



Docket No. Q020020184, Solar Successor Program

Joint Comments of the Solar Energy Industries Association and the New Jersey Solar Energy Coalition

Comments

May 27, 2021

Introduction & Overview of Comments

The Solar Energy Industries Association (“SEIA”) and the New Jersey Solar Energy Coalition (“NJSEC”) are pleased to submit the following comments on the New Jersey Solar Successor Program Straw Proposal (Straw Proposal). We appreciate the hard work and leadership from the BPU Staff in developing this proposal. We further appreciate the open dialogue with you and your staff throughout this process. We look forward to working with the BPU to ensure that the final Successor Program is a durable solar incentive program that puts the State on a path toward meeting its goal of 100% clean energy by 2050, balances ratepayer impacts, and supports a thriving and stable solar industry.

SEIA is the national trade association for the United States solar industry. 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 20% 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. 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.

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.

The stakes are very high. The Integrated Energy Plan modelling conducted to support the Energy Master Plan suggests “that New Jersey should install 5.2 GW of solar by 2025, 12.2 GW by 2030, and 17.2 GW by 2035.”¹ If presented on an annual basis, the EMP also shows New Jersey needing to install more than 950 MW per year, or a threefold increase over installation rates during the previous five years. SEIA and NJSEC’s comments underscore our member companies’ collective commitment to maintaining New Jersey’s national leadership position in solar and achieving these targets. All types of solar, and all types

¹ New Jersey Energy Master Plan, January 2020. At 124.

of New Jersey's solar customers, must be supported in order to make those aggressive targets a reality. However, the current straw proposal from the BPU staff falls short. We have genuine concerns that if the following recommendations are not adopted, the Successor Program will fail to live up to its potential of supporting the continued growth of the solar industry in New Jersey or achieving the Murphy Administration's Energy Master Plan goal of 17 GW solar deployed by 2035.

Our comments are organized with an opening narrative section explaining our positions followed by specific answers to the questions posed by the BPU. These answers are designated using [blue text](#). Unless otherwise specified, failure to comment on any specific question should be interpreted to mean that our organizations do not take a position on the matter at this time.

Overall Program Design

SEIA and NJSEC generally support the Straw Proposal's recommendation to establish a bifurcated Solar Successor Incentive Program in which there are administratively set fixed incentives for smaller, distributed projects and incentives based on competitive solicitations for larger projects. Specifically, we support staff's recommendation to roll forward several key program design elements from the Transition Incentive Program as the heart of the Successor Program, such as a differentiated, fixed incentive payment for each megawatt-hour (MWh) produced by an eligible solar system for 15 years, starting from the date the project receives permission to operate (PTO). We also support the recommendation to align the start of the Successor program with the start of the permanent community solar program. However, while SEIA and NJSEC agree with many elements of the proposed bifurcated Successor Proposal, critical matters such as substantially low initial incentive values in the administratively determined incentive program, the absence of location and off taker-based adders, overly restrictive solar siting requirements, lack of clarity around the competitive solicitation program, and few details on pairing storage with solar projects together undermine the Successor's ability to fully promote market growth across all segments of the solar industry in New Jersey. Further, we believe that projects on contaminated lands and the proposed dual use pilot program should be part of the administratively set program and not the competitive solicitation program.

Administratively Determined Incentives for All Net Metered and Community Solar Projects

SEIA and NJSEC believe that all net metered systems should be part of the administratively set program – it can take a year or more to negotiate a PPA with a customer and requires establishing customer savings. Under a competitive solicitation model, a developer does not know the level of incentive or whether the incentive will be available to them, making it nearly impossible to even begin this negotiation. Absent this, we appreciate and support staff's revision of the limit from 2MW to 5MW and urge Staff to set this at 5MW ac.

SEIA and NJSEC appreciate that BPU's intent is to ensure that ratepayers are providing the minimum necessary financial incentive to develop diverse types of projects consistent with maintaining a healthy solar industry in New Jersey. However, while the Cadmus report noted the importance of evaluating initial incentives relative to those in the Transition Incentive program to avoid significant market disruption in the transition to the successor program, the Straw's proposed initial incentive levels in Year 1 are too low to make projects economically viable, especially for the non-residential solar and community solar market segments. As a matter of policy, SEIA and NJSEC strongly urge the BPU to adhere to the principle of gradualism and consider a declining cost trajectory over the first few years to allow the market to adjust.

Per the Staff's updated recommendations on May 7th, we support Staff's recommendation under Point #2 to set a separate incentive value for systems 2MW and under and those over 2MW. We ask Staff to clarify in their Point #3 of this memo that the market segment is Net Metered Non-Residential 2MW or less and not 1MW or less as written in the memo.

SEIA Recommends Incentive Adders for Project Configurations that Meet Public Policy Objectives

SEIA and NJSEC appreciate that the new incentive program is proposed to be designed to provide solar producers differing financial incentives tied to the estimated cost and revenue expectations for different types of solar facilities. However, as the BPU notes, the Successor must be sufficiently robust to rapidly expand upon the existing 3.5 GW of installed solar and quickly scale new solar generation to approach these goals. It is imperative that incentives have sufficient value to spur increased customer savings, and customer solar adoption, but the incentive values as proposed are insufficient to achieve those programmatic objectives. For these reasons, we recommend that the BPU adopt several adders (in \$/MWh) for different types of solar projects, based on location, off-taker, or some other criteria that aligns with the State's public policy objectives. We recommend off-taker-based adders such as a low-income and environmental justice communities, as well as public entities, and location-based adders for desirable land uses (i.e., on contaminated land, floating solar, dual-use agriculture, pollinator-friendly, and canopy/carports).

The Successor needs to facilitate solar development of all kinds in the most cost-effective manner in order to achieve the Energy Master Plan solar targets. As the densest state in the country, New Jersey has an acute need to maximize solar development on the existing built environment, especially surface and garage parking canopies/carports. Canopies and carports will be essential infrastructure when building out a resilient electric vehicle charging network. And, canopies change the character of parking lots by managing stormwater run-off and reducing heat island effects. Adopting adders from the onset of the Successor will further embed NJ's preferred siting and state policy objectives within the Successor's program design and better incorporate the market realities of developing different types of solar projects, including those that have broader environmental benefits but come at a cost premium in design and construction.

For similar reasons, we caution against requiring that contaminated lands participate in a competitive solicitation program. If solar on contaminated lands is a state policy preference, an incentive structure that is both fixed and known in advance will better provide the greatest financial certainty and transparency to solar developers to engage in these riskier and costlier projects. To encourage further solar development on contaminated lands, we recommend allowing these projects to participate in the administratively fixed incentive program with a location-based adder, in addition to allowing larger grid supply subsection t projects to participate in the competitive solicitation.

Community Solar Permanent Program

SEIA and NJSEC agree with the Straw Proposal's recommendation to align the start of the Successor program with the start of the permanent community solar program and to include community solar within the administratively set incentive program. We appreciate the BPU's consideration of two primary options for the implementation of a permanent program and recommend Option 2, which eliminates the annual competitive solicitation and instead implements a first-come, first-served model, subject to an annual MW-or cost-based cap.

However, as noted previously, we have concerns with the initial incentive value set for community solar, which could undermine project economics and the ability for community solar to be a critical tool for increasing equity and justice in our energy system, helping traditionally underserved communities' benefit from the state's transition to a clean energy economy. We agree with the BPU's proposal for an increased incentive level for community solar projects that are LMI projects, which is necessary to fully encourage the growth of an equitable community solar program in New Jersey that covers the additional costs of developing LMI community solar projects and ensures that marginalized communities receive the benefits and bill savings associated with community solar. However, we also stress the importance of location and off taker-based adders, which would not only align the Successor program with the Board's emphasis on preferred siting within the community solar program, but also the market realities of encouraging development on preferred siting.

To this end, SEIA and NJSEC support authorizing farm operations to co-locate solar on their property while still maintaining agricultural production. Limiting the dual use program to the competitive solicitation would be a missed opportunity for dual use community solar projects to help save farms across New Jersey, as they have elsewhere across the country.² While we understand that a dual-use program may be available on a limited scale from the onset, SEIA and NJSEC strongly recommend that "dual-use" projects be allowed to be considered within the administratively set program with a location-based adder, which will help cover the costs for developing dual use agricultural projects that permit continued farm production. Doing so will allow community solar development to play a critical role in preserving farmland in New Jersey.

Additionally, it is apparent that the BPU assumes the community solar capacity will remain at 150 MW per year. While it may be reasonable to begin the community solar permanent program with this capacity, we encourage the BPU to consider gradually increased capacity allotments for community solar during the proposed three-year reviews that empower the Board to adjust the long-term programmatic elements of the Successor to meet policy goals and cost considerations.

For the most part, SEIA and NJSEC support rolling over the Pilot Program rules into the Permanent Program. However, as we have argued to the BPU previously, we support implementing consolidated billing as an option for community solar subscriber organizations and specifically support the option for net crediting for community solar to enhance participation and decrease market risks. We also believe that the BPU should consider forming a Billing and Crediting working group, made up of representatives from the EDCs, Subscriber Organizations, and Commission staff, to tackle implementation issues around the billing process on an ongoing basis. Consolidated billing is complex, and, as we have seen it successfully unfold in other states, it will require both time and a great deal of stakeholder collaboration.

Developing a Viable Dual-Use Pilot Program

SEIA and NJSEC also appreciate the BPU's suggestion to pilot a program for solar projects that are compatible with agricultural uses. However, we find the BPU's proposal to define dual-use solar energy generation as overly restrictive. We recommend that the BPU introduce more flexibility to accommodate a range of beneficial agricultural uses, ranging from row crop production to animal grazing that might not take place directly below panels, as well as allowing for a wider diversity of farming sites – including preserved farmland in addition to unpreserved farmland – to be allowable land use categories under the

² <https://www.seia.org/research-resources/how-community-solar-supports-american-farmers>

dual use agriculture program. Indeed, dual-use, as outlined in the National Renewable Energy Laboratory's 2013 technical report, *Overview of Opportunities for Co-Location of Solar Energy Technologies, and Vegetation* can include promoting vegetation growth not just under, but also around the solar installation.³

While we agree with BPU's suggestion that a cross-agency team further define the pilot program and develop technical rules for dual-use farmland standards, we stress the importance of ensuring that developer feedback is incorporated in the establishment of these rules and guidelines and that these rules allow for flexibility in dual use applications and best incent the solar industry to partner with landowners and assist the farming community.

We believe that all dual-use projects in the pilot program should be incentivized with a location-based adder through the administratively set program, regardless of size. It is not appropriate to compensate dual-use solar through a competitive solicitation because it is a new technology within New Jersey's incentive program, and costs specific to the state are not yet well defined. Moreover, developers bidding dual-use projects into a competitive solicitation would be incentivized to adopt a "least cost" approach, which would undermine certain types of agrivoltaics and row crops underneath panels that BPU seeks to explore. Rather, we suggest using the Community Solar Pilot program as a model for developing a viable dual-use pilot program, with an annual capacity limit for the first year. This would maximize the ability to allow dual-use solar projects to participate in the permanent community solar program and allow the pilot program to be structured in a way to experiment with and justify the higher risks and costs for solar developers involved in installing and operating dual use projects.

While we understand that technically developers can file a petition to receive permission to site a solar facility on a specific parcel of land that is in an area that is otherwise not permitted, we believe that dual use solar projects, or solar projects compatible with ongoing productive agricultural or horticultural use, ought to be explicitly allowed to proceed on the very best soils to maximize the potential of dual use agricultural production. Furthermore, dual-use should not only be explicitly allowed on prime agricultural soils, but should be a preferred siting category within the permanent community solar program, and in general. The barrier to entry into the Community Solar program is already extremely high, and dual-use should be on a level playing field with other preferred project types.

Competitive Solicitations for Grid-Supply Projects

SEIA and NJSEC share the Board's interest in developing robust grid supply projects in New Jersey. Given the state's ambitious environmental and clean energy goals, significant deployment at scale will be needed to support the decarbonization of the grid. We support the Straw's recommendation to establish a bifurcated incentive program in which incentives are based on competitive solicitations for larger projects, but maintain that only non-net metered, grid connected projects should be subject to competitive solicitations.

We also support the BPU's recommendation that there be separate solicitation tranches to allow like projects to compete against like projects. However, we believe it is inappropriate to combine rooftops, the built environment, landfills, and contaminated sites into a single "desirable land uses" tranche given

³ [NREL: Overview of Opportunities for Co-Location of Solar Energy Technologies and Vegetation](#)

the vast differences in project costs for these very different project types. These categories should be separated so they can compete fairly against projects with similar costs and development challenges.

The straw proposal calls for a fixed incentive for the competitive solicitation but requires projects to remain merchant in the energy market in order to provide greater benefits to ratepayers. While we acknowledge the Board's emphasis on driving projects to maximize the value of their energy and capacity by participating in the wholesale market to make up a portion of their revenue, the uncertainty of the revenue stream will create financing hurdles for developers. As a first step, we recommend increasing the REC off-take from a term of 15-years to 20 years. However, while a 20-year lock of the REC value would be an important first step, we have seen historically across the country that a bundled contract is the most successful way to ensure large-scale project deployment.

If the Board is unable to provide a bundled PPA for large scale projects, we believe the most appropriate mechanism is the indexed REC approach adopted in New York's Solicitations for Large-Scale Renewables.⁴ Under this concept, a developer does remain merchant for energy and capacity, but the state commits to indexing the REC against the inevitable changes of wholesale market prices. If energy and capacity prices go up, the REC value goes down, and vice versa. The indexed REC approach ensures developers are providing benefits to ratepayers by selling their services into the wholesale market but are given the certainty by the state needed to finance and develop in confidence.

Under this mechanism, a developer would bid in their all-in or "strike price." The strike price reflects the dollar amount that the project needs to be economic. NYSERDA uses the information provided by the developer to model what the embedded prices are likely to be based on forecasted wholesale market prices and selects the most competitive projects.

While we agree with the recommendation to include high project maturity requirements and "skin in the game" to participate in the competitive solicitation process, we note that the maturity requirements should match the program design. For example, if a project bids in an energy storage component in the solicitations but it does not get selected, removing the storage would potentially trigger a material modification with the project's PJM interconnection application. The tradeoff for maturity requirements is the need for the Board to provide transparency and clarity over the likelihood of a competitive project being selected at the configuration studied in the interconnection process.

Incentivizing solar paired with storage both behind and in front of the meter

SEIA and NJSEC wholeheartedly endorse the inclusion of a storage incentive in the Straw Proposal. It is our position that solar customers participating in the Solar Successor program should be able to deploy co-located systems from the beginning of the program in order to embrace the economies of scale that come with permitting, interconnecting and financing both systems simultaneously. Energy storage is a highly flexible grid resource that can be harnessed through intelligent rate design and utility tariffs in order to improve how the electric grid operates for the benefit of ratepayers.

While we appreciate BPU's recognition of the symbiotic relationship between solar and energy storage, limiting New Jersey's energy storage policies to only grid supply solar + storage hybrids turns a blind eye

⁴ See [January 16, 2020 NYPSC Order Modifying Tier 1 Renewable Procurements](#), whereby the PSC directed NYSERDA to offer bidders an Index REC price option in future RES solicitations, as well as [NYSERDA's 2021 solicitation](#)

to the resiliency benefits of customer-based solar paired with storage. If New Jersey is hit with another Superstorm Sandy-type event, solar and storage that provide back-up power will become life-saving for NJ residents. Solar and storage can be deployed not only on homes, but also at emergency shelters across the state. New Jersey's businesses can also benefit, as the solar and paired storage systems can reduce their demand charges. That directly translates to lower peak demands across the distribution grids, as the highest day-time energy users can reduce their own peak loads. SEIA and NJSEC urge the BPU to adopt policies that reflect how energy storage, especially when paired with solar, can best increase electric reliability and resiliency across the state for its ratepayers.

We understand that the BPU envisions the energy storage incentive as a separate program and that its costs would not count towards total RPS compliance cost, but that complication of administering a program should not be an obstacle to offering New Jersey ratepayers the benefits of energy storage. We maintain that an incentive should be available from the onset of the Successor Program's implementation and be available for both behind the meter (BTM) and grid-scale solar+ storage projects. Failure to do so would be a missed opportunity to leverage the solar successor program to launch a BTM energy storage market and a further deviation from incremental progress towards the state's statutory goals of 600 MW of energy storage by 2021 and 2,000 MW of energy storage by 2030.

For energy storage paired with solar projects that qualify for the administratively determined incentive program, we recommend marrying the solar REC with an upfront rebate incentive. We have seen in successful programs across the country that an upfront incentive in the form of a \$/kWh based on the stored energy capacity of the system is the most effective way to deploy energy storage behind the meter, particularly when paired with optimization-focused tariffs or programs. Energy storage on customer sites have the ability to reduce capacity costs for the utility during peak hours, increase resilience at the customer level, and reduce the need for new generation.

Deploying BTM energy storage resources in a nascent market like New Jersey includes significant soft costs related to permitting, interconnection, financing, and customer acceptance. Even though hardware costs are going down, nearly half of the costs at the beginning are made up of soft costs. We recommend that the Board replicate the success of other successful incentive programs by providing an initial \$350/kWh incentive for the first tranche of incentives for BTM storage in the administrative set program. This is aligned with New York's energy storage incentive, California's Self-Generation Incentive Program (SGIP), and energy storage incentives being considered in other states such as Illinois. The Board can decrease the incentive amount as storage deployment increases, but it is critical that the step down occurs in tranches that have a significant amount of megawatts in order to realize soft cost savings.

SEIA and NJSEC recognize the Board is interested in deploying BTM assets that support the grid and provide a net benefit to ratepayers. This can be achieved through rate design and utility tariffs which send market signals to optimize the use of energy storage assets to provide demand response through a Bring-Your-Own-Device program, clean peak capacity, or other grid services, which improve grid reliability and help achieve the state's energy targets. Additionally, these BTM resources could be aggregated as virtual power plants as suggested in the Straw Proposal. Rate design, tariffs and mechanisms to enable virtual power plants may take significant time to develop, and the lack of such programs now should not be used to delay deploying energy storage assets in the state. In fact, using the successor program to deploy energy storage resources will allow for the necessary time to develop and implement optimization programs or tariffs while also creating a resource base able to immediately participate in those programs when ready.

One example of a program that could be adopted in New Jersey is the Bring-Your-Own-Device program, ConnectedSolutions, in Massachusetts which is included in the utility 3-year energy efficiency plans. This Daily Dispatch program pays for the performance of energy storage resources during specific periods of high demand as signaled by the utilities. This type of program has proven effective in providing value for all ratepayers, and much of the groundwork has already been done in other states.

We offer a different approach for energy storage paired with solar projects eligible for the competitive solicitation. Building off of our recommendation for an indexed REC approach, the Board can adopt the same process for energy storage bids as NYSERDA does. Under this approach, developers bid in a separate \$/kWh price for the storage (the incentive amount would be multiplied by the number of hours that is the duration of the system). The Board could cap the incentive at a certain duration, for example, six hours. Systems with durations beyond that cap would still be able to participate but would not receive the additional incentive for the hours beyond the duration cap. Developers would also be required to submit a narrative on how they anticipate using the energy storage. The Board could consider requiring that storage be sized as a percent of solar, but it is critical that not all systems be configured the same. Flexibility is critical as different parts of the grid require different configurations.

We recommend that the BPU use the same auction mechanism described for the competitive solicitation for solar for the energy storage incentive. Solar bids would be evaluated first, without consideration of the storage incentive. After the winning solar bids are selected in accordance with the BPU's budget-based capacity cap, the storage bids that are attached to the selected solar bids would be ordered from lowest to highest \$/installed kWh incentive, up to a predetermined energy storage capacity target. We recommend that the BPU have a *separate* allocation for energy storage, that this energy storage target be based on MW capacity, and that the incentive be available for any of the competitive solicitation tranches. If the energy storage capacity target is not met after all bids are cleared, the remaining unused capacity should be added to the energy storage capacity target for the following year.

We believe that this is an elegant approach that leverages the Solar Successor Program to launch an energy storage market that will provide significant value to the state and note that because energy storage incentive payments do not count towards total RPS compliance costs, the BPU has additional flexibility in program design to meet New Jersey's goal of 2,000 MW of energy storage by 2030.

Establishing Reasonable Solar Siting Requirements

The Straw Proposal introduces an entirely new siting and land use structure to align the goals of encouraging renewable energy development and promoting stewardship of New Jersey's natural resources and open spaces.

While we agree with BPU's suggestion that staff, collaborate with the Department of Environmental Protection (DEP), the Department of Agriculture (NJDA), and the State Agriculture Development Committee (SADC) to adopt rules and regulations establishing siting criteria and preferences for all solar projects sited in New Jersey in a timely fashion, we stress the importance of ensuring developer feedback is incorporated in the establishment of these rules and guidelines and that BPU carefully consider ecosystem services in the context of protecting New Jersey's valuable natural capital. While it is unlikely that any single document can anticipate every possible scenario or project configuration, it is imperative that these rules and regulations be as clear and explicit as possible and that BPU maintain a waiver process

where a developer can petition the Board and make their case for why they ought to be allowed to site a solar facility on a specific parcel of land that is otherwise not permitted.

SEIA and NJSEC respectfully ask the BPU to reconsider its intention to allow no more than 5% of the grid supply solar facilities planned on unpreserved farmland to be located within any county's designated Agricultural Development Area and consisting of prime agricultural soils and soils of statewide importance. Indeed, an important but far too-often overlooked distinction that must be made when discussing land use in the solar industry is the impermanent nature of solar installations. If the Successor Program is to succeed at quickly scaling new solar generation and creating a viable grid-scale solar market segment, it is critical that the Board appreciate the fact that land which hosts a solar array can retain its fundamental character and after 2-3 decades of producing clean, carbon-free energy can be returned to future agricultural use.

As stated before, it is critical that we recognize that in agricultural areas, the choice is not between farms and solar arrays – the choice is more often between solar arrays and subdivisions, or strip malls. It is a choice between permanently transforming the land to a non-agricultural use or choosing to contract with a Solar company which will drill holes in less than 1% of the footprint of their arrays to drive temporary posts on which the panels will sit for several decades while preserving the land underneath for future agricultural use. Moreover, the stable long-term revenues that a solar lease can provide to an agricultural landowner often contribute positively to helping family farms remain in the family.⁵

Additionally, while we actively support agricultural and pollinator friendly solar development, we urge the Board to reconsider proposed requirements that a solar facility must utilize pollinator-friendly native plant species and seed mixes in accordance with standards established by DEP for participation in the competitive solicitation program. Our member companies are increasingly utilizing pollinator-friendly seed mixes on projects where it is economically feasible to do so and ecologically appropriate.

However, though promoted as useful to community acceptance of proposed solar projects, our member companies have increasingly found over the past two years that the proliferation of Pollinator Scorecards and requirements around native plant species and seed mixes have become a significant barrier to solar deployment. The BPU should not assume that a one-size-fits all native plant species and seed mixes requirement works for grid-supply projects and we urge BPU to be clear about what counts as pollinator-friendly, or “local” or “native” (which can vary by state and region) in any proposed standards. Flexibility is key. Widely available, low-growing, seed such as clover provides substantial benefit to pollinators but may not be considered local or native. “Native” and “local” seed mixes may entail substantial cost increases, may grow to heights that are incompatible with grid-scale solar projects, and may not be widely available.

Additionally, we maintain that a pollinator-focused requirement fails to consider other types of ecosystem services that a solar project can provide. Such services may include improved soil health because of pausing agricultural use for solar production, increased carbon sequestration, reduced erosion, and improved water retention on the site.⁶

⁵ See North Carolina Sustainable Energy Association, [North Carolina Solar and Agriculture](#), p 9 (“solar installations generate about 30 percent of the income of a whole farm while occupying about 20 percent of the land”).

⁶ See, [Modeling the ecosystem services of native vegetation management practices at solar energy facilities in the Midwestern United States](#)

Moreover, a pollinator-focused approach fails to consider whether such plantings are the most appropriate for the project site or the local bio-region. For this reason, we urge BPU to balance the desire to provide native perennial vegetation and foraging habitat beneficial to gamebirds, songbirds, and pollinators with the added upfront cost of using pollinator friendly seed and consider the inclusion of a location-based adder for the use of pollinator-friendly native plant species and seed mixes.

We further appreciate staff's proposal to use "contaminated" as a replacement for the term "brownfield" and to allow marginal lands that may be contaminated or polluted, but which are not technically brownfields, to qualify for the preferred siting portion of the competitive solicitation. However, we request that projects sited on contaminated land are not excluded from the administratively fixed program and maintain that development sited on "contaminated" land is best incented through the creation of a location-based adder.

Clarity in the Determination and Appropriate Calculation of the Statutory Cost-Cap

Arguably the biggest issue facing the solar industry in the Solar Successor Program is clarity in the determination and appropriate calculation of the Clean Energy Act of 2018's Statutory Cost Caps. During the BPU's stakeholder workshops, Gabel Associates raised reasonable questions based on analysis grounded in reasonable assumptions that begs the question as to whether there is, or should be, more cost cap headroom than what BPU is currently proposing. We believe that the Gabel Associates criticism of how BPU proposed to calculate the cost cap and proposed alternative modeling by recognizing off-setting grid benefits and solar customer savings persuasively suggests there is adequate headroom under the cost caps for higher incentive and capacity levels than contained within the Straw Proposal.

First, as renewable energy supplants fossil fuels, the merit order or "price stacking" of fossil resources being brought into play becomes more efficient as the highest cost resources are eliminated sequentially as renewable resources replace these fossil generation sources. Clearly, this has a negative impact on the locational marginal price that then gets factored into utility costs lowering customer cost. While the staff straw made a reasonable attempt to include these factors, we believe that they have made several errors in making these calculations. In fairness, we believe that staff needs to revisit these calculations and give due consideration to the data presented by the work of Gabel Associates. In addition, we believe that staff has neglected to include the cost savings associated with solar customer's use of non-grid supplied energy as an offsetting cost in the cost cap calculation.

In addition, board staff has proposed that it would not include the environmental and health benefits associated with the social cost of carbon and other pollutants in calculating the cost cap. The straw has, however, estimated that carbon has a value of \$29 per megawatt hour, and sulfur dioxide, nitrogen oxides, and particulate matter (PM2.5) also for the PJM region could have an approximate value of \$41 per megawatt hour.

This policy action is completely inconsistent with the board's own legal arguments before the Federal Energy Regulatory Commission to include the value of these externalities in the minimum offer pricing rules debate. In addition, it is inconsistent with board policy associated with the 2% mandated reduction in utility energy efficiency, and inconsistent with the recent application of these same principles in the zero-emission credit order supporting our continued use of nuclear power in New Jersey.

SEIA and NJSEC respectfully request that staff revisit these calculations in what would be a more accurate and meaningful balancing of ratepayer costs and benefits.

These modest modeling recommendations suggest that the BPU can provide adequate incentives to fully pursue the Murphy Administration's renewable energy goals and realize annual savings below the cost cap. This means that the BPU can indeed embrace the principle of gradualism and has the flexibility necessary to reduce incentive amounts over the first few years to allow the market to adjust instead of beginning with such a steep reduction in incentive values that runs the considerable risk of significant market disruption to New Jersey's robust solar industry.

Transitioning from the TI Program to the Successor Program

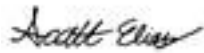
We appreciate the BPU's thoughtful approach to closing the Transition Incentive (TI) Program and opening the Successor Program. Specifically, we appreciate that the administratively determined incentive for residential net metered projects and non-residential net metered projects that are 5 MW or less will immediately be able to register for the administratively determined incentive. We further appreciate the BPU's clarification that projects with existing registrations or that registered before the date of the TI program closure will remain eligible for the TI program and that TI projects that fail to meet in-service date requirements will not forfeit the right to incentives, but simply transition into a comparable segment in the Successor Program where they will be given priority or automatic entry.

Furthermore, we appreciate Staff's recognition that Subsection (t) projects have no successor incentive until the competitive solicitation is finalized and support Staff's recommendation that a temporary administratively determined program be made available for projects located on contaminated lands, to be open approximately 3 months from the day of the close of the TI program. However, we would argue that if BPU limits the administratively determined incentive program to net metered projects that are 5 MW or less, non-residential net metered projects that exceed 5 MW will similarly have no successor incentive until the competitive solicitation is finalized. For this reason, we encourage the BPU to broaden its proposed temporary administratively determined program beyond projects on contaminated land so that large net metered projects are also eligible for this temporary administrative program.


Conclusion

We appreciate the hard work by BPU to design a durable successor solar incentive program and believe these comments capture recommendations that will help ensure that the Successor Program will continue to create jobs in the New Jersey, support local economies, and help businesses, homeowners, schools, hospitals, and local governments save on their electricity bills. SEIA and NJSEC strongly recommend that the BPU embrace gradualism and reconsider the initial administratively determined incentive values, particularly for the commercial solar, carports, and community solar market segments, implement location and off taker-based adders, and implement a robust storage incentive for solar paired with storage both behind and in front of the meter. Furthermore, if New Jersey is serious about facilitating a viable grid-scale market segment, further refinement of the competitive solicitation program design must take into consideration financing hurdles for developers and the need for reasonable siting requirements. Collectively, these recommendations will help ensure that New Jersey maintains its place as a national leader in solar and achieves the state's aggressive clean energy goals. Thank you for considering these recommendations.

Sincerely,



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Part II- Answers to Specific BPU Questions.

Overall program design: Staff proposes to establish a bifurcated Solar Successor Incentive Program in which residential projects, community solar projects, and non-residential net metered projects 2 MW or smaller are offered an administratively set \$/MWh incentive. All other projects would participate in the competitive solicitation.

1. Please comment on the benefits and consequences of this suggested division. Does this program design provide a pathway to maximizing solar development while minimizing ratepayer costs and supporting the industry? Please explain and include alternative suggestions if you believe there is a better approach that Staff should consider.

SEIA and NJSEC generally support the Straw Proposal's recommendation to establish a bifurcated Solar Successor Incentive Program in which some projects participate in an administratively set program and some in a competitive solicitation. Specifically, we support staff's recommendation to roll forward several key program design elements from the Transition Incentive Program as the heart of the Successor Program, such as a differentiated, fixed incentive payment for each megawatt-hour (MWh) produced by an eligible solar system for 15 years, starting from the date the project receives permission to operate (PTO). We also support the recommendation to align the start of the Successor program with the start of the permanent community solar program. However, while we agree with many elements of the proposed bifurcated Successor Proposal, critical matters such as substantially low initial incentive values in the administratively determined incentive program, most particularly as they relate to carports and commercial projects, the absence of location and off taker-based adders, overly restrictive solar siting requirements, lack of clarity around the competitive solicitation program, and few details on pairing storage with solar projects together undermine the Successors ability to fully promote market growth across all segments of the solar industry in New Jersey. We also believe that projects on contaminated lands and the proposed dual use pilot program should be part of the administratively set program and not the competitive solicitation program.

Administratively determined incentive for small net metered and all community solar projects

2. Please comment on the proposed breakdown of market segments in the administratively set program (e.g., net metered residential, net metered non-residential rooftop and canopy, net metered non-residential ground mount, community solar, and LMI community solar). Would you suggest any changes, and if so, why?

SEIA and NJSEC do not agree that the threshold for larger projects participating in the competitive solicitation should be 5 MW.

Rather, we recommend that non-net metered, grid connected projects should be subject to competitive solicitations. As SEIA suggested in our response to the Capstone Report, whether a system is net metered should be the dividing line between projects subject to competitive solicitations since solar systems serving customers can and should be sized to load.

From a business perspective, it is impossible for developers to meaningfully engage in complex and lengthy power purchase agreement negotiations with an off-taker without knowing the revenue streams that will be available from state incentives.

We therefore caution against creating an arbitrary upper limit for the size of net metered systems as a criterion for participation in the competitive solicitation program. However, if Staff determines that net metered projects above a certain size should be part of the competitive solicitation program, we appreciate and support staff's revision to increase the eligibility threshold from 2MW to 5MW and urge Staff to set this at 5MWac.

3. As currently proposed, all net metered projects in the administratively set program would qualify for an incentive of \$85/MWh for the first three-year period (EY 2022-2024); community solar projects would qualify for an incentive of \$70/MWh, and community solar LMI projects would receive an incentive of \$90/MWh. Please comment on these proposed incentive levels and if you disagree, please reference specific concerns with the modeling or historic performance assumptions used to develop the proposed levels.

SEIA and NJSEC believe that some of the incentive values under the TREC program were too high. We also support the general concept that incentive levels should decline over time, but our member companies believe that the proposed incentive level for commercial systems and community solar is substantially too low. And, in the case of carports the level of proposed incentives would simply close this market completely in New Jersey.

SEIA and NJSEC urge Staff to reconsider the proposed incentive level of \$85 for net metered nonresidential projects of 2 MW or less, which is nearly a 50% reduction in value from the current TREC incentive of \$152. Without an increased initial value, our member companies believe that this market segment will stall. Similarly, SEIA and NJSEC members have expressed concern with the initial incentive level of community solar, especially if the permanent program is only open to LMI projects located on preferred siting, which requires additional compensation to justify the higher risks and costs for solar developers. Currently proposed incentive levels of \$70 for non-LMI and \$90 for LMI community solar represent approximately a 45% and 30% cut from TREC values, respectively. This is likely to cause disruption in that market segment and is unlikely to support many community solar projects on preferred sites unless paired with sufficient location and off-

taker based adders that reflect the market realities of development on preferred siting in New Jersey. SEIA and NJSEC note that preferred siting is not simply a goal for the community solar program—it is essentially a prerequisite under the Board’s current and proposed program design.

As a matter of policy, we urge the BPU to adhere to the principle of gradualism and set a declining cost trajectory for these segments – reducing the incentive amount over the first few years to allow the market to adjust.

With regards to specific concerns with modeling assumptions, we have not performed an exhaustive analysis of the assumptions but point out that the yield assumptions in the Base Scenario for both ground and roofmounted commercial projects are too high; the yield assumptions in the Sensitivity Scenario are much more realistic of what companies experience, although still slightly on the high side. Additionally, customer savings assumptions are unrealistically low, given the current market environment. We understand that this is a policy decision and urge the BPU to take a gradual approach to reduce customer savings assumptions over time in order to allow the market to adjust.

We understand the desire of Staff to take conservative positions on modeling inputs in setting the incentive levels, but the compounding effect of multiple conservative assumptions has yielded incentive levels for this segment that are unworkably low.

To deliver benefits of solar generation, every solar project needs to compensate a site owner and a capital provider for contributions of real estate and capital, respectively. In the case of landlord-owned BTM projects, project incentives and avoided utility cost in the range of \$0.04/kWh-\$0.08/kWh accrue to one entity as it is acting as both site owner and capital provider. Under the TPO model, project incentives and avoided utility cost benefits get bifurcated and delivered to the landlord (in the form of electricity cost reduction) as compensation for siting solar and to the capital provider as compensation for investment of capital. In either case, costs to build and operate projects are the same and, as such, projects require the same level of incentives regardless of the ownership model. It is not feasible to build a sustainable solar market with incentive rates sized to satisfy a small subset of project landlords who enjoy very low cost of capital paired with ability to monetize federal tax benefits. While such entities exist, their capacity to cost solar is inadequate to satisfy even a fraction of the state’s goals.

Furthermore, we understand the BPU’s desire for administrative simplicity, but also recognize that because New Jersey rate design varies significantly between utilities, a single statewide rate may result in over- or under-payments in some service territories, or clustering of solar development in areas where the rate is attractive and little development in other areas. Therefore, instead of setting incentive rates using Public Service Electric and Gas Company (PSE&G) retail rates revenue assumptions, SEIA recommends using statewide average utility rates by market segment in setting the incentive rates in the administratively determined incentive program. This will support BPU’s desire to not differentiate market segments by utility territory for ease of administration in the initial program design while keeping open the possibility for tailored incentives based on each service territory in later years.

4. The Straw proposes that selected projects would receive a 15-year qualifying life, consistent with the TI Program. Staff seeks comments on whether this is the appropriate term due to the nature of heavily discounting outer-year incentives, as well for consistency with the proposed

competitive solicitation program. Please comment on this proposal and explain any alternative suggestions.

We agree with the 15-year qualifying life for the administratively determined incentive program.

5. Staff proposes to establish annual capacity allocations for each market segment on an annual basis, as discussed in the Cost Cap section. The annual program capacity allocation would be divided (by four) into a quarterly allocation. Developers would then be able to reserve a spot within each quarter's capacity allocation.
 - a. Staff proposes to allow projects to reserve capacity against the quarterly capacity allocation on a first-come, first-served basis. Please provide any comments on this proposal.

In general, provided that the applicant meets pre-established eligibility requirements, SEIA and NJSEC agree that capacity should be awarded on a first-come first-served basis. However, the Board should establish clear rules or guidance that allows developers to fix problems in their reservation application before applications are rejected.

While we appreciate the BPU's desire to set market segment targets in three-month increments or windows to avoid a situation in which a given market segment may fill up immediately upon opening, depriving projects of any opportunity to receive an incentive until the window re-opens, we note that this situation in other states is not an apples-to-apples comparison. For example, in MA, SREC II closed in 2017 and SMART did not open until late 2018. More than a year of pent-up demand and projects waiting around for a new program is fundamentally different than the situation the New Jersey solar industry finds itself in with a TREC program that remains open and a proposed seamless transition between the TREC program and the administrative-set program for residential, community solar, and net metered projects. For these reasons, a quarterly window may be unnecessary and indeed unworkable for the residential solar industry, whose sales pipeline can be severely harmed by arbitrary gaps in capacity availability.

- b. Staff anticipates that there may be situations in which a quarter's allocation becomes over-subscribed. How should the Board handle over-subscription?

Staff should establish a waiting list for projects, and award capacity when it is available.

- c. What different or additional measures could the board take to ensure that there is sufficient opportunity to participate in the incentive program throughout the year?

SEIA and NJSEC would first recommend that any unused capacity from other market sectors be transferred to accommodate any market sector that might temporarily exceed its allocation in a given year. Inasmuch as the start of the competitive solicitation program will likely not create incurred costs toward the cost cap until sometime in energy year 2023, 300 MWs of budgeted unused capacity will result. This capacity should be deemed fungible particularly since these costs would not result in the exceedance of the budget or cost cap. The use of this unused capacity would be particularly important for the residential market segment which relies heavily upon maintaining a robust pipeline to maintain a stable work force in a short business cycle that runs 60-90 days in length.

SEIA and NJSEC disagree with Staff's suggestion to open the program capacity on a quarterly basis and instead recommends that all of the capacity be opened at the beginning of the year. This will allow for smoother program operations, less administrative burden on both the BPU and the solar industry, and better allow for natural fluctuations in business cycles throughout the year. We also urge Staff to maintain a waiting list of projects once capacity has been allocated each year. This minimizes disruption to the industry from any gaps in incentive availability and also minimizes administrative burden of managing a potential flood of applications on the first day of opening of new capacity.

While transparency is always important, it is even more important when the available capacity is limited. SEIA and NJSEC urge the BPU to maintain a publicly available dashboard detailing the exact amount of remaining available capacity in each segment and update this dashboard at least once a week.

6. Concern of "ghost projects" or "queue sitting" threatens the productive functioning of the incentive program. Please comment generally on the slate of project maturity requirements as proposed on page 13 of the Successor Straw or suggest alternative bidding requirements, including minimum criteria to demonstrate project maturity, site control, or escrow amounts to discourage speculation.

SEIA and NJSEC generally agree with strict project maturity and timeline requirements, but this must be balanced with flexibility for extensions for all issues beyond the developer's control. Once a project is mechanically complete, it should be exempt from interconnection delays and other issues beyond their control. Requirements that are too strict run the risk of chilling the market as developers are not willing to run the risk of missing a deadline due to something beyond their control. As the amount of solar on the grid increases, interconnection issues will become more complex and likely require longer construction timelines by the EDCs to achieve PTO status. Developers should be exempt from requesting extensions when they can certify mechanical completion.

SEIA and NJSEC believe that 12 months is too short of a timeline for commercial projects – most of the projects would ask for the extension due to normal course of business. We urge the BPU to extend the timeline to 18 months, with the opportunity to apply for a 6-month extension without the need to post an additional 10% deposit. The 10% deposit requirement does not seem to serve any public policy purpose and comes at a time when project financing is critical.

Furthermore, SEIA and NJSEC urge the BPU to use milestones that are within the developer's control when measuring whether the project has met its 18-month deadline or the deadline of the 6-month extension. Again, we recommend that the BPU use Mechanical Completion as defined by paperwork being submitted to the utility for Permission to Operate.

Similarly, SEIA and NJSEC support project maturity requirements for the community solar program, but the Board should ensure that maturity requirements for the Successor are aligned with requirements for the community solar program. Under the current competitive process, project maturity requirements for community solar are limited, and if that model continues,

under the currently proposed requirements awarded community solar projects will not be ready to immediately register for the Successor. If the Board decides to move to a first-come-first-served model, as SEIA and NJSEC recommend, then the Board should align the requirements of the incentive and the community solar program to the extent practicable.

7. Staff proposes that projects awarded within a quarterly window pay a fee to the program administrator to cover the costs of administering the program. The fee would vary based on project size (under 25 kW, between 25 kW and 500 kW, and over 2 MW). Please comment on what fee should be required for the three project sizes.

The fee for systems under 25kW should be no more than \$50-\$75. Larger projects should be charged no more than \$25 per kWac.

8. Staff proposes that developers seeking an extension beyond the initial 12-month deadline must submit a deposit, refundable upon project completion, equal to 10% of the project cost and not to exceed a value determined with stakeholders. Please comment on how Staff should determine the deposit fee for a deadline extension request.

As noted in answer to question 6, SEIA and NJSEC believe that 12 months is too short of a timeline for commercial projects and urges the BPU to extend the timeline to 18 months, with the opportunity for a 6-month extension without the 10% deposit. After all, once a project is far enough along in construction after 18 months as certified in milestone reporting, what policy purpose is served by demanding a 10% deposit for a needed extension to complete work?

9. Staff proposes to set incentives every three years to provide market certainty. However, using an administratively set incentive risks the potential for market under or over performance in any particular sub-market. What measures could be used to stop an overheated market and prevent inefficient use of incentive funds? Should the Board consider implementing measures such as a declining block structure, downward adjustments on the quarterly capacity allocation for the market segment, or others? How should the Board consider and assess market underperformance?

SEIA and NJSEC support the concept of a full-scale review of the administratively set incentives every three years but recommends that the BPU also review the incentive program once a year to ensure progress is being made toward state goals. This “quick review” would afford the BPU staff an opportunity to recommend adjustments to incentives based on unforeseen factors – such as COVID 19, new federal policy, or significant market underperformance as defined by more than 25% under market segment allocation goal levels. Any decrease in incentive levels that would result from such review should also be implemented at least 6 months from a decision to allow the market time to respond.

10. What are the benefits and consequences of allowing or prohibiting behind-the-meter projects in non-EDC territories to register in the Successor Program?

Clearly, non-EDC territories would be defined or restricted solely to New Jersey’s seven municipal electric systems. In these circumstances it would be unfair to offer residential customers or businesses within these municipalities incentives derived solely from New Jersey’s EDC

ratepayers. We would recommend, however, that if these municipal systems would want to participate in the successor solar incentive program that these municipalities create “rider” charges equal to the EDC societal benefits charges, and that these funds be paid into the societal benefits fund. In addition, other important energy conservation and efficiency programs funded through the societal benefits program would then become an available resource for these communities.

Competitive solicitation model for all grid supply projects and large net metered projects

11. Staff proposes to divide the competitive solicitation into four tranches to allow like projects to compete against like projects. The four tranches are designed to enable the Board to set policy preferences through the design and project requirements of the tranches, thereby enabling cost to be the single deciding factor in awarding bids in each tranche.
 - a. Please comment on the overall approach of using a cost-based bid determination within the four described tranches, rather than a single solicitation with a Staff-led scoring process, such as is currently used for the Community Solar Energy Pilot Program. What eligibility or other solicitation criteria could be established to enable competitive bids from a diversity of project types and market segments with divergent cost structures?

SEIA and NJSEC support the BPU’s recommendation that there be separate solicitation tranches to allow like projects to compete against like projects. However, we strongly believe that it is inappropriate to combine rooftops, the built environment, landfills, and contaminated sites into a single “desirable land uses” tranche given the vast differences in project costs and development challenges for these very different project types.

We recommend that the BPU evaluate bids against pre-established criteria, with price being the major driver for project selection, but also taking into consideration the in-state economic development impacts of the projects, the proposing firms experience in building similar projects, and whether the project has reached major development milestones.

- b. Please comment on the four proposed tranches: basic (i.e., open space) grid supply; desired land use (e.g., contaminated land, built environment); solar + storage; and net metered projects greater than 2 MW. Is this the optimal configuration for the competitive solicitation? Would you suggest any changes?

As stated before, SEIA and NJSEC do not believe it is appropriate to combine rooftops, the build environment, landfills, and contaminated sites into a single “desired land use” tranche. We believe that contaminated lands should be within the administratively determined program, however, if Staff decides they will stay within the competitive solicitation program, we support Staff’s May 7th updated recommendations that projects located on contaminated lands should compete in their own separate market segment in the competitive solicitation.

Furthermore, we believe that the storage incentive we have proposed can and should be available for any of the competitive solicitation tranches ultimately established by the BPU.

12. Staff proposes to hold an annual competitive solicitation. Please comment on this proposed schedule. Specifically

a. Would you advise running the solicitations more or less often, and if so, why?

SEIA and NJSEC recommend that New Jersey holds at least annual solicitations for large scale projects for an established number of MW per year.

b. Can all four tranches be administered on the same schedule, or should one or more be run more or less often than the others?

Based on the fact that solar developers may be involved in participating in more than one tranche, it might make for a smoother process to stagger the solicitations over a six-month period.

c. Should the program vary the solicitation frequency schedule based on liquidity in any given tranche? For example, if a given tranche fails to attract sufficient bids in one period, should the program provide extra time before holding the next procurement in that market segment?

Yes, however these details might be best determined after the solicitation consultant's report is filed later this year.

d. Staff is particularly interested in determining if the net metered tranche should run more often than the grid supply tranches, and if so, why.

SEIA and NJSEC are opposed to any competitive solicitation for net metered projects for reasons already posited, herein.

13. In the interest of procuring the maximum amount of solar energy and the lowest possible price, Staff requests feedback on whether projects awarded within the competitive solicitation should be paid-as-bid or receive a single clearing price.

On the one hand, a single clearing price mechanism protects market participants against gaming behavior by bidders and protects against low-ball bids entered simply to win awards. On the other hand, single clearing prices set for the last MW that clears an auction paid to all bidders can also result in windfalls to developers that have considerably lower costs. On balance, and given the cost cap restrictions, a pay-as-bid system coupled with strong project maturity requirements for bidders should avoid over-payment to bidders, avoid windfall profits and ensure projects reach completion. However, SEIA and NJSEC look forward to engaging in BPU's stakeholder process to further refine the competitive solicitation design.

14. Staff proposes that selected projects would receive a contract for REC off-take in a term of 15 years, due to the nature of heavily discounting outer-year incentives, as well for consistency with the administratively determined program. Please comment on this proposal and explain any alternative suggestions.

For competitively bid grid scale projects, SEIA strongly recommend firms submit bids of RECs, energy and capacity and execute those agreements directly with the EDCs. This approach has proven to provide low-cost power to utilities and would be a prudent cost saving approach given

the cost caps. While we acknowledge the Board's emphasis on driving projects to maximize the value of their energy and capacity by participating in the wholesale market to make up a portion of their revenue, the uncertainty of the revenue stream will create financing hurdles for developers. A twenty-year lock of the REC value would be preferable to 15 years, but we have seen historically across the country that a bundled contract is the most successful way of ensuring deployment. A bundled contract (RECs, energy and capacity) drives down the cost of the project and generally improves the financing for solar projects, decreasing the impact on ratepayers when compared to other procurement options. If the Board is unable to provide a bundled PPA for large scale projects, SEIA and NJSEC believe the only other alternative is the indexed REC approach adopted in New York's Solicitations for Large-Scale Renewables.

15. Staff proposes that projects applying to the competitive solicitation must post a deposit equal to \$40/kW of DC nameplate capacity of the solar facility in an escrow account. Projects proposed with energy storage would be required to place an additional deposit of \$40/kW of nameplate capacity of energy storage offered. The escrow amount would be reimbursed to the applicant in full upon either (i) the project not being awarded a contract through the competitive solicitation, or (ii) upon attainment of PTO for the solar electric power generation facility. If a project is selected, the escrow will be forfeited to the State on a pro rata basis for any kW capacity that remains unbuilt after 2 years, plus any applicable extensions.
 - a. Please comment on the proposed deposit fee(s) as they relate to the solar facility, whether it should be lower or higher, and why.

SEIA and NJSEC support a deposit amount that is high enough to discourage bids from projects that are unable to materialize. However, we believe that the deposit should be capped at \$40,000 for any project irrespective of size in accordance with the current statutory limitation.

- b. Please comment on the proposed deposit fee(s) as they relate to the storage facility, whether it should be lower or higher, and why.

SEIA and NJSEC do not see the purpose of an additional deposit for the storage bid. It serves no policy goal and would dissuade bidders from including energy storage bids, which is clearly an important policy goal.

- c. The Straw Proposal seeks to ensure both strict project maturity requirements as well as general program accessibility. Please comment on whether the deposit should be required upon initial application or upon acceptance of a bid. In the alternative, should the Board require a lower deposit for initial application, followed by the balance due upon award?

SEIA and NJSEC recommend that the deposit be required with the application, in order to ensure that projects that are selected are ones that will build. If project deposit is required at the time of selection, the program may encourage immature projects that will not be able to be built.

16. The Straw proposes to include a tranche restricted to hybrid systems (solar and energy storage) in the competitive solicitation. Staff seeks commentary on the following:

- a. The Straw proposes establishing a \$/MWh incentive for hybrid systems would be administratively simpler than establishing separate contracts for the storage and solar components. Please comment on this approach.

We agree that a separate incentive for the energy storage component in the competitive solicitation is an appropriate approach to encouraging hybrid systems. We note that the incentive should be based on duration, meaning that the \$/installed kWh would be multiplied by the duration of the energy storage system to reflect the variation in battery system costs based on the duration of the system.

- b. How should the competitive solicitation account for battery degradation? For example, should applicants be required to commit to minimum performance metrics in order to qualify for the solicitation? Should applicants be required to commit to maintaining their stated capabilities until the end of the term? What criteria and documentation should the program administrator require as evidence?

SEIA and NJSEC recommend that manufacturer's battery degradation data be filed with the application setting performance standards and commitments based upon anticipated performance as documented by the manufacturer at the time of application.

- c. Please address how the competitive solicitation should normalize bids associated with different MW and MWh capabilities. Should the Board require pricing based on specific battery sizes to enable clear bid comparisons, or should the Board allow flexibility?

In our proposal, the competitive solicitation would first determine which solar projects will receive an incentive. After selecting the solar projects, the storage bids associated with those solar projects would be selected up to the megawatt cap for storage for that solicitation. Given that a \$/installed kWh is multiplied by the duration of the battery, that would be the differentiator for different durations.

- d. Please comment on the potential for allowing distributed storage developers to place offers that aggregate a pool of distributed resources into a single "virtual power plant" bid that can participate in the grid supply paired with an energy storage tranche. Please address whether this is technically feasible for implementation in the first round of auctions or whether it should be deferred for possible consideration in future development cycles.

SEIA and NJSEC wholeheartedly endorse enabling the aggregation of energy storage devices in order for a system to participate in a Virtual Power Plant program. We note that VPPs created from behind the meter assets are based on rate design and utility tariffs that can be created and modified over time. As such, deploying VPP configurations from the start is appropriate.

We also note that due to continuing delays in PJM's implementation of Order 2222, it may be impractical to develop a program that allows aggregations to effectively compete in the first solicitation. We encourage the board to explore this issue further in both the upcoming competitive solicitation stakeholder process and any subsequent storage-only proceeding.

New Programs and Technologies

17. For solar projects proposed on farmland that allow for continued farming on the same parcel, known as “agrivoltaics” or “dual-use programs,” is it likely that there is a market for dual-use projects smaller than 2 MW, or should Staff presume that all dual-use projects would be larger and enter the competitive solicitation?

It should not be assumed that all dual-use projects will exceed 2 MW in size. Moreover, SEIA and NJSEC maintain that all dual-use projects should be incentivized with a location-based adder through the administratively set incentive program, regardless of size.

18. If dual-use projects are permitted into the competitive solicitation in future years, should they be permitted as a fifth tranche or into the basic grid supply tranche with an adder? If with an adder, how should the Board determine the adder?

It is not appropriate to compensate dual-use projects through a competitive solicitation because it is a new technology within New Jersey’s incentive program, and costs specific to the state are not yet well defined. Rather, we suggest that all dual-use projects are incentivized with a location-based adder through the administratively set incentive program.

19. Should additional siting restrictions be established for dual-use projects, for example, by limiting dual-use projects only to farms that meet certain soil characteristics or that are used for a certain type of herding, grazing, or crop type?

No, SEIA and NJSEC do not believe additional siting restrictions should be established. Rather, we believe there should be less restrictions to allow for a diverse range of farmers and agricultural uses and that the BPU should consider expanding eligibility to include preserved farmland in addition to unreserved farmland.

20. What rules and regulations should be established to ensure either no loss, or a reasonable loss, of agricultural productivity for dual-use projects? What should be considered a “reasonable loss” of agricultural productivity?

We do not have a comment at this time.

21. Are there additional solar technologies or use cases for which this Successor Straw has not yet considered that may be considered for the Successor Program, either now or in the future? Please explain.

We do not have a comment at this time.

Solar Siting

22. Please comment on Staff’s proposed methodology for (a) limiting solar development on the areas specified on page 20 and (b) establishing a path forward for projects seeking to be developed on desired land uses that fall within otherwise prohibited siting areas.

SEIA and NJSEC appreciate that Staff has outlined waiver process where a developer can petition the Board and make their case for why they ought to be allowed to site a solar facility on a specific parcel of land that is otherwise not permitted, but we respectfully asks BPU to reconsider its intention to allow no more than 5% of the grid supply solar facilities planned on unpreserved farmland to be located within any county's designated Agricultural Development Area and consisting of prime agricultural soils and soils of statewide importance. We also urge Staff to reconsider the stipulation that a project shall utilize native plant species and seed mixes as a requirement for participation in the competitive solicitation program. SEIA and NJSEC fear that overly strict siting requirements will be a significant barrier to facilitating grid-scale solar deployment, which the BPU is counting on to meet the Murphy Administration's Energy Master Plan goal of 17 GW solar deployed by 2035.

23. Has Staff overlooked any siting categories for which solar development should be either expressly prohibited or otherwise limited as described in the Successor Straw and noted in the question above?

We do not have a comment at this time.

24. Has Staff overlooked any siting categories for which solar development should be considered a desired land use?

Staff should consider relatively new land uses for solar development, such as floating solar, on former mines, and use of pollinator-friendly seed mixes within the desired land use.

25. How should Staff consider relatively new land uses for solar development, such as floating solar, former mines, and quarries? Others?

We do not have a comment at this time other than that these relatively new land uses should be considered a desired land use and that BPU should consider the creation of location-based adders that justify the higher risks and costs for solar development on these desired but relatively new land uses.

26. Please comment on a proposed methodology for qualifying "contaminated lands." Please cite objective federal or state standards

We do not have a comment at this time.

Section IV: Megawatt Targets

27. Should the annual capacity targets for the administratively set program be set broadly for the whole program, or should the administratively set program be further sub-divided into market segments with individual cost caps? In other words, should the Board set cost caps for the residential sector, net metered commercial rooftop, net metered commercial ground-mount, etc., or simply allocate a certain amount of money to the whole net metered program? Staff notes that the community solar segment will have its own cost cap.

SEIA and NJSEC agree with the need for minimum set-asides for the residential and small commercial sectors to allow development of a diverse solar industry, however, we do not see a

reason for non-residential net metered projects to be further differentiated by whether they are ground mount or rooftop projects. As we also have posited previously, unused capacity from other market sectors or the competitive solicitations at the end of a given year should be transferred and allocated to keep potentially closed market sectors open and working to avoid layoffs.

28. Should the annual capacity targets for the competitive solicitation tranches be set with flexible parameters, such that the Board may accept more or fewer projects into any particular tranche based on viable project applications and pricing, as long as the total projects accepted into the competitive solicitation don't exceed the overall annual budget cap?

The budget cap should be flexible enough to accommodate viable projects with good pricing rather than lose these projects to an arbitrarily set budget cap.

29. Please comment on Staff's proposed megawatt targets for the first year (EY 2022) (see page 22).

The proposed megawatt targets have been based upon historical build rate averages that fall far short of creating the level of solar construction required to meet the future goals of the administration.

Section V: Cost Cap Calculation

30. Staff proposes to include the total amount of expenditures by electricity customers on annual retail bills and the costs associated with all net metered and other solar projects – whether host-owned or third-party owned – when calculating the denominator of the cost cap, as to accurately reflect the total amount of money paid by New Jersey customers for electricity (see details beginning on page 24 for details).
- a. Do you agree with Staff's proposed categories for inclusion? Should any category be omitted? Has Staff overlooked a category that should be included?

SEIA and NJSEC believe that board staff would have created a more accurate calculation of the DRIPE merit order calculation had it used the Aurora or similar simulation model in the calculation of the numerator. This electric market simulation model is used more extensively and is forward looking rather than regressive in its modeling approach. Using this modeling we calculate that the staff modeling understates the DRIPE impacts by a factor of 8 times. In addition, the numerator should have included a reduced number properly reflecting the customer savings of all on-site customers who realize savings.

The denominator in the staff calculation does not include Cogeneration costs from currently operating facilities in New Jersey, solar PPA costs or other host owned costs. These costs along with the successor program costs, OREC costs reflecting far higher capacity factors, and electric rate escalators that reflect EIA Annual Energy Outlook 2021 data all need to be added to the denominator of the calculation.

Finally, the staff straw proposal offers no environmental and health benefits that it has taken a lead role in arguing to include in its legal actions against the FERC MOPR. Board staff has considered these attributes in other proceedings including its policy in energy efficiency cost benefit calculations, and most recently in its recommendation to approve the PSEG filing for

zero emission credits. It is inexplicable that the staff straw would consciously omit these significant cost factors in its calculations.

- b. Please comment on the sources of information, calculations, and assumptions underlying the categories

Please see answer to question 30a above.

31. Please consider the benefits and consequences of using the moving three-year average of annual electricity demand versus annual amounts in calculating and forecasting the annual cost cap percentage.

Clearly, the impacts of a three-year moving average on annual electricity demand will dampen any rapid changes in the cost cap calculation impacting job losses. This is preferable to annual calculations which could drive further instability to the workforce. However, if board staff reconsidered the reasonable calculation adjustments discussed in the previous question, there would be no need to consider this demand calculation option.

32. For the purposes of forecasting future electric costs to estimate the cost cap in later years, Staff proposes using a 0.5% growth factor based on consumption patterns, presumptive expenditures for future and continued clean energy incentives, such as energy efficiency programs, ORECs, and ZECs, as well as increased demand due to vehicle electrification in particular, and cost declines due to increasing energy efficiency. Please comment on Staff's assumptions.

This question alone clearly frames the great variability in cost cap calculations that can arise from varying assumptions, and the virtual impossibility of making assumptions that will all ultimately prove to become accurate. While a 0.5% growth factor may be a reasonable factor to apply, these layered assumptions could easily flip to a much higher growth rate particularly with the increased use of electricity for transportation.

33. Staff proposes to include the following elements in calculating the numerator of the cost cap to reflect the cost of incentives paid by ratepayers: the annual costs of SRECs, TRECs, and Class I RECs, minus the DRIPE benefits of solar (see section beginning on page 29 for details).
 - a. Do you agree with Staff's proposed categories for inclusion? Should any category be omitted? Has Staff overlooked a category that should be included?

See answer to question 30a above.

- b. Please comment on the calculations and assumptions underlying each of the components of the cost cap

See answer to question 30a above.

- c. How should the Board consider the assumed annual value of SRECs, which is not fixed?

The Board should consider the value of the SREC market based upon their adoption of the Market Balancing Mechanism as has been advanced by the industry. This would provide a pricing curve not very much different than what the staff has posited in the straw

proposal, however, it would provide for additional stability as that market closes over time.

Section VI: Implementing the Successor Program and Transitioning from the Transition Incentive Program

34. Please comment on the Staff proposal that, following the close of this stakeholder process, the Board will issue an Order directing Staff to close the Transition Incentive Program within 30 days. After that 30-day period, the administratively set program will open immediately. The competitive solicitation is targeted to commence in the second half of 2021. Staff notes that there will be a seamless transition for residential, community solar, and net metered projects at 2 MW or less, but there will likely be a gap between the end of the TI Program and the start of the competitive solicitation that will affect large net metered and grid supply projects.

SEIA and NJSEC appreciate BPU's thoughtful approach to closing the Transition Incentive (TI) Program and opening the Successor Program. Specifically, we appreciate that the administratively determined incentive for residential net metered projects and non-residential net metered projects that are 5 MW or less will immediately be able to register for the administratively determined incentive. We further appreciate BPU's clarification that projects with existing registrations or that registered before the date of the TI program closure will remain eligible for the TI program and that TI projects that fail to meet in-service date requirements will not forfeit the right to incentives, but simply transition into a comparable segment in the Successor Program where they will be given priority or automatic entry.

Furthermore, we appreciate Staff's recognition that Subsection (t) projects have no successor incentive until the competitive solicitation is finalized and supports Staff's recommendation that a temporary administratively determined program be made available for projects located on contaminated lands, to be open approximately 3 months from the day of the close of the TI program. However, we would argue that if BPU limits the administratively determined incentive program to projects that are 5 MW or less, projects that exceed 5 MW will similarly have no successor incentive until the competitive solicitation is finalized. For this reason, we encourage the BPU to broaden its proposed temporary administratively determined program beyond projects on contaminated land to include large net metered projects as well.

Ensuring State Policy Priorities

35. Should "adders" or "subtractors" be used to further differentiate incentives by project attributes in both the administratively set incentive program and the competitive solicitation, only one program, or neither? Explain why.

Yes, SEIA and NJSEC recommend that the BPU adopt several adders (in \$/MWh) for different types of solar projects in both programs, based on location, off-taker, or some other criteria that aligns with the State's public policy objectives. SEIA recommends off-taker-based adders such as a low-income and environmental justice communities, as well as public entities, and location-based adders for desirable land uses (i.e., on contaminated land, floating solar, dual-use solar, pollinator-friendly, and canopy/carports). Adopting adders from the onset of the Successor's program design and better consider the market realities of developing different types of solar projects, including those that might be preferred to the state but come at a cost premium in design and construction.

36. Would adders make the administratively set incentive program too complex when coupled with the anticipated differentiation envisioned for residential, non-residential roof, non-residential ground, community solar LMI, and community solar non-LMI? How could they be used most effectively?

No, we do not think that adders would make the program too complex – projects in the above-mentioned categories could choose different adders. In fact, it would strengthen BPU’s ability to articulate preferred siting and aligns incentives with the State’s public policy objectives. A variety of adders will also encourage a wider range of system types and subsequent benefits to be realized by a broader range of customers across the state, including marginalized and disadvantaged communities, commercial and industrial customers, farmers, and Towns and Municipalities.

37. Should the administratively set incentive program include an adder for projects that benefit environmental justice communities? For the competitive solicitation? If so, should there be criteria to select the projects with the highest benefits? How can “benefits” for these communities be quantified?

SEIA and NJSEC support the concept of an adder for projects that benefit low-income and environmental justice communities. We recommend looking at the Low-Income Generation Units Guideline that is part of the Solar Massachusetts Renewable Target (SMART) Program and engaging with environmental justice communities in designing the criteria, which should be open to both the administratively set incentive program and the competitive solicitation in the form of an adder.

38. How else could the Board consider designing the program to encourage broader participation among traditionally underrepresented groups?

SEIA and NJSEC maintain that the transition to a clean energy economy must be centered around justice and equity for all Americans and support communities that have historically been left behind. As noted in SEIA’s [*Solar Industry Policy Principles on Environmental Justice & Equity*](#), public buildings and other infrastructure can provide low-cost opportunities to install community solar projects or other clean energy investments that directly support frontline communities. Indeed, the call for a Public Entities off-taker based adder reflects the fact that public multi-family housing developments, libraries and other municipal buildings, and public schools can leverage their rooftops, land and other resources to provide affordable clean solar energy to be used either onsite or offsite.

Furthermore, the Board should consider partnering with community-based organizations on implementation and marketing of available incentives to ensure they reach the desired audience and build upon the existing trust and relationships from those who already provide services to traditionally underrepresented communities.

Lastly, we recommend the BPU review program participation statistics for low-income and environmental justice communities during the three-year program reviews, and, if necessary, revise the program to enhance low-income and environmental justice participation.

Section VII: Community Solar Permanent Program

39. Please comment generally on whether the Board should consider maintaining the competitive solicitation for community solar projects in the Permanent Program, or if it should adopt strict qualifications and otherwise establish a first-come, first-served model (detailed as Option 1 and Option 2 on pages 40-41).

SEIA and NJSEC recommend Option 2, which eliminates the annual competitive solicitation and instead implements a first-come, first-served model, subject to an annual MW-or cost-based cap. This model can achieve the Board's policy goals for the program, reduce the administrative demands of the current model, while also providing greater certainty to the market and a more efficient development process.

As stated above, we support including strong project maturity requirements under this model. However, the Board should carefully consider the exact requirements for interconnection progress in light of the current process challenges that the Board has rightly recognized. Given those challenges and the large volume of interested community solar projects in Years 1 and 2 of the program, it is reasonable to assume that the EDCs would struggle to keep up with demand if projects were required to have a full interconnection study completed. While we generally support what the Board has proposed, it should be evaluated in light of what is currently possible, and potentially modified after the Board has taken the expected action to modernize the state's interconnection processes.

40. Please comment on the Pilot Program rules (detailed beginning on page 41) and discuss which, if any, the Board should consider modifying for the Permanent Program, and why.

SEIA and NJSEC generally support the Pilot Program rules but respectfully suggests the following changes. First, the Board should continue to evaluate whether the current rules for LMI verification are working and appropriate. While the Board recently took positive steps to improve this process, our members feel the process would be improved by the use of self-attestation as a method of verification, subject to further refinement working with stakeholders.

Second, we recommend that the Board remove the 250 customers per megawatt maximum in the current program rules. Our members have found this requirement challenging, and counterproductive to the program's goal of ensuring the participation of residential and low-income customers, whose usage and thus subscription sizes, are lowest.

Finally, we recommend that the Board quickly implement a Billing and Crediting working group, made up of representatives from the EDCs, Subscriber Organizations, and Commission staff, to tackle implementation issues around the billing process on an ongoing basis.

41. Currently, community solar projects must be sited in a single location and are not permitted to include aggregated rooftops.
- a. Should the Board consider revising this policy to allow aggregation of rooftop projects, up to the 5 MW capacity limit? Please comment on this general policy, and if you agree, what kind of limitations should the Board set with respect to the proximity of the rooftops, site control or ownership, etc.

Yes, without restriction other than the rooftops all reside within the EDC franchise territory.

- b. What should the Board consider with respect to the competing value of rooftop space, particularly on multi-unit residential and small commercial buildings, in locating HVAC or other equipment necessary for future energy efficiency and building decarbonization measures?

SEIA and NJSEC do not have a comment at this time.

Bonus Question

42. Staff is seeking feedback on its proposal to call the Successor Renewable Energy Certificate a “UREC” to differentiate it from the Solar Renewable Energy Certificate (SREC) and the Transition Renewable Energy Certificate (TREC). In the alternative, please provide additional acronyms or program names for consideration

SEIA and NJSEC support the use of the term SREC II or JREC (Jersey REC)