State of New Jersey
Governor Philip D. Murphy
Lt. Governor Tahesha L. Way

Board of Public Utilities
www.nj.gov/bpu/

Christine Guhl-Sadovy
President

Dr. Zenon Christodoulou
Marian Abdou
Michael Bange
Commissioners

NOTICE[1]

IN THE MATTER OF THE NEW JERSEY ENERGY STORAGE INCENTIVE PROGRAM

2024 STRAW PROPOSAL

DOCKET NO. QO22080540

Staff of the New Jersey Board of Public Utilities ("NJBPU" or "Board") hereby gives notice of a virtual stakeholder meeting to present the New Jersey Energy Storage Incentive Program ("NJ SIP") 2024 Straw Proposal ("Straw") and associated draft rules attached to this Notice. This 2024 Straw Proposal builds on the BPU's September 29, 2022, NJ SIP Straw Proposal[2] to reflect stakeholder input solicited by the BPU via a Request for Information ("RFI"), which was issued by the BPU under the above-referenced docket on August 8, 2023.[3]

VIRTUAL STAKEHOLDER MEETING

DATE:	November 20, 2024
TIME:	10:00 AM – 12:00 PM
LOCATION:	Zoom Virtual Webinar
REGISTER:	https://us06web.zoom.us/webinar/register/WN_wucFCgA-RVWJhqfTLR6QvQ

Board Staff will host the stakeholder meeting. Please note that the public meeting will be conducted via Zoom. You must register for the public meeting to attend, using the link provided above. Stakeholders and members of the public are invited to participate and may express their views. To encourage full participation, please submit any requests for needed accommodations, such as interpreters and/or listening assistance, 48 hours prior to the above meeting to the Board Secretary at board.secretary@bpu.nj.gov. If you want to reserve a speaking opportunity, please register at least 48

[1] Not a paid legal advertisement.

[2] The 2022 NJ SIP Straw Proposal can be found here. In re the New Jersey Energy Storage Incentive Program, BPU Docket No. QO22080540, Notice dated September 29, 2022 ("2022 Straw Proposal").

[3] The RFI can be found here. In re the New Jersey Energy Storage Incentive Program, BPU Docket No. QO22080540, Notice dated August 8, 2023.

hours before the start of the meeting and indicate your request to speak during the online registration process.

After registering, you will receive a confirmation email containing information about joining the meeting and information about checking your system requirements in advance of the meeting. Please check access and devices in advance of the meeting to ensure that they will properly connect. The webinar may be recorded, and both the presentation and any recording will be made available at https://www.njcleanenergy.com/storage.

Questions on this stakeholder process may be directed to the BPU's energy storage email box: energy.storage@bpu.nj.gov.

The deadline for comments on this matter is 5 p.m. EST on Wednesday, December 18, 2024. Please submit comments directly to the specific docket listed above using the "Post Comments" button on the Board's Public Document Search tool. Comments are considered "government records" for purposes of the State's Open Public Records Act and any confidential information should be submitted in accordance with the procedures set forth in N.J.A.C. 14:1-12.3. Written comments may also be submitted to:

Sherri L. Golden
Secretary of the Board
44 South Clinton Ave., 1st Floor
PO Box 350
Trenton, NJ 08625-0350
Phone: 609-292-1599
Email: board.secretary@bpu.nj.gov

Dated: November 7, 2024

Sherri L. Golden

Secretary of the Board

IN THE MATTER OF THE NEW JERSEY ENERGY STORAGE INCENTIVE PROGRAM

2024 STRAW PROPOSAL

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ILLUSTRATIONS

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I. Introduction

The State of New Jersey has one of the most ambitious storage targets in the nation, with a statutory mandate to achieve 600 megawatts ("MW") of installed energy storage by 2021, growing to 2,000 MW by 2030. Energy storage resources are critical to bolstering the resilience of New Jersey's electric grid, reducing carbon emissions, and enabling New Jersey's transition to 100% clean energy. The New Jersey Storage Incentive Program ("NJ SIP") described in this Straw Proposal ("Straw") will build a critical foundation for a long-term energy storage effort in the State.

In this 2024 Straw Proposal, Staff of the New Jersey Board of Public Utilities ("Board" or "BPU") ("Staff") proposes to create two energy storage segments for Front-of-Meter and Behind-the-Meter energy storage incentives, patterned after the Board's Successor Solar Incentive ("SuSI") Program.[4] However, while the SuSI Program incentivizes stand-alone solar and Grid Supply solar-plus-storage projects, this Straw will focus on incentivizing stand-alone Grid Supply energy storage projects as well as solar-plus-storage projects that are ineligible to receive storage incentives from the SuSI Program. Incentives will not be retroactive. Only energy storage projects placed into service after the date of the Board Order establishing this program will be eligible for incentives.

As proposed by Staff:

- NJ SIP incentives will be available to energy storage systems that are located either in-front-of- the-meter ("Grid Supply") or behind-the-meter ("Distributed" or "Customer Level"). Separate incentive structures will be created for both configurations.

- Behind the meter systems will receive fixed incentives through blocks released on annual basis as well as performance incentives from their respective EDCs.

- Grid Supply energy storage systems will be awarded fixed incentive payments through an annual competitive bidding structure (this is a change from the administratively determined fixed incentive plus performance incentive structure proposed in the 2022 SIP straw proposal).[5]
    - 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,
    - Distributed storage resources will receive performance payments for successfully reducing on-site load and/or injecting power into the distribution system when called upon by the Electric Distribution Company ("EDC") during certain performance hours, as established by each EDC.

- 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.

[4] In re Solar Successor Incentive Program Pursuant to P.L. 2018, c.17, BPU Docket No. QO20020184, Order dated July 28, 2021.

[5] *See* 2022 Straw Proposal at 15-18.

- Overburdened Communities will be supported by both a reserved incentive block, as well as enhanced incentives.[6]

To maximize private investment, Staff proposes that, in addition to the incentives discussed above, private investors be allowed to own and operate the energy storage systems, allowing them to "stack" revenues from the wholesale electricity market, to utilize the behind-the-meter resource to actively manage their energy usage at the distribution level and reduce electricity costs, or to participate in a Distributed Energy Resource ("DER") Aggregation service, when available.

The NJ SIP is designed to provide New Jersey ratepayers with a variety of benefits such as carbon reduction (by encouraging energy storage systems to charge from cleaner energy off-peak energy sources to displace the need for more emissions-intensive generation during peak periods), hosting capacity improvements (for enabling grid management flexibility at higher DER penetration levels) and improving system resilience. The NJ SIP is also expected to drive reductions in balance-of-plant and other "soft" costs for energy storage as New Jersey's deployment of storage systems increases.

Beyond this NJ SIP, Staff recognizes that, as a key promoter of energy storage, the Board should help inform first responders about safety-related matters. Accordingly, we will work with other State agencies to help ensure that such considerations are addressed.

Table 1 below describes the substantive changes made from the 2022 Straw to the present Straw.

Table 1. Summary of Changes from 2022 Straw Proposal

	2022 Straw	Present Straw
Fixed Incentive	Annual incentive contingent on satisfactory up-time performance metrics.	Upfront incentive not contingent on up-time metrics.
Grid Supply Pay for Performance Incentive	For Grid Supply storage resources, payment is based on the amount of carbon emissions abated through operation of the energy storage system, determined by measuring the marginal carbon intensity of the wholesale electric grid ([Marginal Emissions Rate set by PJM Interconnection, LLC ("PJM"))] at the time the energy is discharged, minus the carbon intensity of the energy drawn during the charging interval for the resource.	Deferred until suitable datasets can be created to inform such a program (See "Performance-based Incentive for Grid Supply Resources" Section).
Grid Supply	No competitive solicitation.	Competitive solicitation.

[6] The term "Overburdened Community" is defined by the New Jersey Department of Environmental Protection pursuant to New Jersey's Environmental Justice Law, N.J.S.A. 13:1D-157 et seq.

Distributed Pay for Performance Incentive	Launched with SIP	Deferred to allow for EDCs to develop mechanism to call resources
Bid Participation Fees	Non-refundable	Refundable
Pre-Development Fee	None	New to ensure timely completion on Grid Supply Projects
Overburdened Community Incentive	Distributed	Distributed or Grid Supply
Solar	Stand-alone storage only	Solar-plus-storage projects that are ineligible to receive storage incentives from the SuSI Program accepted

Figure 1 below shows the incentive program selection pathway.

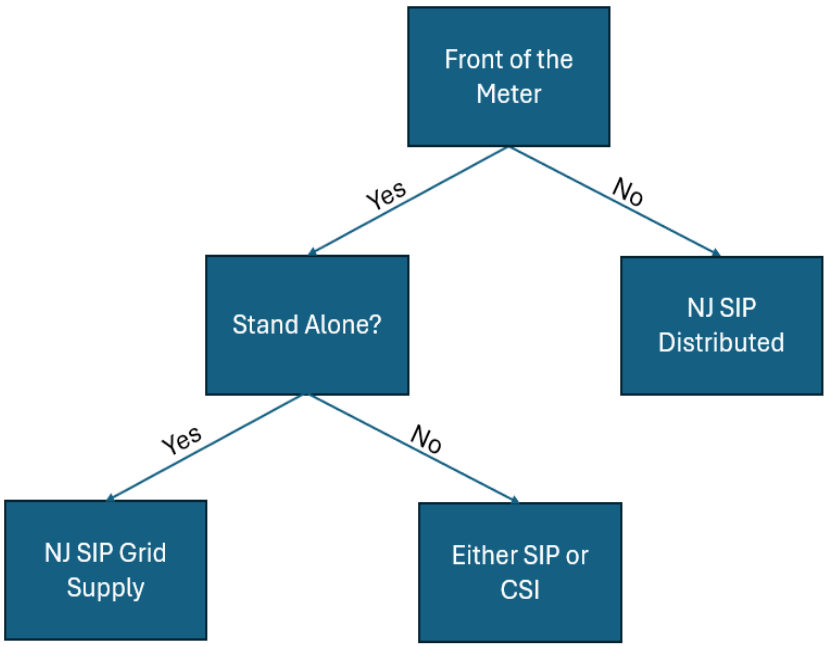

***Figure 1**. Incentive Program Selection*

Table 2 below summarizes the program rollout schedule and incentives.

Table 2. Summary of Incentives

Incentive Type	Grid Supply Fixed	Distributed Fixed	Distributed Performance	Grid Supply Performance
Projected Launch Date	2025	2026	2026	Deferred
Incentive Funding	BPU	BPU	EDC	BPU
Incentive Timing	Upfront	Upfront	Ongoing	Deferred
Form	Annual competitive bid	Annual block	Pay-for-performance	Deferred
OBC Adder	No	Yes	No	No

II. Program Goals

Energy storage is a rapidly evolving technical and economic solution to key challenges presented by the energy transition. This Straw presents a policy framework designed to meet the following goals:

- Achieve, in conjunction with the Competitive Solar Incentive ("CSI") program and other state-supported programs, the 2030 energy storage goal of 2,000 MW by 2030, as set forth in the Clean Energy Act ("CEA"), in a manner that is consistent with New Jersey's competitive electricity markets;
- Promote deployment of low-cost private capital into New Jersey storage projects by establishing a stable market structure;
- Decrease Greenhouse Gas ("GHG") emissions by enabling higher levels of renewable resources to interconnect to the grid;
- Support deployment of energy storage systems interconnected to the transmission or distribution system of a New Jersey EDC;
- Grow a sustainable energy storage industry that gradually requires decreased incentives to deploy additional storage resources and ensure that the benefits of energy storage last well beyond the term of this initial program;
- Support overburdened communities with energy resilience, environmental improvement, and economic benefits derived from energy storage;
- Encourage storage deployment that accelerates the clean energy transition, including facilitating deployment of renewable energy, electric vehicle or other DERs, and resiliency; and
- Establish a Program Administrator at the BPU who would oversee the efficient implementation of the program.

III. GHG Considerations

Over the 2025-2050 period, Staff expects the expansion of energy storage to reduce GHG emissions by facilitating the much larger expansion of solar, wind and electric vehicle service equipment and displacing fossil generation units. Assuming 1,500 MW of energy storage resources by mid-2030 (this assumes that the balance of the State's goal will be met via non-SIP mechanisms, such as the CSI Program), an analysis performed by Staff's consultant estimated that energy storage supported by the SIP would avoid about 2 million metric tons of CO_2 over the 20 year-period of 2025-2044. That corresponds to average avoided emissions of about 100,000 metric tons per year. A higher-end estimate of avoided emissions resulted in about 3.6 million metric tons avoided over 20 years, or about 180,000 metric tons per year on average.[7]

Staff's consultant projected that from 2025 to 2050, energy storage systems will facilitate the expansion of solar and wind resources and will reduce the need for dispatchable fossil generation units. This is due to storage's ability to flexibly and quickly balance variations in solar and wind generation as well as store excess clean energy generated during periods of low demand that might otherwise be curtailed (i.e., "thrown away"). First, system operators will require flexible units to manage the integration of solar and wind. Absent storage capacity, that flexibility would likely be provided by traditional fossil units. Deploying storage capacity would reduce the need for fossil capacity to operate simply to balance variations in wind and solar production. Second, as more wind and solar are deployed, more clean energy may be produced above and beyond the grid's capacity to accept it, potentially resulting in the need to curtail these clean energy resources. By storing energy generated when it is not immediately needed, energy storage systems will enable solar and wind projects to provide greater value and thereby enable the economic deployment of additional clean energy resources.

Staff's consultant, therefore, modeled storage operations with the assumption that solar and wind, facilitated by storage, will eventually displace fossil generation that is currently marginal in unit dispatch. Until then, energy storage systems will support new solar and wind installations, displacing fossil units during non-marginal hours. The modeling indicated that both effects of storage deployment due to the NJ SIP program will indirectly contribute to GHG reductions.

Staff's consultant also accounted for the direct GHG emissions caused by energy storage systems charging and GHG emissions directly avoided by energy storage systems discharging. In the short term, Staff's consultant found that storage operations would slightly *increase* GHG emissions. This is because the difference between the GHG intensity of the marginal generator in PJM during peak and off-peak periods is often too small to outweigh the energy losses that occur as a result of energy storage systems charging and discharging. However, Staff's consultant also found that the projected deployment of cleaner generation will result in more frequent and significant differences in marginal generator's GHG intensities over time. Specifically, Staff's consultant projects that in 2032 storage's real-time operations will begin causing a direct net reduction in GHG emissions, with 141,000 tons of CO_2 avoided by discharging operations and only 131,000 tons of CO_2 induced by charging operations, resulting in direct net avoided emissions of 10,000 tons. This means that any storage capacity deployed within the next

[7] This analysis was performed by TRC Energy Solutions (TRC) using confidential data provided by Ascend Analytics. Due to the sensitive nature of this data and contractual restrictions on its disclosure, Staff is unable to share further details about the assumptions underlying this analysis.

few years will likely cause a direct net decrease in GHG emissions over its lifetime, confirming that the NJ SIP will result in a net reduction in GHG emissions.

IV. Business Model Considerations

Staff recognizes that the ownership and operation of energy storage assets is relevant to the design of an energy storage program. This Straw recommends that the Board promote a storage business model that encourages private ownership and operation of energy storage systems, consistent with New Jersey's competitive electric market structure. While ratepayers will support investment in storage resources, Staff believes the commercial and operational risks should be borne by private investors.

Though the NJ SIP will only support privately owned and operated energy storage systems, the EDCs will need to engage in a robust effort to ensure that the grid can connect storage systems at the distribution and transmission levels. This role is particularly important for the Distributed portion of the NJ SIP, where each EDC will interconnect the resources and establish pay-for-performance incentives. The EDCs will be directed to establish a common incentive framework but will have flexibility to tailor its performance incentive program to its particular needs. Thus, while the NJ SIP does not propose to allow for utility ownership or operation of storage systems incentivized by the NJ SIP, EDCs will play a key role in building the infrastructure necessary to enable the interconnection and effective dispatch of energy storage systems.[8]

As noted above, two major goals of the NJ SIP program are to attract low-cost private capital and to develop an energy storage program that is consistent with New Jersey's competitive electric markets. A major goal of the NJ SIP structure is therefore to encourage long-term investment in, and operation of, energy storage systems at the transmission and distribution level. Staff therefore seeks to encourage energy storage owners to engage in "value stacking." Generally, value stacking refers to the practice of aggregating various sources of customer savings/benefits and revenues derived from providing grid services to make energy storage projects financially compelling to end-use customers or energy storage developers. Revenue from value stacking reduces the need for incentives to move the market at a desired pace. Customer savings and grid-derived revenue may be driven by elements such as:

- All available wholesale market revenues;
- Retail bill reductions created by active management, such as management of demand charges, standby charges, and distribution costs; and/or
- Cost-effective investment in DERs, electric vehicle charging, or other technologies, supported by energy storage systems.

These value-stacking revenues are in addition to any NJ SIP incentives, such as distribution-level price signals established by the EDCs or grid-level performance-based incentives, both of which are discussed below.

[8] Staff clarifies that this straw proposal's statements regarding the ownership of energy storage systems refer only to storage systems that receive SIP incentives unless otherwise noted. Nothing in this straw proposal precludes prudent utility investment in and ownership of energy devices that do not receive SIP incentives. For example, utility-owned energy storage systems may serve as "Storage As a Transmission Asset," or SATA, resources. SATA resources can function at either the transmission or distribution level (despite the less- inclusive SATA label). A future proceeding may include additional guidance on EDC-led SATA investments.

V. Definition of Energy Storage:

Stakeholders broadly agreed with the definition of energy storage proposed in the September 2022 Straw:

> *A device that is capable of absorbing energy from the grid or from a Distributed Energy Resource (DER), storing it for a period of time using mechanical, chemical, or thermal processes, and thereafter discharging the energy back to the grid or directly to an energy using system to reduce the use of power from the grid.*

Accordingly, Staff proposes to utilize this definition in the NJ SIP.

VI. Installed Storage Targets & Deployment Timeline

Staff believes that annually setting installed energy storage targets will best balance the benefits of rapid energy storage deployment with budget considerations. In setting these targets, Staff believes the Board should weigh three main factors: (i) expected declines in the installed cost of storage over time (recognizing the disruption to this trend caused by recent supply chain issues); (ii) the environmental, public health, and grid benefits of quickly scaling storage; and (iii) the need to gain operational experience in New Jersey's storage program.

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. The solar-plus-storage component of the CSI Program already includes a targeted storage procurement of 160 MWhs per year and uses four hours of continuous discharge as the standard. For purposes of measuring progress toward the CEA target, Staff proposes measuring an NJ SIP project's capacity as the lesser of its nameplate capacity (in MW) or its energy storage capacity (in MWh) divided by 4 hours. For example, a 2-hour battery with a nameplate capacity of 10 MW and an energy storage capacity of 20 MWhs would count as 5 MW of storage capacity (as that is the maximum amount of power it could continuously discharge for 4 hours). In contrast, both a 4-hour, 10 MW and 40 MWh battery and a 6-hour, 10 MW and 60 MWh battery would each count as 10 MW of storage capacity (as they each could discharge at a maximum rate of only 10 MW, but both can maintain that rate of discharge for at least 4 hours).

The CEA's 2030 goal will be met primarily through the combination of the NJ SIP and CSI programs. Targets will be established per Fiscal Year, which is June 1 through May 31 of the following year depending on budget available. Staff recommends that the Board reserve the right to change the proposed procurement quantities depending on market conditions, as well as how much storage is procured as part of the CSI Program.

VII. Incentive Structure

Staff proposes that the total NJ SIP incentives be comprised of two main incentive payments. The first will be a fixed incentive, measured in $/kWh of maximum usable energy storage capacity and

paid one time upon commercial operation. The second incentive will be a performance-based incentive applicable to benefits created through the storage system's operations. For behind the meter systems the performance incentive will be paid for and administered by the EDCs.

A. *Fixed Incentives for Grid Supply Resources*

Based on stakeholder comments, the number of storage projects that have remained in the PJM interconnection queue following the imposition of stricter readiness requirements, and the Board's experience with the CSI program, Staff concluded that annual competitive solicitations would be the most appropriate path forward to meet the objectives of the Grid Supply Segment of the NJ SIP. Under this approach, the Board would release a solicitation with the specific amounts, or ranges of amounts, being sought for a given fiscal year. The solicitation would ask participants to identify the level of fixed incentive needed to support project revenue requirements. This competitive process is a change from the 2022 Straw Proposal.

B. *Fixed Incentives for Distributed Resources*

Staff proposes to open a Block of incentives every Fiscal Year by no later than August 1st of that Fiscal Year. Under the block design, the incentive level can be adjusted as required due to changes in costs or market structure.

Staff contemplates that the fixed incentive for storage resources would be paid upfront upon commercial operation to Grid Supply and Distributed projects, so long as the storage resource meets projected installation schedules set forth at the time that the incentive is approved. The upfront payment is a change from the September 2022 Straw Proposal, which contemplated that fixed payments would be made over ten to fifteen years.[9] Upfront incentives provide a lower level of risk to system owners and developers and reduce the overall administrative burden of the program.

i. Setting the Fixed Portion of the NJ SIP Incentive Levels:

This Straw proposes that the Board establish administratively set incentives that decline over time in response to market participation for distributed storage projects. Such a declining block structure is designed to ensure that the total cost to ratepayers decreases as the quantity of resources procured increases. Under a declining block rate structure, the Board would establish an initial "Capacity Block" or "Block" of storage capacity, denominated in MWhs. The Board likewise would establish an initial annual incentive amount for projects registering in the initial Block, denominated in $/kWh of storage capacity. Once the Block is fully subscribed, the incentive level would be stepped down in the next Block depending on market participation and available budget. If a Block remains unsubscribed or under-subscribed, the Board would have the option to increase the incentive, though Staff anticipates that the incentive level in any given Block will never exceed the incentive level in any prior Block that was fully subscribed.

Staff sees several benefits to the use of a block structure. First, it allows for relatively quick program implementation, making it a prime candidate to help meet the Clean Energy Act storage

[9] *See* 2022 Straw Proposal at 15.

goal. Second, a block incentive structure provides the Board flexibility to establish block sizes, reset incentive levels (if necessary), and adjust programmatic elements on an annual basis, as needed, to meet policy goals and budgetary considerations. The Board, by order, could adjust incentive amounts due to under-subscription of a Block, over-subscription of a Block, fundamental changes in technology costs, new sources of energy storage, federal tax policy, supply chain issues or other reasons that show that the incentive amount associated with a given Block will no longer suffice to meet program goals or impose clearly excessive costs on ratepayers.

Staff intends to recommend that the NJ SIP go through a Year 1 Review process, comparable to that of the Administratively Determined Incentive ("ADI") Program. Specifically, Staff would review the performance of the NJ SIP twelve months after initiation to ensure that the program is meeting objectives, and if not, recommend the Board make any necessary adjustments.

Staff proposes that front-of-the-meter storage developers must select between the NJ SIP or the CSI Programs. Staff is interested in how best to allow developers the flexibility to select the program in which they wish to participate in. For example, a solar + storage project that does not clear in the CSI program may elect to later participate in the NJ SIP, or vice versa.

ii. Initial Block Incentives, Decreases, Mechanics and Adjustment Mechanism:

To determine appropriate incentive levels for distributed storage projects, Staff's consultant performed a "gap analysis" that estimated the revenue and savings potential of behind-the-meter storage projects for a variety of different building types, rate classes and tariffs associated with the New Jersey EDCs. The results showed a consistent shortfall of $220 to $330 per kWh and ranged between 37 percent and 47 percent of the total installed cost of the systems (higher for residential systems). The incentive levels shown in Table 3 below are designed to meet the identified need up to a cap of approximately 40 percent fully installed cost. The values shown are intended to be met by a combination of a fixed, upfront payment paid by BPU as well as an annual performance payment from EDCs.

Table 3. Target Combined Incentive Level

Project Type	Nameplate MW Capacity	Target Initial Incentive (Net Present Value of Upfront Incentive Plus Performance Incentives)	Overburdened Community (OBC) Upfront Incentive Adder
Small	<100 kW	$300/kWh	$100/kWh
Medium	100-500 kW	$200/kWh	$67/kWh
Large	>500 kW	$150/kWh	$50/kWh

Staff believes these starting incentive levels appropriately balance both budget targets and the need to establish the storage program and allow the declining block mechanism to reveal the competitive incentive level for storage. By starting with relatively small blocks, Staff believes that

the NJ SIP can protect against excessive incentive amounts, while moving quickly to deploy the storage program.

As Incentive Blocks fill, the incentive level associated with each successive Block would decrease. As discussed above, Staff would propose to undertake an annual process to evaluate the Capacity Block sizes and, if necessary, to adjust the incentive levels.

iii. Enhanced Incentives for Energy Storage Projects in Overburdened Communities

This Straw seeks to ensure that an equitable share of distributed energy storage resources is placed in or serves overburdened communities. Distributed storage plays an important role in reducing emissions and enhances the resilience of the electric grid – both important factors in meeting Governor Murphy's environmental justice and equity directives. Because distributed storage resources are customer-sited, energy storage projects serving overburdened communities will provide improved energy resilience to the local communities and may help offset "dirtier" backup generation options during emergency conditions. Therefore, Staff proposes to:

- Establish an adder of energy storage capacity to the fixed portion of the incentive for projects located in overburdened communities; and
- Reserve a portion of the incentive budget, to be established by the Board, for customers in overburdened communities.

Staff does not propose to include any additional incentives to locate Grid Supply storage in overburdened communities, as those projects typically have fewer localized benefits, compared with distributed storage resources, which directly add to the energy resilience of the local community. However, 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.

The BPU may supplement the incentive for overburdened communities by passing through federal or other external funds, should such funds become available. The terms and conditions of the grant would apply to energy storage projects receiving such grants.

C. *Performance-Based Incentives*

The performance-based incentives for storage resources will be designed to encourage the operation of storage assets in a manner that produces environmental benefits and/or helps the electric grid during times of operational stress. The flexibility of energy storage can result in a range of benefits for the efficient and effective operation of the bulk electricity system while also potentially providing environmental benefits by reducing carbon emissions and criteria pollutants. Likewise, storage resources at the distribution level can provide all these benefits while also contributing to local system resilience, helping integrate higher levels of distributed generation, and potentially reducing the cost of operating and maintaining the distribution grid. Performance incentives will be deferred to allow EDCs adequate time to develop and administer that portion of the program.

Performance-based Incentive for Grid Supply Resources

One of the stated goals of the NJ SIP is to encourage energy storage systems to dispatch in a manner that decreases GHG emissions by tying operations to pay-for-performance metrics. In this updated Straw Proposal, Staff proposes a fixed incentive payment for Grid Supply Energy Storage Systems but also seeks comments on a proposed avoided emissions-based incentive design that the Board may launch if and when the necessary data becomes available.

The September 2022 NJ SIP proposed to use PJM's hourly GHG marginal emissions rates ("MER") data as the basis for a GHG reduction performance incentive. Unfortunately, the MER data are not forward-looking, as PJM does not provide day-ahead emissions signals. In comments to the September 2022 SIP, a significant number of stakeholders argued that the historical, hourly MER data PJM provides cannot be used to project hourly emissions and therefore cannot guide decisions about when to charge or discharge an energy storage system. Staff agreed and sought to determine whether PJM could or would publish a day-ahead emissions signal on which to base a performance incentive. However, because the day-ahead energy market is in part financial (i.e., not unit-specific), PJM is currently unable to develop a day-ahead MER signal based on the day-ahead model. Staff also explored the use of MER data from real-time operations, which is updated approximately every two hours, but mathematical relationships were, at best, weak and, at worst, unreliable.

Both Stakeholders and Staff identified other specific concerns with using the currently available PJM MER data. First, it isn't clear whether emissions rates can be used in conjunction with preliminary load and/or settled hourly prices (e.g., linear regression) to develop reliable mathematical relationships. Second, a review of hourly emissions data for January 1, 2024, through May 22, 2024, found multiple hours during which emissions rates were the reverse of what would have been expected. Third, PJM itself has cautioned that its marginal emissions data is not fully developed. Finally, many stakeholders believe that the MER-based incentive would be too complex.

For these reasons, 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. Qualifying projects would receive a payment equal to their Net Avoided Emissions in short tons multiplied by a dollar-per-ton rate determined by the Board.

The Energy Storage System's net avoided emissions will be calculated by subtracting the gross induced emissions from the gross avoided emissions, where:

- Gross induced emissions will be calculated by multiplying, for each time interval during the relevant Fiscal Year in which the Grid Supply Energy Storage System consumed electricity

to charge, the MER in its wholesale energy market zone or node by the amount of electricity it consumed, and then summing the resulting products together.

- Gross avoided emissions will be calculated by multiplying, for each time interval during the relevant Fiscal Year in which the Grid Supply Energy Storage System discharged electricity, the MER in its wholesale energy market zone or node by the amount of electricity it discharged, and then summing the resulting products together.

Performance-based Incentive for Distributed Storage Resources

For distributed storage systems, Staff proposes to direct each EDC to establish a performance-based incentive, in $/kW year, that would be provided to storage resources operating during specific call hours, patterned in part on the ConnectedSolutions program utilized in Connecticut and Massachusetts. These programs provide an easy-to-understand incentive to distributed storage resources by providing a $/kW payment for customers discharging power when called by the EDC during specific performance hours, usually summer afternoons. However, the Straw proposes that each EDC be provided the flexibility to establish the call hours and payments based on its specific needs. The development of a mechanism for calling resources is anticipated to take approximately six months to a year after the launch of the Grid Supply program.

Each EDC energy storage filing will be required to address the following items:

1. Program Call Hours:

Staff proposes that each EDC will identify the seasons and times of day when deployment of storage resources are most likely to benefit the grid. Staff initially proposes that the call hours would focus on summer peak hours, which typically occur between 3 pm – 7 pm on weekdays. However, each EDC would have the flexibility to determine the season and preferred hours based on its specific needs.

2. A $/kW per year Incentive Payment for Calls:

Staff proposes that each EDC would adopt a simple $/kW per year payment to incentivize storage resources on its system.

The EDC may adopt a single-system payment or may establish geographically variable payments, if such payment differentiation is warranted. Rate and tariff design should align with expected PJM rules related to Federal Energy Regulatory Commission ("FERC") Order 2222 and include co-optimizing economic and GHG reduction considerations. Enhancing the value stack will provide a strong financial incentive for energy storage resources to provide energy to the grid (and/or serve on-site load) during the times when the grid is the most stressed. The release of stored energy during these times could provide significant environmental, reliability, and cost savings to New Jersey consumers. This is because the energy storage resources will potentially avoid or at least reduce the use of peaking generation, which is typically the most expensive, dirtiest, and least efficient generation.

Each EDC should explain how its proposed payment structure meets the following criteria: (i) increases environmental benefits of storage deployment; (ii) cost-effectively reduces the need for traditional distribution investments; and (iii) otherwise minimizes the stress on the local distribution system and reduces operating costs.

3. Payments to Resource Owners

During dispatch events, an energy storage owner will meet its obligations under the performance-based payment portion of the NJ SIP if it responds to a call. Successfully "responding" to a call can take two forms or some combination thereof: either injecting power into the distribution system or by using the energy storage system to reduce the customer's consumption of power from the grid during the call period. Collectively, these are the distributed customer's "Response kWs," and are measured in kWs of relief provided. When a dispatch signal is sent by the relevant EDC, the customer would receive credit for each kW of Response kWs it provides during the call period, averaged over all call periods in a particular year. For example, an EDC that issued 10 calls over the course of a summer would sum up the total Response kWs provided by a storage system and report the average response over those 10 calls. A resource owner would be required to provided Response kWs for the entire duration of a call (likely up to four hours). A missed call would be registered as 0 kW. The resource owner would then receive the $/kW incentive established by the EDC, multiplied by their average Response kWs. At no point would the distributed storage resource incur penalties or result in a decrease to the fixed payment.

4. A Mechanism for Calling Resources

Each EDC will be required to develop a system for calling resources and communicating with distributed storage resources, which are expected to be able to respond automatically. However, customers may opt-out of a particular call, without penalty (apart from foregoing performance incentives they could earn during that call).

Staff proposes that each EDC program offer incentives for customer performance but that responding to calls should be voluntary for the consumer, as is the case in the ConnectedEnergy programs. Further, Staff recognizes that many customers invest in distributed storage resources in order to provide backup power during blackouts or other reliability events. In order for customers to rely on storage system during these times of grid stress, the customer may want to ensure that the storage system is fully charged before a storm or other event. To prevent storage systems from being drained immediately in advance of a potential grid event (i.e., a significant weather event), it is imperative that advance notice of a call is given by the EDCs. Staff notes that the ConnectedSolutions programs typically prohibit EDCs from dispatching energy storage resources less than 48-hours ahead of anticipated extreme weather or likelihood of grid outages.

VIII. Project Maturity Requirements and Participation Fees

Ratepayers benefit when projects awarded incentives via a competitive solicitation or allowed into a particular block have a reasonable likelihood of successful and timely completion. Project qualification and maturity requirements aim to strike a balance between awarding MW allotments sufficiently early to minimize project risk and limiting support to projects that can reach commercial operation within a reasonable timeframe at the incentive amount offered. This means that a well-designed incentive structure must take steps to ensure that projects registering in the program satisfy certain qualitative criteria.

For this reason, this Straw proposes to require that projects meet maturity requirements when they submit responses to a competitive solicitation or enter the declining block structure, as well as pay a fee for participating in the program. The intention of these requirements is to eliminate projects that cannot be expected to reach commercial operation within a reasonable time frame. Staff proposes that projects must demonstrate that they plan to achieve commercial operation within

550 days of receiving an award from the Board. If projects are not able to achieve commercial operation within that timeframe, then the capacity they reserved would be returned to the market, at which point those MWs will increase the size of the then open competitive solicitation or block. Staff further proposes that a project should only be considered to have achieved commercial operation if it is fully constructed *and* has completed the full interconnection process, either at PJM or with a New Jersey jurisdictional EDC, including construction of any required interconnection upgrades. Grid supply projects that failed to meet the maturity requirements of one solicitation could bid into a future competitive solicitation. Staff anticipates that the Program Administrator will be charged with implementing these requirements.

A. Project Maturity Requirements:

This Straw recommends that Grid Supply projects be required to meet all of the following criteria at the time they respond to a competitive solicitation:

- Have, at minimum, an executed System Impact Study;
- Have site control, either through lease or ownership;
- Have obtained all Major Permits or have an execution plan for all Major Permits;
- Have a Guaranteed COD prior to December 31, 2030, and after the effective date of the NJ SIP;
- Are planned to be interconnected with the PJM Transmission Network and situated within a Transmission Zone in New Jersey, or is planned to be interconnected with the distribution system of a New Jersey EDC in a front-of-the-meter configuration;
- Are not enrolled in the Successor Solar Incentive Program; and
- Meet all other economic and non-economic criteria the Board may set by order.

For Distributed Projects, Staff proposes that projects be required to meet the following criteria at the time of application:

- Its System Owner shall have submitted a level 1, 2, or 3 interconnection agreement application to the EDC and received notice confirming that said application was complete;
- Any generation resource it is paired with produces class I renewable energy;
- Its System Owner has 100% site control, either through lease or ownership;
- Its System Owner has obtained all Major Permits or has an execution plan for all Major Permits;
- Has a Guaranteed COD prior to December 31, 2030, and after the effective date of the NJ SIP;
- Is owned, leased, or operated by a residential or non-residential customer of an EDC;

- Meets all other economic and non-economic criteria the Board may set by order; and
- Meets all criteria set by the EDC establishing the Performance Incentive program.

B. *Bid Participation Fees:*

Fees or deposits for projects applying for State incentives are frequently used as means of ensuring the seriousness of bidders, incentivizing bidders to follow through on project commitments, and (in some cases) helping to defray the cost of administering State incentive programs.

Three models can be found in New York, Massachusetts, and Illinois:

- **New York.** In the New York Renewable Energy Certificates Program (administered by the New York State Energy Research & Development Authority ("NYSERDA")), bidders are assessed non-refundable bid fees in amounts that vary with the size of the projects, ranging from $1,000 per MW to $4,000 per MW, as follows in Table 4:[10]

Table 4. NYSERDA Bid Fees

Nameplate Capacity (MW)	Bid Fee
Less than 5.00 MW	$5,000
5.00-19.99 MW	$20,000
20.00 – 49.99 MW	$50,000
50.00 MW or more	$100,000

- **Massachusetts.** In Massachusetts, bidders in the SMART Program are required to provide a performance guarantee deposit in amounts that may vary but must not exceed $25 per kW of capacity (equivalent to $25,000 per MW).[11] These amounts are refunded to unsuccessful bidders and to selected bidders who meet Program Effective Date requirements.

- **Illinois.** In Illinois, renewable energy product procurements are administered by the Illinois Power Agency. In Illinois's Long-Term Renewable Resources Procurement Plan, applicants must pay a non-refundable application fee of $20 per kW, with a not-to-exceed cap of $15,000 per project.[12] This amount is not returned to applicants; rather it is used to offset program costs that would otherwise be "paid for out of the RPS budget."[13]

[10] Request for Proposals (RFP) No. RESRFP23-1, N.Y. State Energy Research & Dev. Auth., NYSERDA Seeks to Acquire New York Tier 1 Eligible Renewable Energy Certificates 44 (Nov. 30, 2023), https://portal.nyserda.ny.gov/servlet/servlet.FileDownload?file=00P8z000003b5XREAY.

[11] 225 Mass. Code Regs. 20.07(3)(a)(2)(i).

[12] Ill. Power Agency, 2024 Long-Term Renewable Resources Procurement Plan 221 (Apr. 19, 2024), https://ipa.illinois.gov/content/dam/soi/en/web/ipa/documents/final-2024-long-term-renewable-resources-procurement-plan-19-apr-2024.pdf

[13] Ibid.

The Straw proposes to implement a refundable instead of non-refundable $1,000 per MW fee due to the requirement of additional predevelopment securities.

C. Pre-Development Securities

Should a project be awarded a Fixed Incentive, the Board may require the System Owner to provide a Pre-Development Security of up to $100,000.00 per MW for Grid Supply projects upon application approval. The Pre-Development Security would be used to impose penalties for delays on project development milestones for non-Excused Events. Additionally, upon approval, the incentive recipient will provide a Planned Commercial Operation Date (PCOD) and a Guaranteed Commercial Operation Date (GCOD). If the applicant misses the Planned Commercial Operation Date, the Board may impose delay damages that will also be deducted from the predevelopment security. The Board will revoke the incentive award if the applicant misses their GCOD, adjusted for any grace period the Board may establish by order, though the Board may waive this penalty if the applicant demonstrates good cause for relief.

IX. Requirements

In order to be eligible to apply for incentives, Staff proposes that Grid Supply storage and Distributed storage projects must meet the following requirements:

- The energy storage system must be comprised of new equipment, be a Planned Resource if it is a Grid Supply Resource interconnecting to the PJM Transmission Network, and be electrically interconnected to the Distribution System of a New Jersey EDC or to a part of the PJM Transmission Network situated within a Transmission Zone in New Jersey;
- Meet the COD requirements, as demonstrated by submitting as-built drawings and confirmation of permission to operate from the relevant utility to the Program Administrator;
- Meet appropriate financial security and project maturity requirements;
- Meet minimum safety requirements by a nationally recognized testing laboratory as evidenced by specific UL listings defined in the program manual at the time the system enters commercial operation. These references are intended to evolve to meet current best practices in the storage industry; and
- Comply with all manufacturers' installation requirements, applicable laws, regulations, codes, licensing, and permit requirements.

X. Administration of Program and Assignment of Block Priority Dates

In terms of administration of incentives, Staff proposes that block allocations ("block priority date") for distributed storage projects be established on a first-come, first-served basis, based on the date stamp of when the Program Administrator receives a completed application. Projects will be required to meet all of the maturity, fee, and other requirements discussed above in order to be deemed complete. Applications will be deemed "complete" if the application contains only minor deficiencies, as determined by the Program Administrator. The Program Administrator may impose a schedule on the applicant to resolve minor deficiencies. Applications with major deficiencies will be assigned the block priority date on which the deficiency is cured. A project that is larger than the size of any individual block will be carried over into the next block(s) and be offered a rate that blends the two (or more) blocks. Developers will be offered the opportunity to decide whether to accept the blended offer, reduce their project size, or withdraw the project.

XI. Request for Comments

Staff requests comments on all elements of this Straw, including program design, administrative processes, financial proposals, as well as any other comments on items not specifically addressed in this Straw. The deadline for comments is indicated on the first page of this document. Below are specific questions that Staff is seeking comment on; however, comments on all aspects and content of the Straw are encouraged.

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?
2. In the absence of a day-ahead emissions signal, should the SIP institute another form of performance incentive for Grid Supply projects?
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?
    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?
    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?
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.

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

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?

SUBCHAPTER 14. NEW JERSEY STORAGE INCENTIVE PROGRAM

14:8-14.1 Purpose and Scope

This subchapter sets forth the rules for the establishment of the New Jersey Energy Storage Incentive Program. The program is comprised of two components: one for in-front-of- the-meter, or grid supply ("Grid Supply") Energy Storage and the other for behind-the-meter or distributed ("Distributed") Energy Storage. The two components are designed to provide incentives for eligible Energy Storage Systems in support of the State of New Jersey target to achieve 2,000 megawatts ("MW") of installed Energy Storage by 2030.

14:8-14.2 Definitions

For the purposes of this subchapter, the following words and terms shall have the following meanings, unless the context clearly indicates otherwise:

"Authority Having Jurisdiction" means an organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

"Block" means the target deployment level of Distributed Energy Storage System Installed Capacity for a given Fiscal Year.

"Block Incentives" means the Fixed Incentive levels for Distributed Energy Storage Systems the Board sets for a specific Block in a particular Fiscal Year.

"Block Priority Date" means the date on which the Program Administrator receives a completed Distributed Segment application.

"Board" means the New Jersey Board of Public Utilities.

"Business Day" means any day except a Saturday, Sunday, or a day designated as a legal holiday pursuant to New Jersey law.

"Calendar Day" means all weekdays and weekend days including days designated as legal holidays pursuant to New Jersey law.

"Class I Renewable Energy" shall have the same meaning as provided in N.J.A.C. 14:8-1.2.

"Commercial Operation" means obtaining the applicable permission to operate ("PTO") an Energy Storage System from an Electric Distribution Company (EDC), PJM Interconnection, L.L.C. (PJM), or both an EDC and PJM depending on the point of interconnection.

"Covered agricultural lands" shall have the same meaning as provided in in N.J.A.C. 14:8-12.2

"Delay Damages Rate" means $100 per Planned Installed Capacity (MW) per Calendar Day.

“Delivery Term” means 20 years after the date that Commercial Operation commences.

“Distributed Energy Storage System” means an Energy Storage System that operates in parallel with an electric Distribution System, is connected on the customer side of the meter, and is owned by the customer or another party that is not an EDC.

“Distributed Segment” means the component of the New Jersey Storage Incentive Program (NJ SIP) designed to accelerate the deployment of Distributed Energy Storage Systems.

“Distributed Energy Resource,” or “DER,” means a category of devices and technologies that are integrated with the electricity system at the distribution level, either providing or consuming power.

"Distribution System" means, with respect to an EDC, any property that is used for the distribution or delivery of electricity to the customers of the EDC including, but not limited to, the land, structures, meters, lines, switches, and all other appurtenances thereof and thereto, owned or controlled by the EDC within this State.

“Electric Distribution Company” or “EDC” means a public utility, as that term is defined in N.J.S.A. 48:2-13, that transmits and distributes electricity to end users within the State.

“Emitting Generation Resource” means any electric generation unit that generates electricity by burning a fossil fuel or any other fuel whose combustion releases air pollutants, including Greenhouse Gasses (GHGs), that are reasonably anticipated to be harmful to human health.

“Energy Storage” means a device that is capable of absorbing energy from the grid or from a Distributed Energy Resource (DER), storing it for a period of time using mechanical, chemical, or thermal processes, and thereafter discharging the energy back to the grid or directly to an energy-using system to reduce the use of power from the grid.

“Energy Storage System,” absent further qualification, means either a Distributed Energy Storage System or a Grid Supply Energy Storage System.

“Facility” or “Facilities” means the land or building on which an Energy Storage System is to be built, or is in the process of being built, along with all electrical and mechanical equipment required to interconnect such Facility or Facilities with either the PJM Transmission Network or the Distribution System of an EDC.

“Facilities Study” means an interconnection study conducted by PJM or an EDC to determine the direct costs (if any) to interconnect a Facility to the PJM Transmission Network or the Distribution System of an EDC.

“FERC” means the Federal Energy Regulatory Commission or any successor agency.

“Fiscal Year” means July 1 through June 30 of the following calendar year.

“Fixed Incentive” means a one-time monetary payment to partially offset the Installed Cost of an Energy Storage System that the Board makes to a System Owner once their Energy Storage System achieves Commercial Operation.

"Forested Land" means land that is at least 1.0 acre in size and 120.0 feet wide and that has, or has had within the past 10 years, at least 10 percent crown cover by live tally trees of any size or at least 10 percent canopy cover of live tally species, based on the presence of stumps,

snags, or other evidence. Forested Land includes transition zones, such as areas between forest and non-forestland that meet the minimal tree stocking/cover and forest areas adjacent to urban and built-up lands.

"Force Majeure" means an event that is not attributable to fault or negligence of the Facility and is caused by factors beyond the System Owner's reasonable control.

"Gap Analysis" means an analysis that determines the difference between the average Installed Cost of an Energy Storage System, including all fixed and operating costs, and the projected revenue needed to fund debt and equity costs.

"Guaranteed Commercial Operation Date," or "Guaranteed COD," means the date by which a recipient of a Fixed Incentive award commits to achieve Commercial Operation.

"Grid Emergency" means an "Emergency" as defined in PJM Manual 13.

"Grid Supply Energy Storage System" means an Energy Storage System that is interconnected with the PJM Transmission Network and situated within a Transmission Zone in New Jersey or interconnected with the Distribution System of a New Jersey EDC in a front-of-the-meter configuration and is subject to an Interconnection Agreement with an EDC or PJM.

"Grid Supply Segment" means the component of the NJ SIP designed to accelerate the deployment of Grid Supply Energy Storage Systems.

"IEEE 1547" means the IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces.

"Installed Capacity" has the meaning set forth in PJM Manual 18.

"Installed Cost" means the total construction cost of a new Energy Storage System, including the costs of hardware, siting, installation, permitting, and interconnection.

"Interconnection Agreement," or "Generator Interconnection Agreement," or "GIA," means an agreement between a Facility and an EDC or PJM that governs the connection of the Facility to the electric Distribution System or the PJM Transmission Network, as well as the operation of the Facility after it is interconnected with the Distribution System or the PJM Transmission Network. An Interconnection Agreement shall follow the standard form agreement developed by the Board and available from each EDC, or, in the case of transmission interconnection, the standard form developed by PJM.

"Interconnection Construction Services Agreement" has the meaning put forth in PJM Manual 14A.

"Large," when describing Distributed Energy Storage Systems, means possessing a nameplate capacity of greater than 500 kW.

"Marginal Emission Rate or "MER" means the amount of carbon dioxide the Marginal Resource in a particular PJM wholesale market zone or node emits for every megawatt-hour it supplies during a particular time interval.

"Marginal Emissions Rate Signal" or "MER Signal" means a system or means of determining and relaying data on the Marginal Emission Rates for New Jersey wholesale market zones during a particular time interval.

"Marginal Resource" means the source of electricity or load reduction that sets the zonal or nodal wholesale energy market clearing price in the relevant zone or node during a given time interval.

"Maximum Facility Output," or "MFO," means nameplate capacity rating adjusted for station load.

"Medium," when describing Distributed Energy Storage Systems, means possessing a nameplate capacity of 100 to 500 kW.

"Net Avoided Emissions" means avoided carbon dioxide emissions resulting from an Energy Storage System discharging, net of carbon dioxide emissions caused by the Energy Storage System charging.

"New Jersey Storage Incentive Program," or "NJ SIP," means the program designed to accelerate the deployment of Energy Storage Systems interconnected to a New Jersey EDC's Distribution System or the part of the PJM Transmission Network located in New Jersey, as set forth in this subchapter.

"OBC Adder" means an increase to the Fixed Incentive for Distributed Energy Storage Systems that benefit OBCs or OBC residents.

"Overburdened community," or "OBC," means any census block group, as determined in accordance with the most recent United States Census, in which: (1) at least 35 percent of the households qualify as low-income households; (2) at least 40 percent of the residents identify as minority or as members of a State-recognized tribal community; or (3) at least 40 percent of the households have limited English proficiency.

"Performance Incentive" means a series of recurring monetary payments that are paid to the owner of an eligible Energy Storage System that participates in the NJ SIP to compensate such owner for the power system and/or environmental benefits provided by the Energy Storage System.

"Permission to Operate" or "PTO" means final approval from PJM and/or the applicable EDC to start utilizing a grid-connected Energy Storage System following the complete installation or construction of the Energy Storage System and any equipment needed to facilitate its interconnection.

"Permits" means any site-specific or project-specific permit that must be issued by an Authority Having Jurisdiction prior to the operation of the energy storage facility.

"PJM Interconnection, L.L.C.," or "PJM," means the privately held, limited liability corporation that serves as a FERC-approved Regional Transmission Organization, or its successor, that manages the regional, high-voltage electricity grid serving all or parts of 13 states, including New Jersey, and the District of Columbia; operates the regional competitive wholesale electric market; manages the regional transmission planning process; and establishes processes and rules to ensure that the regional and in-State energy markets operate fairly and efficiently.

"PJM Transmission Network" means the high-voltage network of transmission equipment managed by PJM.

"Planned," or "Planned Resource," means Facilities that are designated as "Active" in PJM's serial service request status list or cycle service request status list and have not cleared capacity in Reliability Pricing Model Capacity Auctions or energy in PJM energy or ancillary services markets.

"Planned Commercial Operation Date," or "Planned COD," means an estimated date on which a System Owner will commence Commercial Operation.

"Pre-Development Security" means with respect to System Owner, one or more of the following: (i) cash; or (ii) a Letter of Credit in a form reasonably acceptable to the Board.

"Program Administrator" means the entity responsible for managing, in consultation with the Board, the processes associated with the procurement of new Energy Storage Installed Capacity and for development of any reports or evaluations required by the Board to assess the progress of such procurement.

"Project Milestones" means significant events in the design, planning, construction, and commissioning phases of a project. Project Milestones include, but are not necessarily limited to, financial close; executed interconnection agreement; final notice to proceed; major equipment delivery; and Commercial Operation.

"Project Operator" means the entity responsible for an Energy Storage System's operations and maintenance, and for its participation in the applicable wholesale markets and/or Performance Incentive structures.

"Response kWs" means the power discharged from a Distributed Energy Storage System during a dispatch call initiated by a New Jersey EDC.

"Small," when describing Distributed Energy Storage Systems, means possessing a nameplate capacity of less than 100 kW.

"Standalone" means, when describing Energy Storage Systems, those Energy Storage Systems that are not a component of a "hybrid" configuration, which would include a generating resource of a different asset class.

"System Impact Study" has the meaning set forth in PJM's Open Access Transmission Tariff, Definitions section.

"System Owner" means the owner of an Energy Storage System that is eligible to participate in the NJ SIP.

"Transmission Zone" means the jurisdictional territory of an EDC in PJM that owns and maintains transmission facilities within the territory.

"UL 1741" means UL Standards and Engagement, Standard 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources.

"UL 1741 SB" means UL Standards and Engagement, Standard 1741 Supplement B, for Inverters for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources.

"UL 9540" means UL Standards and Engagement, Standard 9540 Energy Storage Systems and Equipment.

"UL 9540A" means UL Standards and Engagement, Standard 9540A Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems.

14:8-14.3 Grid Supply Segment Fixed Incentive Program Structure

(a) For the Grid Supply Segment, the NJ SIP shall provide a Fixed Incentive to Planned, Standalone Energy Storage Systems and to Facilities pairing Planned Energy Storage Systems with a generating resource deemed eligible pursuant to this subchapter.

(b) The size of the Fixed Incentive that Grid Supply Energy Storage Systems receive will be determined by a competitive solicitation process.

(c) For the Grid Supply Segment, the Board shall conduct at least one annual application solicitation process through Fiscal Year 2028. The timing of the solicitation, as well as the maximum amount of Installed Capacity to be sought, shall take place in the first half of the calendar year. The solicitation may include, but is not necessarily limited to, bid price and other factors to be determined by the Board.

(d) Board staff or their designated Program Administrator shall present to the Board for approval the Grid Supply solicitation application design and requirements and the criteria for evaluation of submitted applications. The selection criteria may include, but is not necessarily limited to, bid price and other criteria which may be established by the Board.

(e) Board staff shall open an application period for the NJ SIP for a length of time to be determined at the opening of the application process.

(f) The Board will determine the maximum annual MW target or budget limit at the time of a solicitation based on the available budget and an estimate of the award amount, in dollars per MW, that would allow a Facility to obtain economic financing for a construction loan.

(g) An application package must be accompanied by a refundable application deposit. The amount of the deposit shall be based on dollars per kW of nameplate capacity, set by the Board, and specified in the application. The deposit will be refunded if:

1. **Staff rejects the application; or**
2. **Staff accepts the application, and the applicant achieves Commercial Operation by its Guaranteed COD.**

(h) Following the close of the application period, Board staff and the Program Administrator will evaluate and score projects based on criteria identified in the solicitation.

(i) Only applications that are complete or substantively complete by the close of the application period will be considered for participation in the NJ SIP for that program year.

(j) Projects will be presented to the Board for approval for participation in the NJ SIP beginning with the highest-scored project, and until the maximum annual MW target is filled or available budget is consumed.

(k) If the Board approves the application, Board staff or their designee will send notice to the applicant. As soon as practicable after an applicant receives notice of a Fixed Incentive award, such applicant shall provide a report to the Board with the estimated dates for the following pre-COD Project Milestones, as applicable:

1. **Fully executed GIA;**
2. **Fully executed engineering, procurement and construction contract;**
3. **Financial close;**

4. **Full notice to proceed;**
5. **Planned COD; and**
6. **Guaranteed COD.**

(l) **The Board may require the System Owner to provide Pre-Development Security of up to $100,000 per Planned Installed MW, or other value determined by the Board. At each of the Project Milestones, the Program Administrator will evaluate progress, requiring documented achievement within 30 days of the Project Milestone date. Should a given Project Milestone be achieved, a portion of Pre-Development Security would be returned to the System Owner, up to the full amount for timely completion of all Project Milestones.**

1. **The Planned COD must be no more than 550 Calendar Days after the date of execution of the GIA. The Guaranteed COD must be no more than 150 Calendar Days after the Planned COD.**
2. **Should a System Owner fail to achieve a Project Milestone within 30 Calendar Days of its scheduled completion date, for each day starting with the Calendar Day that is 30 Calendar Days after the applicable scheduled completion date, the Board shall deduct from the System Owner's Pre-Development Security an amount equal to the Planned Installed Capacity multiplied by the Delay Damages Rate. Such Delay Damages will not be deducted from the System Owner's Pre-Development Security if the delay was caused by an event of Force Majeure, in which case the Guaranteed COD and all remaining Project Milestone scheduled completion dates will be extended by no more than 180 Calendar Days.**
3. **If Commercial Operation has not occurred by the Planned COD, for each day starting with the Calendar Day after the Planned COD until Commercial Operation, the Board shall deduct from the System Owner's Pre-Development Security an amount equal to the Planned Installed Capacity multiplied by the Delay Damages Rate. Such Delay Damages will not be deducted from the System Owner's Pre-Development Security if the delay was caused by an event of Force Majeure, in which case the Guaranteed COD will be extended by no more than 180 Calendar Days.**
4. **A System Owner will forfeit any Fixed Incentive award for a project that fails to achieve Commercial Operation by the Guaranteed COD or within any grace period the Board may establish by Order. However, the Board may allow a System Owner that achieved Commercial Operation at a later time to retain a Fixed Incentive award if they show good cause for such relief.**

(m) **Grid Supply Segment Eligibility**

1. **The Grid Supply Segment of the NJ SIP shall be open to an Energy Storage System that is either Standalone or paired with a generating resource that meets all of the following criteria:**
    1. **Has, at minimum, an executed System Impact Study;**
    2. **Has 100% site control, either through lease or ownership;**
    3. **Has obtained all Major Permits or has an execution plan for all Major Permits;**
    4. **Has a Guaranteed COD prior to December 31, 2030, and after the effective date of the NJ SIP;**
    5. **Is planned to be interconnected with the PJM Transmission Network and situated within a Transmission Zone in New Jersey, or is planned to be**

interconnected with the Distribution System of a New Jersey EDC in a front-of-the-meter configuration;

6. **Is not enrolled in the Successor Solar Incentive Program established under subchapter 11 of this chapter; and**
7. **Meets all other economic and non-economic criteria the Board may set by order.**

(n) Grid Supply Segment Reporting

1. **The System Owner shall provide to the Board, or its designee, construction reports after receiving full notice to proceed until the Commercial Operation date, as specified in the application approval letter, to enable the Board to assess progress toward the achievement of each Project Milestone.**
2. **No later than five Business Days after the last Calendar Day of each month of the Delivery Term, System Owner shall provide the Board, or its designee, with a report that shows key operational metrics to be identified by the board.**
3. **The Board must be notified, in writing, of any change to the project developer, owner, or operator in case of sale, transfer, contract modification, or other material change to the parties initially listed in the application. Specifically:**
    1. **Within 30 days of a material change in control of the owner, such a new owner shall notify the Board of their individual and/or corporate names, tax ID, address, contact phone, and percent ownership of the project.**
    2. **Within 30 days of a material change in the Project Operator, such a new Project Operator is required to notify the Board of its individual and/or corporate names, tax ID, address, and contact phone number.**
    3. **The Board shall be kept apprised of all major project developments and/or changes via written notification (e-mail or letter).**

(o) For new or existing power generation equipment at the Energy Storage System site, the System Owner must also install a revenue-quality meter or meters capable of measuring the power and energy discharged by the Energy Storage System separately from the power and energy produced by the power generation equipment, along with telemetering equipment and data acquisition services sufficient for producing monthly operating reports pertaining to the Energy Storage System.

14:8-14.4 Grid Supply Segment Performance Incentive Program Structure

(a) 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 consistent with the provisions of this section. The following subsections shall only apply if the Board issues such an order.

(b) Only Grid Supply Energy Storage Systems that neither received a Fixed Incentive award nor commenced Commercial Operation prior to the launch of a Net Avoided Emissions Performance Incentive shall be eligible for such Performance Incentives.

(c) Grid Supply Energy Storage Systems that are eligible to receive Net Avoided Emissions Performance Incentives shall receive a combination of a Fixed Incentive and Net Avoided Emissions Performance Incentives.

(d) If the operation of a Grid Supply Energy Storage System that receives Net Avoided Emissions Performance Incentive payments causes a net reduction in carbon dioxide emissions in a given Fiscal Year, it shall receive a Net Avoided Emissions Performance Incentive payment on August 1 of the subsequent Fiscal Year. A Grid Supply Energy Storage System that either caused no net reduction in carbon dioxide emissions or an increase in carbon dioxide emissions during a given Fiscal Year shall receive no Net Avoided Emissions Performance Incentive payments for that Fiscal Year.

(e) If a Grid Supply Energy Storage System qualifies for Net Avoided Emissions Performance Incentive pursuant to (d), it shall receive a payment equal to its Net Avoided Emissions in short tons for the relevant Fiscal Year multiplied by a dollar-per-ton rate to be established by the Board.

(f) A Grid Supply Energy Storage System's Net Avoided Emissions for a Fiscal Year shall be calculated as follows:

1. **The Grid Supply Energy Storage System's gross avoided emissions shall be calculated by multiplying, for each time interval during the relevant Fiscal Year in which the Grid Supply Energy Storage System discharged electricity, the MER in its wholesale energy market zone or node by the amount of electricity it discharged, and then summing the resulting products together.**
2. **The Grid Supply Energy Storage System's gross induced emissions shall be calculated by multiplying, for each time interval during the relevant Fiscal Year in which the Grid Supply Energy Storage System consumed electricity to charge, the MER in its wholesale energy market zone or node by the amount of electricity it consumed, and then summing the resulting products together.**
3. **The Grid Supply Energy Storage's gross induced emissions shall then be subtracted from its gross avoided emissions to determine its Net Avoided Emissions for the relevant Fiscal Year.**

14:8-14.5 Distributed Segment Fixed Incentive Program Structure

(a) For the Distributed Segment, the NJ SIP shall provide a Fixed Incentive to Planned, Standalone Energy Storage Systems and Facilities pairing Planned Energy Storage Systems with a generating resource deemed eligible pursuant to this section. Such Energy Storage Systems must be physically interconnected with the Distribution System of any of the four EDCs in New Jersey in accordance with N.J.A.C. 14:8-5.

1. **The Board shall set Distributed Segment Block sizes and Block Incentives for every Fiscal Year by no later than August 1 of that same Fiscal Year until all statutory Energy Storage targets are achieved. The Board may by order establish individual incentive levels and target procurement levels for specific segments based on project size. Board staff shall have the authority to deviate from target procurement levels and reallocate the available budget between size categories in response to the number of incentive applications for particular size categories,**

fundamental changes in technology costs, new sources of energy storage, federal tax policy updates, emerging supply chain issues, or other reasons that show that the incentive amount associated with a given Block will no longer suffice to meet program goals or will impose clearly excessive costs on ratepayers.

(b) Block Incentives for a given Fiscal Year will be determined by the Board following a Gap Analysis to ensure that the incentive to the owner incorporates consideration of the difference between projected revenue, including any Performance Incentive offered, and the Installed Cost as well as ongoing operations and maintenance costs of the Energy Storage System.

(c) A portion of the incentive budget, to be established by the Board, shall be reserved for Distributed Energy Storage Systems located in Overburdened Communities.

(d) The Board may establish OBC adders and adjust their level by order, provided that any decrease in OBC adders will not take effect until the start of the next Block.

(e) No more Distributed Segment Fixed Incentives shall be awarded in a Fiscal Year once the level of Distributed Energy Storage System capacity awarded Fixed Incentives in that Fiscal Year exceeds the target capacity of the corresponding Block. Any Fixed Incentive applications submitted after that point shall be treated as an application for Fixed Incentives in the subsequent Fiscal Year's Block.

(f) Any applicant seeking a NJ SIP Distributed Segment Fixed Incentive for an Energy Storage System shall submit a complete application package to the Board, or its designee, in accordance with Board rules and orders and the instructions posted on the Board's website.

(g) An application package must be accompanied by a refundable application deposit to be determined by the Board, of nameplate capacity. The deposit will be refunded if:

1. **Staff rejects the application; or**
2. **Staff accepts the application, and the applicant achieves Commercial Operation by their Guaranteed COD.**

(h) Block allocations shall be established on a first-come, first-served basis, with the assignment of a Block Priority Date based on the date stamp of when the Program Administrator receives a completed application.

(i) The Program Administrator shall determine whether Applications are substantively complete or substantively incomplete. The Program Administrator shall reject an application that is substantively incomplete and notify the applicant that their application will not be processed until they submit a substantively complete version.

(j) A Distributed Energy Storage System that is larger than the size remaining in any individual Block will be carried over into the next Block(s) and be offered a rate that blends the two (or more) Blocks. Applicants will be offered the opportunity to decide whether to accept the blended offer, reduce their project size, or withdraw their application.

(k) As soon as practicable after an applicant for a Large Distributed Energy Storage System Fixed Incentive receives notice of an award, such applicant shall provide a report to the Board with the estimated dates for pre-COD Project Milestones, as established by the program administrator.

(l) System Owners of Large Distributed Energy Storage Systems shall provide to the Board construction reports after receiving full notice to proceed until the Commercial Operation date, as specified in the application approval letter, to enable the Board to assess progress

toward the achievement of each Project Milestone, communicating content to be established by the program administrator.

(m) As soon as practicable after an applicant for a Small or Medium Distributed Energy Storage System receives notice of a Fixed Incentive award, such applicant shall provide a report to the Board with the estimated dates for the following pre-COD Project Milestones, as applicable:

1. **Fully executed GIA;**
2. **Planned COD; and**
3. **Guaranteed COD.**

(n) The Planned COD for a Distributed Energy Storage System must be no more than 550 Calendar Days after the date of execution of the GIA.

(o) The Guaranteed COD for a Distributed Energy Storage System must be no more than 150 Calendar Days after the Planned COD.

(p) A System Owner will forfeit any Fixed Incentive award for a Distributed Energy Storage System that fails to achieve Commercial Operation by the Guaranteed COD or within any grace period the Board may establish by Order. However, the Board may allow a System Owner that achieved Commercial Operation at a later time to retain a Fixed Incentive award if they show good cause for such relief.

(q) The Fixed Incentive shall be disbursed after a System Owner's Facility achieves Commercial Operation.

(r) Distributed Segment Eligibility

1. **The Fixed Incentive of the Distributed Segment of the NJ SIP shall be open to a Distributed Energy Storage System that is either Standalone or paired with a generation resource and meets all of the following criteria:**
    - i. **Its System Owner submitted a level 1, 2, or 3 Interconnection Agreement application to the EDC and received notice that said application was complete;**
    - ii. **Any generation resource it is paired with produces Class I Renewable Energy;**
    - iii. **Its System Owner has 100% site control, either through lease or ownership;**
    - iv. **Its System Owner has obtained all Major Permits or has an execution plan for all Major Permits;**
    - v. **It has a Guaranteed COD prior to December 31, 2030, and after the effective date of the NJ SIP;**
    - vi. **It is owned, leased, or operated by a residential or non-residential customer of an EDC; and**
    - vii. **It meets all other economic and non-economic criteria the Board may set by order.**
2. **A Distributed Energy Storage System shall qualify for an OBC Adder if it is:**
    - i. **Installed at a single-family or multi-family residence in an OBC; or**
    - ii. **Installed at and provides resiliency benefits to a critical public facility such as a town hall, police station, or emergency shelter in an OBC;**

14:8-14.6 Distributed Segment Performance Incentive Program Structure

(a) For the Distributed Segment, Performance Incentive programs will be established by each of the EDCs pursuant to a common program framework, set forth in Minimum Filing Requirements ("MFRs") that the Board shall establish by order, consistent with the provisions of this section.

(b) The Performance Incentive shall be designed to incentivize participants to dispatch their Energy Storage Systems when called upon by the EDC.

(c) A Distributed Energy Storage System Owner's annual Performance Incentive payments shall equal their average Response kWs for the applicable year multiplied by a per-kW Performance Incentive rate. Response kWs dispatched on average for calls in that year.

(d) An EDC's call duration shall not exceed 4 hours.

(e) The EDC shall require that the Response kWs be provided for the entire duration of a call.

(f) An EDC shall measure Response kWs based on the total amount of power discharged by a Distributed Energy Storage System, regardless of whether the power is consumed behind the retail meter, is injected into the Distribution System, or is split between serving load behind the retail meter and power injections into the Distribution System.

(g) An EDC may establish geographically variable Performance Incentive rates.

(h) EDCs may not penalize Distributed Energy Storage Systems that fail to respond or opt-out of a call, apart from withholding the Performance Incentive payments the Distributed Energy Storage Systems could have earned had they responded. The EDC shall register a missed call as 0 kW.

(i) The EDC's call protocol shall address avoiding dispatching storage resources less than 48-hours ahead of anticipated extreme weather or likelihood of grid outages. The Performance Incentive of the Distributed Segment of the NJ SIP shall be open to a Distributed Energy Storage System that is either Standalone or paired with a generating resource that meets all of the following criteria:

1. **Its System Owner has 100% site control, either through lease or ownership;**
2. **Its System Owner has obtained all Major Permits or has an execution plan for all Major Permits;**
3. **It has a Guaranteed COD prior to December 31, 2030, and after the effective date of the NJ SIP;**
4. **It is owned, leased, or operated by a residential or non-residential customer of an EDC;**
5. **It meets all other economic and non-economic criteria the Board may set by order; and**
6. **It meets all criteria set by the EDC establishing the Performance Incentive program.**

(j) The EDCs shall develop the application process and application requirements for the Performance Incentives by building upon the common program framework established by the Board, and then present the application process and application requirements to the Board for approval.

(k) The EDCs shall develop the eligibility criteria for Performance Incentives and present them to the Board for approval.

(l) The EDCs shall develop the Performance Incentive program call hours, $/kW per year Performance Incentive rates, and payment disbursement procedures. EDCs shall present the program call hours, $/kW per year Performance Incentive rates, and payment disbursement procedures to the Board for approval.

(m) EDCs shall submit monthly electronic reports to the Board, or its designee, on Distributed Energy Storage System interconnections, energy production, and finances, within 30 days of the end of the applicable calendar month. The content of the reports shall include, but not necessarily be limited to:

1. **A list of Distributed Segment projects that submitted an interconnection application, including name, location, and Planned Installed Capacity;**
2. **A list of Distributed Energy Storage Systems interconnected over the previous month, including name, location, and Installed Capacity;**
3. **The estimated kilowatt-hours supplied to the Distribution System by Distributed Energy Storage Systems over the previous month, and a description of the estimation methodology used;**
4. **Cumulative data on the total number of interconnection applications received, total number of Distributed Energy Storage Systems interconnected, total Installed Capacity of Distributed Energy Storage Systems interconnected, and estimated total kilowatt-hours supplied to the Distribution System by Distributed Energy Storage Systems since the beginning of the Distributed Segment of the NJ SIP; and**
5. **The total funds disbursed to make Performance Incentive payments and administer the Performance Incentive program.**

(n) EDCs are required to submit annual reports to the Board, or its designee, providing the following data on Distributed Energy Storage Systems receiving the Performance Incentive:

1. **Number of Distributed Energy Storage Systems participating in an EDC Performance Incentive program;**
2. **The cumulative amount, by hour, of energy delivered to, and energy discharged from, participating Distributed Energy Storage Systems;**
3. **The power, by hour, delivered to and discharged from participating Distributed Energy Storage Systems; and**
4. **The total funds disbursed to make Performance Incentive payments and administer the Performance Incentive program.**

14:8-14.7 Siting Prohibitions – Grid Supply

(a) Any Grid Supply Energy Storage Systems located on or proposing to locate on the following land types (collectively "prohibited land uses") are ineligible to receive NJ SIP incentives, unless they receive a waiver pursuant to N.J.A.C. 14:8-14.8:

1. **Land preserved pursuant to the Green Acres Program, as defined at N.J.A.C. 7:36;**
2. **Land located within the preservation area of the Pinelands area, as designated in subsection b. of section 10 at P.L. 1979, c. 111 (N.J.S.A. 13:18A-11);**

3. **Land designated as forest area in the Pinelands Comprehensive Management Plan adopted pursuant to P.L. 1979, c. 111 (N.J.S.A. 13:18A-1 et seq.);**
4. **Land designated as freshwater wetlands, as defined pursuant to P.L. 1987, c. 156 (N.J.S.A. 13:9B-1 et seq.), or coastal wetlands, as defined pursuant to P.L. 1970, c. 272 (N.J.S.A. 13:9A-1 et seq.);**
5. **Lands located within the Highlands preservation area, as designated in subsection b. of section 7 at P.L. 2004, c. 120 (N.J.S.A. 13:20-7b);**
6. **Forested Land and associated transition zones; and**
7. **Covered agricultural lands.**

(b) In determining whether a Grid Supply Energy Storage System is sited on or proposed to be sited on Forested Land, the presence of unimproved roads and trails, streams, or clearings in Forested Land shall not act to change the character of Forested Land, unless such roads, trails, streams, or clearings are more than 120 feet wide or larger than one acre in size.

14:8-14.8 Waiver provisions for siting on prohibited land uses

(a) Any entity seeking a waiver of N.J.A.C. 14:8-14.7(a) may file a petition with the Board seeking to waive the prohibition for good cause shown. The Board, or its designee, shall make a positive finding with regard to any such petition only upon:

1. **Consulting with other State agencies, as appropriate;**
2. **Determining that the petitioner has documented sufficient facts and circumstances establishing the public's specific interest in siting the Energy Storage System on or within a specific prohibited land use; and**
3. **Finding that the waiver is in the public interest.**

(b) Notwithstanding the requirements at (a) above, Energy Storage Systems proposed to be located on prohibited land uses are presumptively deemed to be in the public interest if the Energy Storage System will be located exclusively on the built environment, provided that the structure or surface has existed for at least three years prior to the date the waiver application is filed.

1. **The Board designates approval of such waiver applications to Board staff, or a Program Administrator duly retained by the Board.**
2. **Any Energy Storage System that is denied a waiver pursuant to (b)1 above may, instead, file a petition with the Board pursuant to (a) above explaining the specific facts and circumstances of its waiver request.**

(c) The Board, or its designee, may request additional evidence prior to approving or denying a request for any waiver requested, pursuant to this section.

(d) Projects proposed to be located on preserved farmland are not eligible for a waiver and the Board authorizes Board staff, or its designee, to administratively deny such requests.

14:8-14.9 Technical Requirements

(a) An Energy Storage System must be comprised of new equipment, be a Planned Resource if it is a Grid Supply Resource interconnecting to the PJM Transmission Network, and be

electrically interconnected to the Distribution System of a New Jersey EDC or to a part of the PJM Transmission Network situated within a Transmission Zone in New Jersey.

(b) Energy Storage Systems must meet the COD requirements, as demonstrated by submitting as-built drawings and confirmation of Permission to Operate from the relevant utility to the Program Administrator.

(c) Energy storage systems must comply with all manufacturers' installation requirements.

(d) Energy Storage Systems must conform to all laws, regulations, codes, standards, licensing, and permitting requirements that were applicable when the project was constructed.

(e) All Energy Storage Systems receiving incentives shall be certified to UL 9540 if applicable.

(f) All Energy Storage Systems receiving incentives that do not fall under the scope of UL 9540 shall be certified to a comparable applicable standard, if one exists.

(g) All Energy Storage Systems receiving incentives shall have completed large-scale fire testing in accordance with UL 9540A. UL 9540A test reports shall be made available to the Board, the Program Administrator, and any Authority Having Jurisdiction that requests them.

(h) Inverters used in Energy Storage Systems receiving incentives shall be certified to UL 1741 SB and IEEE 1547.

(i) The Board may update or change the specific standards to which systems must be certified to and compliant with by order, provided the Board first finds that the new or updated standard is superior to the specific standard listed in this section.