To: Sherri L. Golden, Secretary of the Board, New Jersey Board of Public Utilities
Email: board.secretary@bpu.nj.gov
From: Todd Olinsky-Paul, Senior Project Director, Clean Energy Group
RE: Stakeholder comments in the matter of the 2024 Straw Proposal for the New Jersey Energy Storage Incentive Program, Docket No. QO22080540

Clean Energy Group (CEG) appreciates this opportunity to comment on New Jersey BPU's Energy Storage Incentive Program. Clean Energy Group, a national nonprofit organization, works at the forefront of clean energy innovation to enable a just energy transition to address the urgency of the climate crisis. CEG fills a critical resource gap by advancing new energy initiatives and serving as a trusted source of technical expertise and independent analysis in support of communities, nonprofit advocates, and government leaders working on the frontlines of climate change and the clean energy transition. CEG collaborates with partners across the private, public, and nonprofit sectors to accelerate the equitable deployment of clean energy technologies and the development of inclusive clean energy programs, policies, and finance tools.

Clean Energy Group is pleased to submit the following stakeholder comments in the matter of the Straw Proposal for the New Jersey Energy Storage Incentive Program, Docket No. QO22080540, as requested by the New Jersey Board of Public Utilities.

In general, CEG applauds the changes made from the Version 1 straw, particularly the suggestion that OBC adders (or added weight in procurement) may be offered to grid supply energy storage projects that displace existing fossil fuel peakers in OBC communities. With regard to this possibility, we suggest the following:

1) Any grid supply project applying for an OBC peaker displacement adder should be required to file a community benefits plan (CBP) with annual reporting, to show the benefits accruing from the project to the host community; and

2) Representatives of the host community should have some role in the review of the proposed CBPs and updates.

In regard to the NJBPU's proposal to defer performance payments until emissions data become available (for grid supply storage) and until EDCs develop performance programs (for distributed storage): We encourage the NJBPU to develop a performance payment program as soon as possible (and require EDCs to do the same), and preferably to set specific deadlines for the launch of performance payment programs. It is unlikely that BTM developers will deploy storage under the SIP while a significant part of their revenue stream (performance-based incentives) remains unknown; while for grid supply storage, many developers may prefer to take the larger up-front payment (based on presumably higher competitive bids), which is immediate and risk-free, rather than wait for an unknown performance payment system to be developed; but the storage deployed prior to the institution of performance

payments cannot be expected to meaningfully contribute to GHG emissions reduction unless alternate operational incentives or requirements are adopted (see further discussion below).

Further comments on the straw may be found in this table. We also address some of NJBPU's questions in a separate section below.

PAGE NUMBER	STRAW EXCERPT	CEG COMMENT
3, 13	Grid Supply storage resources will initially receive only a fixed upfront incentive, as the NJ SIP will defer an avoided emissions-based performance mechanism until suitable datasets become available Staff concludes that it would be inadvisable to launch the NJ SIP with a Net Avoided Emissions Performance Incentive. However, Staff believes the Board should have the ability to implement such an incentive if and when the necessary data and analytics become available. Staff therefore proposes that if the Board determines that a sufficiently accurate day ahead MER Signal capable of guiding dispatch decisions has been developed, either by PJM or by a third party that is capable of modeling security-constrained unit commitment and dispatch in the PJM Transmission Network, the Board may by order establish a Net Avoided Emissions Performance Incentive for Grid Supply Energy Storage Systems. The Performance Incentive would be provided in addition to a fixed incentive and would only be available to Energy Storage Systems that neither received a Fixed Incentive nor commenced Commercial Operation prior to the launch of a Net Avoided Emissions Performance Incentive.	When does the NJBPU expect suitable emissions datasets to become available? In the meantime, could the grid supply storage earn performance incentives through alternate operational incentives or requirements? As currently proposed in the straw, NJ would create two tiers of grid supply storage: one tier developed prior to the launch of a performance incentive, and a second tier developed after the launch of a performance incentive. As stated in the straw, tier 1 projects would be ineligible to qualify for the performance incentive, while tier 2 projects would be expected to base their procurement bids on the presumed future performance incentive payments they may be able to capture. On the face of it, it would appear that building grid-supply storage BEFORE a performance incentive is instituted would reduce risk for the storage owner (the competitive bid is a known quantity and provided up front, as opposed to an unknown quantity potentially earned over a period of years). In other words, this structure will tend to make pre-performance signal projects more attractive to developers than post-performance signal projects. This may result in a number of projects that are rushed into development in order to take advantage of the higher competitive bidding prior to the launch of performance incentives. These projects might never meaningfully contribute to the state's goal of reducing GHG emissions, and may in fact behave counter to that goal. For example,

		if the first annual procurement is set for 100 MW of grid supply energy storage, but there is no performance incentive available at that time, the result will be 100 MW of energy storage that cycles for its entire lifetime independent of any emissions signal. It seems counterproductive to forever exclude these early projects from participating in reducing GHG emissions. NJBPU should consider other ways to obtain at least some GHG benefits from these early grid supply projects, with the idea of transitioning them into a later emissions-tied performance payment program. For example: 1) NJBPU could provide added incentives for grid-supply projects that charge wholly or in significant part from renewable sources, and discharge during prescribed peak hours 2) NJBPU could provide performance incentives for grid-supply projects that cycle on the same signal provided by EDCs to distributed projects, until such time as a more accurate grid supply performance regime can be developed CEG encourages NJBPU to resolve the emissions data issue as speedily as possible; to make public as much information as possible regarding expectations for future performance payment mechanisms and rates; and to provide some sort of interim emissions-tied incentive system for the first generation of grid supply projects (on the theory that some benefit is better than no benefit).
3	The Grid Supply Segment of the Storage Incentive Program is anticipated to launch in early 2025. The Distributed Storage Segment Incentive Program is anticipated to launch in 2026.	CEG encourages NJBPU to launch the distributed segment earlier if possible, given the state's impending 2030 energy storage target, and the ability of BTM storage to scale up quickly. New Jersey's EDCs can look to numerous performance payment program models in other states and should be able to move quickly to put a similar system into practice.
4	Overburdened Communities will be supported by both a reserved incentive block, as well as enhanced incentives.	CEG applauds this approach. One question that remains is whether any low- or no-interest financing will be made available for OBCs and income-eligible customers. This can be very helpful in communities where the initial capital investment to purchase an energy storage system is too high a barrier to overcome, even if the system will eventually pay for itself.

4-5	Table 1: grid storage or distributed storage eligible for OBC adder	Table 1 seems to contradict Table 2 and portions of the text on this point. CEG requests that NJBPU clarify this point and correct the straw. Under certain circumstances, as noted in the straw, grid supply storage could provide OBC benefits (see below).
12	Staff believes that Grid Supply projects that replace peaker plants in overburdened communities or co-locate with such peaker plants and demonstrably reduce their run-time and emissions may provide significant local benefits. As further discussed below in the Request for Comments section, Staff therefore seeks stakeholder input on whether and how the Board should provide special weight to proposed Grid Supply projects that will replace or reduce the run-time and emissions of generation facilities located in overburdened communities.	New York has recently demonstrated how large-scale storage procurement can include a carve-out for overburdened communities, with a focus on displacement of fossil-fueled peaker plants located in or near those communities. A similar carve-out could be instituted by NJBPU for grid supply procurement. See New York State Public Service Commission (PSC) Case 18-E-0130–In the Matter of Energy Storage Deployment Program. The NYS PSC applied a 35% carve-out for disadvantaged communities to the State's procurement of its 6 GW energy storage target. The carve-out applies both to bulk and distributed energy storage procurement. Specifically, the PSC directed allocation of a minimum of 35% of program funding for energy storage projects in areas of the state that will most benefit disadvantaged communities and reduce reliance on high-emitting fossil fueled peaker power plants. For bulk power storage, the Commission identified specific geographic capacity zones that should be prioritized for hosting large-scale energy storage projects, to provide the greatest benefit to disadvantaged communities. The PSC further ordered that at least 35% of procured energy storage projects be located within disadvantaged communities. And the PSC directed the New York State Energy Research and Development Authority (NYSERDA) to incorporate considerations for disadvantaged communities and their participation within its implementation plans. Clearly it is important not to impose added burdens on overburdened communities, however, the NY approach supports the use of energy storage to replace or decrease the run-time of existing fossil fueled peakers within these communities, thus reducing local emissions of harmful pollutants. NJBPU could implement a similar OBC tier of competitive procurement, defining eligible OBCs and setting aside a percentage of each annual procurement for projects in and/or serving those communities. Any

		additional support needed to develop grid supply projects in OBCs would be reflected in higher bids within this tier. If NJBPU were to go this route, CEG would further recommend requiring community benefits plans to accompany bids in the OBC tier, and regular reporting from grantees on how the hosting community is benefiting from the project through its operational life; and participation in this process by representatives of the host OBC.
9	The CEA describes the storage target in terms of "megawatts" of storage. Because energy storage is typically denominated in MWh, Staff proposes to interpret the CEA's 2030 storage mandate as requiring New Jersey to procure 2,000 MW of storage systems capable of four hours of continuous discharge, or 8,000 MWh.	Assuming a 4-hour duration seems a good initial step. However, CEG notes that the nature of PJM's ELCC capacity mechanism is such that as more capacity resources are installed, longer duration capacity resources are required (shorter duration storage would be derated); so that even 4-hour batteries will likely see their capacity credit progressively derated by the ISO in future years. On the other hand, some studies show that increasing solar PV on the grid has the effect of making shorter-duration storage more valuable. NJBPU should consider revisiting the 4-hour duration requirement in future years to reflect changes in regional capacity needs.
12	Distributed storage performance incentives will be deferred to allow EDCs adequate time to develop and administer that portion of the program.	As noted above, development and enrollment of new distributed energy storage is unlikely so long as performance incentives are deferred to an unknown future time, and the mechanism and amount of these incentives remains unclear. CEG urges NJBPU to require swift compliance from EDCs, and notes that numerous existing energy storage performance programs exist, upon which the NJ EDCs could model their program. These include the California SGIP program, ConnectedSolutions in Massachusetts and Rhode Island, Energy Storage Solutions in Connecticut, the Green Mountain Power programs in Vermont, the BYOD program in Hawaii, the Liberty Utilities pilot in New Hampshire, and similar pilots in Maryland, North Carolina and elsewhere.
13	Staff concludes that it would be inadvisable to launch the NJ SIP with a Net Avoided Emissions Performance Incentive. However, Staff believes the Board should have the ability to implement such an incentive if and when the necessary data and analytics become available. Staff therefore proposes that if the Board determines that a sufficiently	As noted above, launching the SIP without a grid supply avoided emissions performance incentive seems a missed opportunity. There may be near-term, temporary substitutes that could be employed until emissions data and analytics become available. On the theory that some benefit is better than none at all, NJBPU should consider instituting a temporary timed or signaled discharge program, or an adder for grid supply storage charging from renewables, that could be phased out in the future when

	accurate day ahead MER Signal capable of guiding dispatch decisions has been developed, either by PJM or by a third party that is capable of modeling security-constrained unit commitment and dispatch in the PJM Transmission Network, the Board may by order establish a Net Avoided Emissions Performance Incentive for Grid Supply Energy Storage Systems.	an emissions signal is phased in; any systems developed in this initial period could be made eligible to transition to the emissions signal when appropriate.

Board Staff seeks comment on the following:

Grid Supply

1. Should a performance incentive based on net avoided emissions be proposed only if PJM

or another entity produces a day-ahead, marginal emissions signal?

1A. Not necessarily. As noted above there may be other ways to achieve benefits. While these may not be optimal, the NJBPU should do whatever it can to align energy storage operations with state energy and environmental goals.

2. In the absence of a day-ahead emissions signal, should the SIP institute another form of

performance incentive for Grid Supply projects?

2A. As discussed above, the SIP could provide a performance incentive for storage charging from renewables. Alternately, the performance incentive could be offered, on a temporary basis, to grid supply storage following the EDC signal provided to distributed storage systems.

3. What other changes or alternatives would you propose to the GHG Performance Incentive?

4. How can the Board mitigate the risk of Grid Supply projects not operating/performing after

receiving upfront incentives?

4A. No developer is going to invest in a grid supply energy storage project for the incentive alone (if they did, it would indicate the incentive needed to be drastically adjusted). The real question is

how the Board can mitigate the risk of these grid supply energy storage systems operating in ways that are contrary to state energy and environmental goals (e.g. charging during peak demand hours, cycling in such a way that GHG emissions are increased). Developing and swiftly instituting a performance incentive seems the best way to ensure that storage systems are operated in support of the state's goals. In the absence of a performance incentive, NJBPU could require storage developers to sign operational agreements as part of the procurement process. These agreements would stipulate that systems receiving incentives shall not operate in specific, prescribed ways. This is not an ideal solution (for example, if a storage system were sold, it would be difficult to hold the new owner to the agreement) but it would be better than nothing as an interim measure.

a. Are the reporting requirements proposed herein sufficient?

b. Should there be a clawback clause to recover fixed incentive payments from energy

storage systems that cease operating shortly after coming online?

bi. Yes, probably.

c. What should be the metric of success for a specific project be (e.g., discharging

power during peak demand periods) for Grid Supply energy storage systems? In

other words, what metrics should the Board consider when evaluating operation?

ci. In the absence of emissions data, success could be defined as (a) charging from renewable sources entirely or above a set threshold, or (b) charging during low demand/high renewable production hours and discharging during peak demand hours.

5. Should Grid Supply energy storage projects that replace or demonstrably reduce the run

time of fossil-based peaker plants in overburdened communities be evaluated solely on

price or receive additional weight or a preference in competitive solicitations? If additional

weight or preference is warranted, please specify how.

5a. Grid supply storage should be eligible for OBC incentive adders providing the system meets requirements, including a community benefits plan and regular reporting.

Distributed

6. The distributed incentive level breakdown provides varying incentive levels for different

sized energy storage systems to account for cost differences. Are the proposed incentive

levels appropriate?

6.a See CEG/CESA's prior work on setting energy storage program incentive levels, and on program and policy development to make energy storage affordable and accessible.

7. Are the incentive adders for OBCs too high, too low, or should the proposed OBC incentive otherwise be modified?

7a. The level of response to these adders will provide this feedback to the SIP.

8. How far along are the EDCs in implementing the technology needed to issue calls for the performance incentive portion of the SIP? Will this affect the design of the performance incentive?

9. Should the Board require EDCs to implement a designated distributed energy resources management system (DERMS) to effectively manage and dispatch resources across their systems?

9a. EDCs will likely need to adopt DERMS. They are likely in the best position to determine which DERMS will work best for their systems.

Other

10. Do any aspects of this program need to be modified to address NJ Legislature Bills S225/A4893, should the bill be signed into law?

Clean Energy Group respectfully submits these comments and recommendations in the hope that they will be of value. We will be happy to discuss further or provide additional resources at NJ BPU's convenience.

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Clean Energy Group