

Welcome

This is the public stakeholder meeting for

The New Jersey Storage Incentive Program (NJ SIP)

2024 Straw Proposal and Draft Rules

Docket No. QO22080540

November 20, 2024

This meeting will focus on the NJ SIP Straw Proposal and associated draft rules released on November 7, 2024



Disclaimer

This presentation is provided for informational purposes only and should not be taken to represent the views of the New Jersey Board of Public Utilities, its Commissioners, or the State of New Jersey. Please be aware that any information presented is subject to change if there are changes to New Jersey statutes, rules, or policies

All viewers are responsible for ensuring that they rely only on current legal authority regarding the matters covered in the presentation

Webinar Protocol

- All attendees will be automatically muted
- The Chat function in Zoom will be turned off
- This meeting is being recorded. A copy of the recording and presentation will be made available at: <https://www.njcleanenergy.com/storage>

Stakeholder Comment Guidelines

- Comments accepted:
 - During the Q&A portion of this 10:00 AM – 12:00 PM webinar, beginning with registered speakers. Other interested parties may speak as time permits. Three-minute time limit per organization please.
 - In writing by 5:00 P. M. EST Wednesday, December 18, 2024, to https://publicaccess.bpu.state.nj.us/CaseSummary.aspx?case_id=2111434 (Docket No. QO22080540), using the “Post Comments” button
- Comments are “public documents” per the State’s Open Public Records Act - confidential information should be submitted in accordance with the procedures set forth in N.J.A.C 14:1-12.3
- Storage Program email: energy.storage@bpu.nj.gov

Introduction to the New Jersey Storage Incentive Program (NJ SIP) Straw Proposal

- New Jersey's statutory energy storage target is 2,000 megawatts by 2030
- Energy storage is 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 NJ SIP will provide a critical foundation for a long-term energy storage effort in the state
- The NJ SIP builds on the BPU's September 2022 NJ SIP Straw Proposal and August 2023 Request for Information (RFI)

Introduction (continued)

- 2024 Straw proposes 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
- This Straw will focus on incentivizing stand-alone Grid Supply energy storage projects and solar-plus-storage projects that are ineligible to receive storage incentives from the Competitive Solar Incentive (CSI) program
- Incentives will not be retroactive

Program Goals

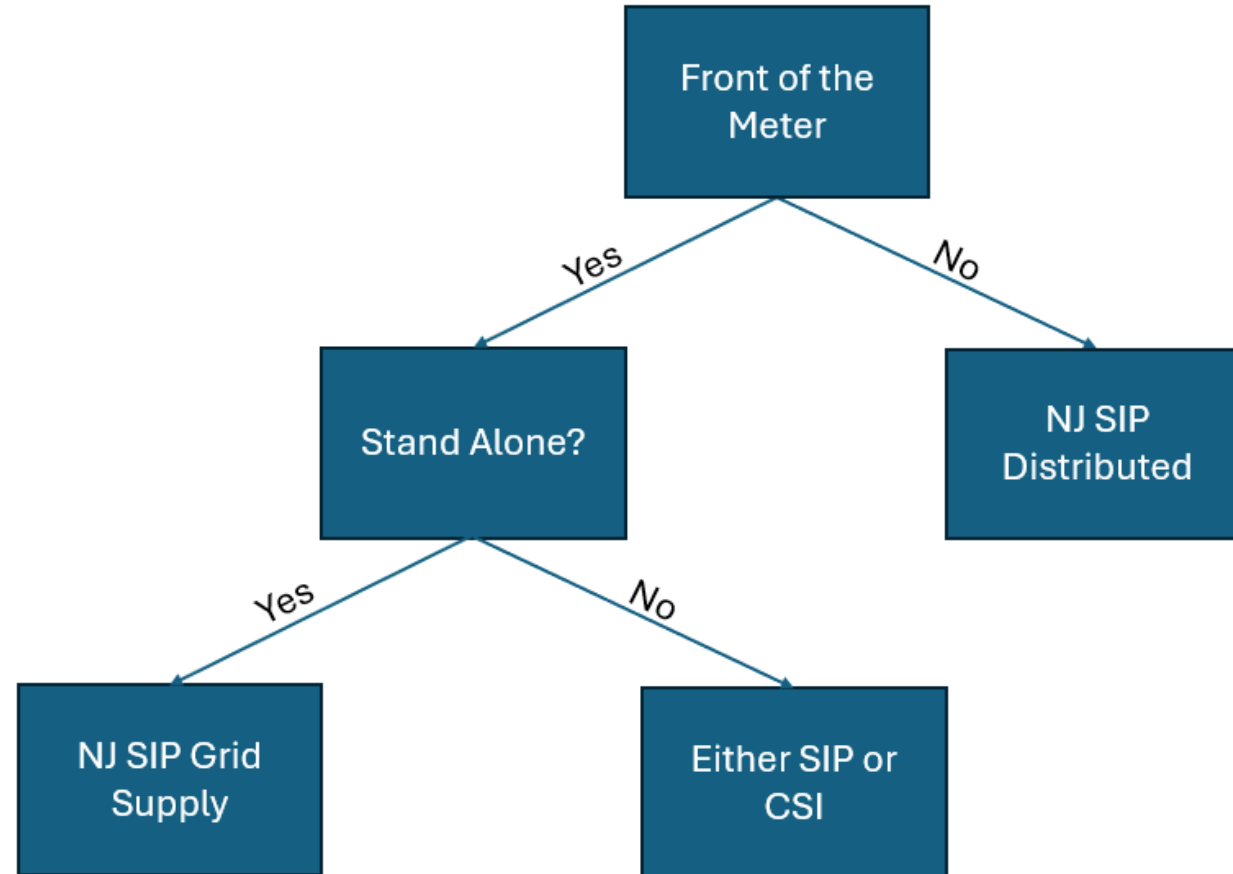
- Achieve, in conjunction with the CSI program, the 2030 energy storage goal of 2,000 MW by 2030, in a manner that is consistent with New Jersey's competitive electricity markets
- Promote deployment of low-cost private capital into New Jersey storage projects
- Decrease GHG emissions by enabling higher levels of renewable resources
- Support deployment of energy storage systems interconnected to the transmission or distribution system of NJ EDCs
- Grow a sustainable energy storage industry that gradually requires decreased incentives
- Support overburdened communities with energy resilience, environmental improvement, and economic benefits derived from energy storage
- Accelerate the clean energy transition and create resiliency
- Establish a Program Administrator at the BPU

Key Changes from 2022 Straw Proposal

	2022 Straw	2024 Straw
Fixed Incentive	Annual incentive contingent on satisfactory up-time performance metrics.	Upfront incentive not contingent on up-time metrics.
Grid Supply Performance Incentive	Based on carbon emissions abated through operation of the energy storage system, determined by the marginal carbon intensity of the wholesale electric grid Marginal Emissions Rate set by PJM	Deferred until suitable datasets can be created to inform such a program
Grid Supply	No competitive solicitation	Competitive solicitation
Distributed 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 CSI Program accepted

Incentive Program Selection Pathway

Choose CSI or NJ SIP?



Summary of Incentives and Rollout Schedule

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
Overburdened Community (OBC) Adder	No	Yes	No	No

GHG Impact Analysis Projects that the SIP Will Reduce Emissions Over the Life of the Program

- From 2025-2050, energy storage will facilitate the much larger expansion of solar, wind and EV chargers and the contraction of dispatchable fossil power plants
- The NJSIP will cause a net reduction of ~2 million metric tons of CO₂ over 2025-2044 (20 years), or about 100,000 metric tons per year
- The SIP may increase emissions in its initial years due to current small differences between peak and off-peak marginal emission rates
- 2031 is the last year with increased emissions. In 2032 system avoided emissions are projected to be 128,000 metric tons and emissions from battery operations are projected to be 119,000 metric tons leading to net abated emissions of 9,000 metric tons

Business Model & Electric Utility Role

- The Straw recommends private ownership and operation of NJ SIP-incented energy storage systems, consistent with New Jersey's competitive electric market structure
- Ratepayers will support for investment in storage resources, but private investors will bear commercial and operational risks
- Each electric utility will interconnect the resources and establish distributed pay-for-performance incentives
- Electric utilities will be directed to establish a common incentive framework but will have flexibility to tailor its performance incentive program to its particular needs

Definition of Energy Storage

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.

Installed Storage Targets & Deployment Timeline

- Annually setting installed energy storage targets will balance:
 - Available budget
 - Expected declines in the installed cost of storage over time and corresponding drop in needed incentive levels
 - The environmental, public health, and grid benefits of quickly scaling storage
- The storage 2030 target 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
- 2030 target of 2,000 MW “normalized” to 8,000 MWh based on four hours of storage capacity

Incentive Structure Overview

- **Fixed Incentive**

- Measured in \$/kWh of maximum usable energy storage capacity
- Paid one time upon commercial operation.

- **Performance Incentive**

- Applicable to benefits created through the storage system's operations.

Fixed Incentive - Grid Supply Resources – 2025 Launch

- Annual competitive solicitation: the Board proposes to 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.

Fixed Incentives - Distributed Resources – 2026 Launch

- Fixed incentives paid upfront upon commercial operation. 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
- Declining Block Structure:
 - Incentive levels to be set by Board and decline with each successive block
 - Denominated in \$/kWh of storage capacity
- Flexibility to annually adjust incentives

Initial Block Incentives, Decreases, Mechanics and Adjustment Mechanism

- Staff's consultant performed an incentive "gap analysis" that estimated the revenue and savings potential of behind-the-meter storage projects
- 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
- Incentive levels designed to meet up to approximately 40 percent fully installed cost
- Incentives are intended to be met by a combination of a fixed, upfront payment paid by BPU as well as an annual performance payment from electric utility.
- As Incentive Blocks fill, the incentive level associated with each successive Block would decrease.

Initial Block Incentives, Decreases, Mechanics and Adjustment Mechanism (Continued)

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

Distributed Fixed Incentives for Overburdened Communities

- Enhanced Incentives
 - As shown in table on previous slide
- Reserved Incentives: Reserves portion of each capacity block specifically for overburdened communities
- Benefits: Increases energy resilience, supports environmental justice, and aligns with state equity goals.

Performance-based Incentive for Grid Supply Resources

- Goal: encourage energy storage systems to dispatch in a manner that decreases GHG emissions by tying operations to pay-for-performance metrics
- NJ SIP proposes an initial fixed incentive payment for Grid Supply Energy Storage Systems

Performance-based Incentive for Grid Supply Resources - 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
- Many stakeholders commented 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 concluded that it would be inadvisable to launch the NJ SIP with a Net Avoided Emissions Performance Incentive
- Staff believes the Board should have the ability to implement such an incentive if and when the necessary data and analytics become available

Performance-based Incentive for Distributed Storage Resources

- NJ SIP proposes to direct each EDC to establish a performance-based incentive patterned in part on the ConnectedSolutions program utilized in Connecticut and Massachusetts
- These programs provide a \$/kW incentive for distributed storage resources discharging power when called by the EDC during specific performance hours, usually summer afternoons
- The Straw proposes that each EDC be given 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

Project Maturity Requirements and Participation Fees

- Intent: ensure that projects awarded incentives via a competitive solicitation or allowed into a particular block have a reasonable likelihood of successful and timely completion
- Projects must demonstrate that they plan to achieve commercial operation within 550 days of receiving an award from the Board
- Refundable \$1,000 per MW fee
- Pre-Development Security of up to \$100,000.00 per MW for Grid Supply projects upon application approval

Other Requirements

- The energy storage system must be:
 - 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 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
 - Comply with all manufacturers' installation requirements, applicable laws, regulations, codes, licensing, and permit requirements

Administration of Program and Assignment of Block Priority Dates

- Block allocations (block priority date) for distributed storage projects 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.
- 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.

Draft Rules

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.

Subchapter 14. New Jersey Storage Incentive Program

- 14:8-14.1 Purpose and Scope
- 14:8-14.2 Definitions
- 14:8-14.3 Grid Supply Segment Fixed Incentive Program Structure
- 14:8-14.4 Grid Supply Segment Performance Incentive Program Structure
- 14:8-14.5 Distributed Segment Fixed Incentive Program Structure
- 14:8-14.6 Distributed Segment Performance Incentive Program Structure
- 14:8-14.7 Siting Prohibitions – Grid Supply
- 14:8-14.8 Waiver provisions for siting on prohibited land uses
- 14:8-14.9 Technical Requirements

Request for Comments

Grid Supply Questions for Stakeholders

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?

Grid Supply Questions for Stakeholders continued

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?

Distributed Questions for Stakeholders

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.
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?

Other Questions for Stakeholders

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?
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?

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Thank you!



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