficient staff time responding to such petitions, as has occurred under the Transition Incentive Program.

If the BPU's intent is to promote deployment of private capital by establishing a stable market structure that attracts low-cost capital, SEIA and NJSEC strongly recommend that the BPU reconsider this recommendation, and, at a minimum, adopt a streamlined process for projects that received a notice of conditional registration to request one six-month extension to their registration expiration date, consistent with the ADI Program and CSI Program Extension policy.

Conclusion

SEIA and NJSEC appreciate the hard work by BPU to design an energy storage incentive program and believes these comments capture recommendations that will help ensure that the program best guides New Jersey toward achieving its statutory mandate for 2,000 megawatts (MW) of installed energy storage by 2030 in a manner that attracts the deployment of private capital, accelerates the clean energy transition, supports overburdened communities, and provides benefits to both the grid and NJ ratepayers at large. Collectively, these recommendations will ensure that New Jersey takes another step forward as a national clean energy leader. Thank you for considering these recommendations.

Sincerely,



Scott Elias
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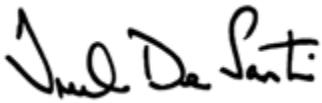
Solar Energy Industries Association



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