



STATE OF NEW JERSEY
Board of Public Utilities
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CLEAN ENERGY

IN THE MATTER OF THE GARDEN STATE ENERGY)
STORAGE PROGRAM PHASE 1, TRANCHE 2)
)
)
ORDER LAUNCHING
PHASE 1, TRANCHE 2 OF
THE GARDEN STATE
ENERGY STORAGE
PROGRAM

DOCKET NO. [QO25120634](#)

Parties of Record:

Brian O. Lipman, Esq., Director, New Jersey Division of Rate Counsel

BY THE BOARD:

By this Order, the New Jersey Board of Public Utilities (“Board” or “BPU”) initiates Tranche 2 of Phase 1 of the Garden State Energy Storage Program (“GSESP”)¹ to advance cost-effective and reliable energy storage systems. Tranche 2 will be open to qualifying stand-alone energy storage projects, as well as solar-plus-storage projects that are ineligible for storage incentives under the Board’s Successor Solar Incentive (“SuSI”) Program, thereby addressing a critical gap in the market. These projects are essential for mitigating the electric capacity supply crunch that is driving dramatic rate increases for New Jersey consumers, strengthening the resilience of New Jersey’s electric grid, reducing carbon emissions, and facilitating the state’s clean energy transition.

The Board is tasked by the Clean Energy Act of 2018 (“CEA”)² with a mandate to deploy 2,000 megawatts (“MW”) of energy storage by 2030.³ P.L. 2025, c.136 specifically requires the Board to award incentives to 1,000 MW of transmission-scale energy storage.⁴ This Order is a key part

¹ The GSESP was set up to have at least two phases: Phase 1 provides fixed incentives for transmission-scale battery energy storage systems, while Phase 2, which is still under development, will provide incentives for distribution-scale battery energy storage systems. Phase 1 involves competitive solicitations, known as Tranches.

² P.L. 2018, c.17.

³ See N.J.S.A. 48:3-87.8. All megawatt or MW values in this Order are in alternating current or “AC.”

⁴ N.J.S.A. 48:3-121.3(a)(2).

of a multi-year effort to implement these mandates, strengthen the electric grid by increasing the supply of dispatchable capacity that can firm up generation from clean but intermittent resources such as solar, and rapidly promote the entry of new capacity online to maintain reliability and limit rate increases in the face of soaring demand for electricity. This Order also implements Governor Sherrill's directive in Executive Order 2 to launch Tranche 2 no later than 45 days after January 20, 2026.⁵ Board Staff ("Staff") has performed an updated quantitative analysis, described in Appendix A to this Order, which indicates that Tranche 2 of GSESP Phase 1 will provide net savings to ratepayers.

In a separate Order issued today, the Board awarded incentives in Tranche 1 to three projects that collectively had 355 MW of installed capacity. To obtain the remaining installed capacity necessary to meet P.L. 2025, c. 136's mandate to procure 1,000 MW of storage capacity, Tranche 2 will seek to award 645 MW of capacity via competitive solicitation. This order initiates Tranche 2 of GSESP Phase 1 and directs Staff to solicit bids for this additional energy storage capacity.

BACKGROUND

Legislative and Policy Background

The State of New Jersey has a statutory mandate to achieve 2,000 megawatts ("MW") of installed energy storage capacity by 2030. On January 20, 2026, Governor Sherrill issued Executive Order No. 2,⁶ which in relevant part directed the Board to accelerate the development of transmission-scale energy-storage in order to alleviate the current capacity shortage and lower electricity costs in response to the State's utility-affordability emergency.

Energy storage resources are critical for mitigating electric capacity supply constraints that are driving dramatic rate increases, strengthening the resilience of New Jersey's electric grid, and reducing carbon emissions. The GSESP also supports the development of a long-term energy storage industry that is essential to achieving a reliable and affordable clean energy transition.

In the short-to-medium term, the GSESP helps alleviate the tight supply conditions that have driven recent electric rate increases. Specifically, these rate increases resulted from the record-high clearing prices in PJM Interconnection, LLC ("PJM")'s July 2024, July 2025, and December 2025 capacity auctions, formally known as Base Residual Auctions ("BRAs").⁷ These high clearing prices significantly increased the wholesale cost of power, a cost which Basic Generation Service ("BGS") providers passed on to ratepayers via higher prices in the February 2025 and

⁵ Exec. Order No. 2 (Jan. 20, 2026), <https://www.nj.gov/infobank/eo/057sherrill/pdf/EO-2.pdf> ("Exec. Order No. 2").

⁶ Ibid.

⁷ Ethan Howland, PJM Capacity Prices Hit Record Highs, Sending Build Signal to Generators, Util. Dive (July 31, 2024), <https://www.utilitydive.com/news/pjm-interconnection-capacity-auction-vistra-constellation/722872/>; Press Release, N.J. Bd. of Pub. Utils., NJBPU Announces Conclusion of New Jersey's Annual Electricity Supply Auction (Feb. 12, 2025), <https://www.nj.gov/bpu/newsroom/2025/approved/20250212.html>.

2026 BGS auctions.^{8,9}

The primary cause of these high clearing prices is unprecedented load growth driven primarily by the ongoing data center buildout that is exceeding the rate at which new supply can enter.¹⁰ These supply-and-demand trends are expected to continue for the foreseeable future, due to projections of continued data center load growth and the significant time required to build new generation capacity.¹¹ Energy storage resources are the most significant source of near-term capacity that can help address these conditions, as they comprise the bulk of proposed New Jersey capacity with interconnection approval from PJM.¹² Energy storage resources can also be constructed faster than traditional power plants.¹³ Consequently, deploying energy storage resources is one of the fastest available means of addressing the cause of recent electric rate increases.

The National Laboratory of the Rockies (formerly the National Renewable Energy Laboratory) also expects storage to become “a critical element of a low-carbon, flexible, and resilient future electric grid.” The New Jersey Energy Master Plan (“EMP”) recognized energy storage as a key

⁸ Press Release, N.J. Bd. of Pub. Utils., NJBPU Announces Conclusion of New Jersey’s Annual Electricity Supply Auction (Feb. 12, 2025), <https://www.nj.gov/bpu/newsroom/2025/approved/20250212.html>.

⁹ Press Release, N.J. Bd. of Pub. Util., New Jersey Board of Public Utilities Certifies 2026 Electricity Auction Results (Feb. 12, 2026), <https://www.nj.gov/bpu/newsroom/2026/approved/20260212.html>

¹⁰ See Monitoring Analytics, Indep. Mkt. Monitor for PJM, Analysis of the 2027/2028 RPM Base Residual Auction Part A 2-4, 7 (Jan. 5, 2026), https://www.monitoringanalytics.com/reports/Reports/2026/IMM_Analysis_of_the_20272028_RPM_Base_Residual_Auction_Part_A_20260105.pdf.

¹¹ PJM Interconnection, PJM’s Updated 20-Year Forecast Continues to See Significant Long-Term Load Growth, PJM Inside Lines (Jan. 14, 2026), <https://insidelines.pjm.com/pjms-updated-20-year-forecast-continues-to-see-significant-long-term-load-growth/>; PJM Interconnection, 2025 Long-Term Load Forecast Report Predicts Significant Increase in Electricity Demand, PJM Inside Lines (Jan. 30, 2025), <https://insidelines.pjm.com/2025-long-term-load-forecast-report-predicts-significant-increase-in-electricity-demand/>.

¹² A Staff analysis of PJM data indicates that as of January 27, 2026, 27 New Jersey projects had interconnection approval. These included 12 standalone energy storage projects with a collective capacity of 955 MW, 12 standalone solar projects with a collective capacity of 210 MW, 2 solar-plus-storage projects with a collective capacity of 108 MW, and a single 51 MW uprate to an existing gas-fired power plant. See Serial Service Request Status, PJM, <https://www.pjm.com/planning/service-requests/serial-service-request-status> (last visited Jan. 27, 2026). However, cross-referencing this data with Tranche 1 applications shows that several New Jersey storage projects plan to proceed with a smaller amount of nameplate capacity than was approved by PJM, likely because they lacked sufficient capacity interconnection rights to fully utilize their originally planned nameplate capacities. After adjusting for this, Staff estimates that the actual amount of standalone storage capacity with interconnection approval is approximately 750 MW, including the capacity awarded in Tranche 1. But that is still significantly greater than the 369 MW of capacity approved for interconnection in New Jersey from all other resource classes combined.

¹³ Compare Vilayanur Viswanathan, Pac. Nw. Nat’l Lab. et al., 2022 Grid Energy Storage Technology Cost and Performance Assessment 122 tbl.6.2 (2022), <https://www.pnnl.gov/sites/default/files/media/file/ESGC%20Cost%20Performance%20Report%202022%20PNNL-33283.pdf> (noting that grid-scale battery storage projects can be constructed in one year), with Lazard, Levelized Cost of Energy+ 38 (2024), <https://www.lazard.com/media/xemfey0k/lazards-lcoeplus-june-2024-vf.pdf> (noting that gas-fired, coal-fired, and nuclear power plants take 24 to 69 months to construct).

component of the state's clean energy future.¹⁴ The EMP, along with the Integrated Energy Plan (“IEP”) modeling conducted by the Rocky Mountain Institute and Evolved Energy (“RMI/Evolved”), identified energy storage investment as essential to achieving 100% clean energy by 2050. Their analysis suggested that New Jersey will need at least 8.7 gigawatts (“GW”) of energy storage by 2050, which far exceeds current state mandates.

Launch of the GSESP and Tranche 1 Solicitation

On June 18, 2025, the Board by Order established the GSESP and approved the launch of Tranche 1.¹⁵ Additional background information, a discussion of the stakeholder proceedings, and responses to stakeholder comments can be found in the Board’s June 18, 2025, Order.¹⁶

The specific goals of the GSESP, as established by the Board in the GSESP Launch Order, are to:

- Reduce electricity costs for ratepayers.
- 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 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.

On June 25, 2025, the pre-qualification window opened for Tranche 1. To be eligible for a guaranteed pre-qualification review that provided an opportunity to identify and correct deficiencies, pre-qualification materials were required to be submitted by July 23, 2025. Applicants were required to submit any questions by August 11, 2025. On August 15, 2025, Staff communicated pre-qualification deficiencies to applicants. On August 20, 2025, final bid submissions were due. The Board subsequently reviewed and considered the submitted bids. The Board awarded Tranche 1 incentives to for three eligible transmission-scale energy storage systems in a separate docket on today’s Board agenda.

¹⁴ N.J. Bd. of Pub. Utils. et al., 2024 New Jersey Energy Master Plan: <https://nj.gov/emp/pdf/2024NJEMP.pdf>

¹⁵ In re the Garden State Energy Storage Program (“GSESP”) Pursuant to P.L. 2018, c.17, BPU Docket No. QO22080540, Order dated June 18, 2025 (“GSESP Launch Order”, “Tranche 1 Order”, or “Launch Order”).

¹⁶ Ibid.

Ratepayer Impact Analysis

The Board recognizes that, with electricity rates rising sharply, it is vital to do everything possible to control and ideally reduce cost burdens placed on ratepayers. For that reason, the Board intends to fund the GSESP using its existing Clean Energy Program (“CEP”) budget, Ørsted Settlement funds,¹⁷ and other available funding sources, without increasing Societal Benefits Charge (“SBC”) rates. This means there would be no gross rate increase due to the GSESP. Staff believes that funding the GSESP without SBC increases is feasible due to the expected reductions in other areas of the CEP budget, consistent with Governor Sherrill’s Executive Order No. 1.¹⁸

In order to evaluate the extent to which funding the GSESP actively contributes to reducing ratepayers’ cost burden, Staff began the exercise to quantify, to the extent feasible, the savings that funding the GSESP will likely provide to ratepayers compared to benefit of returning GSESP funding directly to ratepayers. That exercise resulted in Staff’s analysis described in Appendix A, which compares plausible incentive costs for the Phase 1, Tranche 2 transmission-scale segment initiated by this Order to modeled capacity cost savings produced by the resulting increase in the supply of capacity. The results indicate that in most scenarios capacity cost savings realized due to Phase 1, Tranche 2 projects will exceed the cost of Phase 1, Tranche 2 incentives, thus demonstrating that spending money on Phase 1, Tranche 2 incentives will likely provide greater ratepayer relief than returning that money directly to ratepayers. Staff therefore concludes that using SBC collections to fund Tranche 2 incentives is both consistent with Executive Order No. 1 and advances its larger purpose of reducing costs for ratepayers.¹⁹

The net ratepayer benefit is a result of capacity savings significantly exceeding incentive costs in years when the capacity market is tight, a finding that is independent of widely varying assumptions about the size of the necessary incentives. Importantly, this means that Phase 1, Tranche 2 will provide more savings in the short-to-medium term when capacity prices and electric rates are higher than direct ratepayer relief would. However, in years when the capacity market is no longer tight, Staff’s analysis consistently found that incentive costs exceeded capacity savings. Whether the lifetime savings provided by Phase 1, Tranche 2 exceeds the lifetime costs of Phase 1, Tranche 2 depends on the size of the incentives awarded to Phase 1, Tranche 2 projects and how long the capacity market remains tight. In most scenarios, lifetime capacity savings exceeds lifetime costs, indicating that Phase 1, Tranche 2 will most likely be net beneficial to ratepayers in both the long run and the short term.

Staff also notes that this capacity savings analysis is not a full cost-benefit analysis, as it only compares program costs to one single benefit. Though Staff expects capacity savings to be the main ratepayer benefit of the GSESP, the addition of energy storage resources is likely to provide other savings to ratepayers (e.g., reducing prices in the energy markets during periods of high demand) that this analysis does not quantify. This analysis also does not quantify the benefits of improved grid reliability and resilience that energy storage resources provide or the societal

¹⁷ In re the Clean Energy Programs and Budget for Fiscal Year 2026, BPU Docket No. QO25040206, Order dated June 30, 2025.

¹⁸ Exec. Order No. 1 (Jan. 20, 2026), <https://www.nj.gov/infobank/eo/057sherrill/pdf/EO-1.pdf>.

¹⁹ See id. Staff also believes that Executive Order No. 2’s express directive for the Board to launch Tranche 2 implicitly contemplates the use of SBC collections for this purpose, as it was issued against the backdrop of the Board’s publicly announced plan to fund the GSESP in part from this source. See Exec. Order No. 2, § 3(a); GSESP Launch Order at 7-8.

benefits of reducing carbon emissions and other forms of pollution. Staff, therefore, believes that this analysis should be seen as a conservative lower bound on the value of Phase 1, Tranche 2 of the GSESP.

STAFF RECOMMENDATIONS

Certain requirements for implementing Phase 1, Tranche 2 of the GSESP are mandated by statute.²⁰ Staff makes the following recommendations to implement these requirements in a manner consistent with the Board's legislative authority and obligations, and to further the goals of the program as described above.

At the program level, the Board will review the GSESP annually to ensure it meets its goals, with adjustments made as needed. A public website will provide regular updates on the program's status.

Installed Storage Targets

Staff recommends that Tranche 2 launch with a solicitation target of 645 MW of transmission-scale energy storage installed capacity in order to meet, in combination with energy storage installed capacity procured in Tranche 1, P.L. 2025, c.136's 1,000 MW target. Should the 645 MW target not be reached, Staff recommends opening a third tranche to Phase 1 to procure the remaining capacity needed to reach P.L. 2025, c.136's target.

Eligible Project Types

Staff recommends continued use of the broad definition of energy storage adopted in the Tranche 1 Order, which was designed to encourage innovation and competition while minimizing costs for ratepayers. Staff recommends that Tranche 2 be limited to only transmission-scale energy storage systems to align with P.L. 2025, c.136. Staff further recommends that Tranche 2 allow qualified bids from all commercially available battery energy storage technologies.

Staff recommends clarifying that, for the purposes of the GSESP, the term "transmission-scale energy storage system" has the same meaning as defined in P.L. 2025, c.136. Thus, to qualify as a "transmission-scale energy storage system," an energy storage system must have "an installed capacity of at least 5 MW AC" and either be "interconnected with the PJM Transmission Network and situated inside a Transmission Zone in New Jersey or [be] otherwise located in New Jersey and qualified to provide energy, capacity, or ancillary services in the wholesale markets established by PJM."²¹ Consequently, to qualify for the Tranche 2 solicitation a proposed energy storage system must, among other requirements, have an installed capacity of at least 5 MW AC and either plan to interconnect at a transmission voltage via a PJM interconnection process or interconnect at a distribution voltage and possess or be pursuing a PJM Wholesale Market Participation Agreement.

Staff further recommends allowing stand-alone storage as well as storage additions to existing or new solar or other Class I renewable energy resources to participate in Tranche 2, provided they are not receiving and will not receive incentives for the same storage capacity from the SuSI program.

²⁰ See P.L. 2025, c.136, N.J.S.A. 48:3-121.2 to 121.7.

²¹ N.J.S.A. 48:3-121.2.

The project type eligibility requirements are a continuation of the approach used in Tranche 1.

Incentive Structure

P.L. 2025, c.136 set requirements for how the Board is to carry out Phase 1 of the GSESP, including use of a competitive, fixed incentive structure for its solicitations and the term of payments to be awarded.

Staff recommends that the Board continue the competitive, fixed-incentive structure outlined in the Tranche 1 Order, which provides additional detail on program design and solicitation mechanics. Staff further recommends that Transmission Fixed Incentives be paid out over 15 years, as is required in P.L. 2025, c. 136.

Schedule for Tranche 2

Staff recommends conducting Tranche 2 of the GSESP in accordance with the schedule below.

Table 1. GSESP 2026 Tranche 2 Transmission-Scale Procurement Schedule

Event	Date
Posting of draft application instructions	April 2026
Publication of application instructions and eligibility requirement; pre-qualification window opens	May 20, 2026
Deadline for submission of pre-qualification materials to receive a guaranteed review for deficiency and opportunity for correction	June 10, 2026
Pre-qualification deficiencies will be reported to applicants by this date for correction	June 26, 2026
Deadline for applicant’s question submissions	July 1, 2026
Deadline for final bid submission*	August 7, 2026
Board Decision on Bids	October 28, 2026

*Note: Applicants may submit new bids and prequalification information until the final deadline. However, only applicants who submit prequalification information by **June 10, 2026**, will be guaranteed a review for deficiencies and the opportunity to correct the deficiencies before the final bid deadline. After the final bid deadline, no changes to bids or prequalification information will be accepted.

Pre-qualification, Project Maturity, and Bid Process

Staff recommends that the Board continue to use a pre-qualification step prior to the final bid deadline, consistent with the process outlined in the Tranche 1 Order. Under this approach, developers may submit preliminary documentation demonstrating project maturity and eligibility, which Staff or the Program Administrator would review for deficiencies and allow developers to correct before submitting final bids.

Staff recommends posting draft application instructions in **April 2026**, publishing application instructions and eligibility requirements and opening the pre-qualification window for Tranche 2

on **May 20, 2026**, and keeping the window open until bids are due on **August 7, 2026**. Staff recommends that the Board authorize Staff to extend the final bid submission deadline, should it become necessary to ensure an adequate pool of eligible projects participate in the solicitation. Staff further recommends that only pre-qualification requests submitted by **June 10, 2026**, should be guaranteed to be reviewed for deficiencies and given the opportunity to correct the deficiencies before the final bid deadline. Additionally, developers are permitted to submit questions on the solicitation up to **July 1, 2026**. Answers to questions received will be posted on a rolling basis to the solicitation webpage for all applicants and members of the public to view. Final applications with unresolved deficiencies at the bid deadline may result in project disqualification from the solicitation.

Staff further recommends that the Board specify that all bids will be considered valid for a period of nine (9) months from the final bid submission deadline. Staff recommends adding a bid validity period, which would be a change from the Tranche 1 design, to avoid any question about when the Board or applicants will consider bids to be stale.

As part of the pre-qualification request for Tranche 2, Staff recommends requiring developers to provide evidence that their proposed transmission-scale energy storage projects meet the following criteria:

- Be a planned resource or part of a planned resource that will interconnect to the PJM transmission network and be located within a transmission zone in New Jersey or be an addition to an existing resource that is interconnected to the PJM transmission network and located within a transmission zone in New Jersey.
- Provide a planned COD and a guaranteed COD no later than 150 calendar days after the planned COD. CODs scheduled within 42 months of the solicitation application closing date will receive preferential consideration from the Board. Project may propose CODs beyond this 42-month window. This recommendation is a change from Tranche 1, where projects were required to have a COD within 30 months of the start of the solicitation. Staff recommends making this change to avoid excluding too many otherwise eligible projects.
- Not participate in any other energy storage program. Storage systems seeking to pair with or interconnect behind the same meter as an existing solar project participating in the CSI Program shall only qualify for a GSESP incentive award if neither the existing solar project nor the transmission-scale energy storage system has received, is receiving, or will receive incentives from the SuSI Program for any energy storage capacity.

Staff recommends that applicants be required to provide evidence of interconnection progress appropriate for program participation at the time of application. Staff recommends deferring a final determination regarding interconnection-related project maturity requirements (that is, what stage of an interconnection process a project must reach in order to be eligible for Tranche 2) until the time Staff posts final application instructions during the summer. Under this approach, definitive project maturity requirements will be included in the final application instructions and published at the opening of the application window. Staff recommends that the Board direct Staff to specify precise project maturity requirements in the final application instructions in order to allow Staff to gather additional information about how much eligible capacity there will be for Tranche 2 under different requirements. A later specification of maturity requirements will allow Staff to better balance the benefits of prioritizing more shovel-ready projects with ensuring there is enough eligible capacity for a competitive solicitation to work.

Staff recommends requiring Tranche 2 GSESP-eligible facilities to submit a final application and bid for an incentive award, calculated in dollars per MW of effective nameplate capacity, after they submit their pre-qualification request. The final application should include the following elements:

- An incentive price in \$/MW of effective nameplate capacity;
- Each proposed project must specify its nameplate capacity in megawatts and its energy storage capacity in megawatt-hours;
- The number of Capacity Interconnection Rights (“CIRs”) that the project holds;
- The proposed project’s PJM interconnection queue ID number;
- The total projected installation cost for the project as well as the major cost components of the project’s installation costs in dollars. Staff notes that this is change from Tranche 1, which only required applicants to report their cost components as a percentage of overall installation costs. The reason for this change is to provide the Board with information about actual project costs in New Jersey. Note that applicants may request confidential treatment of this information in accordance with N.J.A.C. 14:1-12.1(b). If an applicant properly supports such a request, this information will be redacted from all public facing files;
- Evidence of interconnection progress appropriate for program participation. Definitive application requirements will be included in the final application instructions and published at the opening of the application window;
- The proposed project’s full address, geographical information systems (“GIS”) coordinates and shapefiles including attribute data, if available, municipality, county, block, lot, and number of acres proposed for development;
- For a storage facility paired with grid supply solar, a description of the associated solar facility;
- Evidence reasonably satisfactory to the Board of site control, such as a copy of a lease agreement or a property title;
- Evidence reasonably satisfactory to the Board that an applicant has or will obtain all required permits, which evidence shall include an execution plan to obtain all required permits that the applicant has not yet secured. Such evidence may include submitted applications, schedule projections, and related correspondence with the Authority Having Jurisdiction (“AHJ”);²²
- Evidence reasonably satisfactory to the Board of the applicant’s financial means to construct the transmission-scale energy storage system, which may include:

²² For the purposes of this Order, “Authority Having Jurisdiction” or “AHJ” means an organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving or permitting equipment, materials, an installation, or a procedure.

- a. Audited financial statements from the applicant or project sponsor showing sufficient assets, liquidity, or net income to support project development;
 - b. Proof of committed funding, such as executed equity investment agreements or letters of credit;
 - c. Bank statements or financial institution letters demonstrating access to capital reserves;
 - d. Loan agreements or term sheets from lenders confirming project finance arrangements; and/or
 - e. Evidence of successful past development and operation of energy infrastructure projects of a similar scale;
- Evidence reasonably satisfactory to the Board of the applicant's financial means to construct the transmission-scale energy storage system and ability to obtain revenues through electricity markets or non-ratepayer funding, including, but not limited to, energy arbitrage, ancillary services, and capacity revenues in PJM. Such evidence may include:
 - a. Market analysis or third-party revenue projections demonstrating potential earnings from energy arbitrage, frequency regulation, spinning reserves, and capacity market participation in PJM;
 - b. Letters of intent or executed contracts for energy or capacity sales, power purchase agreements (PPAs), or tolling agreements; and/or
 - c. Registration or enrollment of the project in PJM as a market participant or asset;
 - Assurances reasonably satisfactory to the Board that the transmission-scale energy storage system will adhere to the latest version of NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems) and any nationally recognized minimum safety requirements, including, but not limited to, appropriate laboratory testing, and will comply with all manufacturers' installation requirements, applicable laws, regulations, codes, licensing, and permit requirements. Such evidence shall include:
 - a. Evidence that the project will utilize only energy storage systems certified by a Nationally Recognized Testing Laboratory (NRTL) such as UL 9540 and UL 9540A for thermal runaway testing;
 - b. Evidence that installation will be performed by certified technicians in accordance with all manufacturer specifications, such as copies of a commissioning report and ongoing maintenance plan aligned with manufacturer guidelines and industry best practices;
 - c. A signed and sealed letter by a New Jersey licensed professional engineer confirming that the system design, installation, and operation will adhere to all relevant building codes (e.g., NFPA, NEC), local permitting requirements, and the manufacturer's safety and installation guidelines; and/or

A detailed Safety and Code Compliance Plan to ensure adherence to all applicable federal, state, and local codes outlining procedures for installation, commissioning, inspection, and ongoing maintenance, referencing specific applicable laws, permits, and standards (e.g., NEC, IEEE, NFPA 855), with confirmation of coordination with AHJ. For project sites located on a brownfield, the Board requires applicants to include in their application an attestation to the following:

- Compliance with NJDEP Contaminated Site Remediation & Redevelopment (CSRR) program requirements that considers and incorporates the proposed BESS project
 - Identification or confirmation of an appropriate NJDEP PI/Case Number for the project
 - Identification of the License Site Remediation Professional (LSRP) retained for the site

If this documentation is not provided, the applicant will be ineligible for the community benefits bonus.

- A statement describing the transmission-scale energy storage system's alignment with State and regional transmission and resource adequacy planning goals and demonstrating the transmission-scale energy storage system's coordination with PJM and the appropriate electric public utility;
 - A projection by year of any expected reduction in effective nameplate capacity due to battery cell degradation over the project's operational lifespan, as well as the characteristic duration assigned to the project by PJM for the purpose of assigning it to a capacity storage resource class.²³ Projects that plan to maintain or limit the loss of their effective nameplate capacity must provide information on how they will counteract degradation (e.g. through upfront overbuild and/or augmentation);
- A sealed letter by a New Jersey licensed professional engineer confirming that the system design, installation, and operation will adhere to all relevant building codes (e.g., NFPA, NEC), local permitting requirements, and the manufacturer's safety and installation guidelines; and
- A non-refundable application fee of \$200 per MW of nameplate capacity. Projects whose capacity is expressed as a range in MW shall submit the application fee based on the upper end of that range.

Project Evaluation, Selection, Award, and Registration Processes

Consistent with the process outlined in the Tranche 1 Order, Staff recommends that the Board continue to award incentives for transmission-scale energy storage systems through a competitive solicitation. Staff further recommends that bid price remains the primary evaluation criterion, with the Board retaining the discretion to consider community benefits, including brownfield redevelopment and advantages to overburdened communities, subject to the same quantitative limits established in Tranche 1, as well as maturity requirements, such as having achieved more advanced interconnection milestones or an earlier anticipated commercial operation date. For projects proposed on brownfield sites, Staff also recommends maintaining the

²³ The PJM Reliability Assurance Agreement ("RAA") defines "Capacity Storage Resource Classes" as the ELCC Classes specified in Schedules 9.1 and 9.2, section B of [the PJM RAA], each of which is composed of Capacity Storage Resources with the same specified characteristic duration of 4, 6, 8, and 10 hours. The characteristic duration of an Energy Storage Resource Class is the ratio of the modeled MWh energy storage capability of members of the class to the modeled MW power capability of members of the class. See PJM Reliability Assurance Agreement, art. 1, <https://www.pjm.com/pjmfiles/directory/merged-tariffs/raa.pdf> (last visited Feb. 2, 2026) ("PJM RAA").

Tranche 1 requirement that applicants engage an LSRP to qualify for the community-benefits bonus. However, Staff now recommends adding to the additional requirement that applicants submit an attestation of compliance with NJDEP Contaminated Site Remediation & Redevelopment (CSRR) program requirements that considers and incorporates the proposed BESS project, identifies or confirms an appropriate NJDEP PI/Case Number for the project, and identifies the LSRP retained for the site, to qualify for the community-benefits bonus.

Selection and Award Procedure

Staff recommends selecting the lowest-cost projects in price-ranked order, subject to consideration of community benefits and project maturity, until the Board awards enough transmission-scale energy storage systems to meet the solicitation's 645 MW target of installed capacity. Incentives will be reported as the price per MW of effective nameplate capacity per year. If the 645 MW target cannot be met within Tranche 2, Staff recommends that the Board conduct a Tranche 3 solicitation to ensure the Board can award incentives to at least 1,000 MW of transmission-scale energy capacity under Phase 1 of the GSESP.

Staff recommends that the Board find awarding more capacity is in the best interest of ratepayers if doing so could enable meeting the requirements of P.L. 2025, c.136, at a lower total cost net of offsetting savings to ratepayers. If a final award would result in exceeding the target installed capacity for the solicitation, Staff recommends that the Board exercise discretion in determining whether awarding the project would sufficiently benefit New Jersey to warrant exceeding the target. Similarly, if two (2) projects are bid with the same price and either can be awarded without exceeding the procurement target, but awarding both would exceed it, Staff recommends that the Board exercise its discretion in selecting one (1) or both of the projects and making the award(s).

Staff also recommends that the Board retain the authority to decline the award of fixed incentives to a transmission-scale energy storage system if the Board determines that funding the requested incentive would constitute an unduly expensive means of achieving the State's energy storage goals. In making this determination, the Board should consider factors, including, but not necessarily limited to, confidential gap analysis results, adjustments for market conditions (such as tariffs), and potential savings for ratepayers (such as capacity savings). To evaluate the reasonableness of incentive levels requested by applicants, Staff recommends using an incentive benchmark developed through a techno-economic analysis using the National Laboratory of the Rockies' (formerly the National Renewable Energy Laboratory) System Advisor Model ("SAM") to estimate the incentives needed to ensure successful project development. Staff recommends that the Board reserve the right to reject bids that exceed this benchmark, as well as bids that do not result in net capacity savings.

If the 645 MW target cannot be met within Tranche 2, either because insufficient capacity bid into the solicitation or because awarding the 645 MW would unduly burden ratepayers, Staff recommends establishing a Tranche 3 solicitation to ensure that the Board can award at least 1,000 MW of transmission-scale energy storage in Phase 1 of the GSESP.

Staff recommends that the Board retain the discretion to award incentives to more expensive transmission-scale energy storage systems instead of lower applicants when doing so is in the public interest, including when a project demonstrates greater maturity, such as having achieved more advanced interconnection milestones or an earlier anticipated commercial operation date, or provides greater community benefits than a less expensive project.

Specifically, Staff recommends that the Board retain the discretion to issue awards to more

expensive projects on the basis of greater maturity if:

- They have guaranteed CODs within 42 months of the solicitation application closing date; and
- Staff determines that the additional benefits the projects provide, including but not necessarily limited to greater capacity savings, outweigh the additional cost of any higher incentive awards such projects may request.

Staff recommends that the Board retain the discretion to award incentives to transmission-scale energy storage systems that do not have the lowest per-unit bids on the basis of community benefits if:

- The per-unit bid price is no more than ten percent higher than the lowest rejected bid price in the same solicitation; and
- The Board determines that awarding incentives to these more expensive transmission-scale energy storage systems instead of lower applicants is in the public interest after considering qualitative factors such as brownfield redevelopment, demonstrated benefits to overburdened communities where a transmission-scale energy storage system is proposed to be located, and/or other community benefits.

For Tranche 2, Staff recommends determining the lowest price bid on a per-unit basis by dividing the applicant's requested annual incentives by the expected average accredited capacity of the transmission-scale energy storage systems over the first five years of the system's commercial operation. Staff recommends using expected accredited capacity, rather than the lesser of nameplate capacity or energy storage capacity divided by 4 hours, to account for the additional resource adequacy value provided by storage projects with greater CIRs or longer durations.

Staff recommends determining a project's expected accredited capacity in each of its first five years of operation by multiplying the project's expected effective nameplate capacity for that year, calculated using the projected degradation data supplied by the applicant and the number of CIRs it holds, by PJM's forward projections of Effective Load Carrying Capability ("ELCC") rating for the relevant capacity storage resource class in the corresponding year.²⁴ PJM provides these ELCC class rating projections on its website.²⁵ A project's capacity storage resource class (4-hour, 6-hour, 8-hour, or 10-hour) would be determined by dividing the proposed project's energy storage capability by the number of CIRs it holds.

For example, a 100 MW/400 MWh project with 40 MW of CIRs would be assigned ELCC class ratings for the 10-hour capacity storage resource class. This is because 400 MWh divided by 40

²⁴ Pursuant to the PJM RAA, the accredited capacity of a "Limited Duration Resource," which includes storage resources, is equal to its effective nameplate capacity multiplied by the applicable ELCC class rating, and multiplied again by the ELCC resource performance adjustment. PJM RAA, art. 1; *id.* sch. 9.2(D)(1)(a). A limited duration resource's effective nameplate capacity is capped at the greater of its CIRs or transitional system capability. *Id.*, art. 1. Staff recommends ignoring the ELCC resource performance adjustment component because PJM does not provide the necessary data to include it in this calculation.

²⁵ See [Preliminary ELCC Class Ratings for Period Delivery Year 2026/27 – Delivery Year 2034/35](https://www.pjm.com/-/media/DotCom/planning/res-adeq/elcc/preliminary-elcc-class-ratings-for-period-2026-2027-through-2034-2035.pdf), PJM, <https://www.pjm.com/-/media/DotCom/planning/res-adeq/elcc/preliminary-elcc-class-ratings-for-period-2026-2027-through-2034-2035.pdf> (last visited Feb. 4, 2026) ("Preliminary ELCC Class Ratings").

MW equals 10 hours. Assuming the project will begin commercial operation in early 2030 in time for the 2030/2031 delivery year, its expected ELCC class ratings for its first five delivery years would be 73%, 68%, 69%, 70%, and 70%.²⁶ If one also assumes the project loses 10 MWh of energy storage capability per year due to degradation, its effective nameplate capacity for each corresponding year would be 40 MW, 39 MW, 38 MW, 37 MW, and 36 MW.²⁷ It would therefore have an expected accredited capacity of approximately 29.2 MW, 26.5 MW, 26.2 MW, 25.9 MW, and 25.2 MW in each year, resulting in an average expected accredited capacity of about 26.6 MW.

In contrast, if the same project held 100 MW of CIRs, it would be assigned the ELCC class ratings for the 4-hour capacity storage resource class, as 400 MWh divided by 100 MW equals 4 hours. Assuming the project will begin commercial operation in early 2030 in time for the 2030/2031 delivery year, its expected ELCC class ratings for its first five delivery years would be 49%, 42%, 42%, 40%, and 38%.²⁸ If one also assumes the project loses 10 MWh of energy storage capability per year, its effective nameplate capacity for each corresponding year would be 100 MW, 97.5 MW, 95 MW, 92.5 MW, and 90 MW. It would therefore have an expected accredited capacity of approximately 49.0 MW, 41.0 MW, 39.9 MW, 37.0 MW, and 34.2 MW in each year, resulting in an average expected accredited capacity of about 40.2 MW.

After the Board determines which projects to award incentives to, Staff recommends that Staff, or the Program Administrator, send an award letter (in addition to an email) to all winning applicants within five (5) business days following the Board Order announcing the award. Staff further recommends notifying all applicants that did not receive an incentive award via a letter and/or email of the Board's decision and of their option to reapply in a future solicitation, should the Board decide to pursue a Tranche 3 solicitation.

Staff further recommends that recipients of Tranche 2 incentives should be ineligible to receive future performance incentives.

Staff recommends that the Board aim to issue awards under Tranche 2 no later than the end of October 2026 to enable participation in the 2027 BRA.

²⁶ Ibid.

²⁷ This is because an energy storage project's effective nameplate capacity equals the maximum amount of power it can continuously discharge for the period matching the characteristic duration of its capacity storage resource class, provided that value does not exceed the amount of CIRs or transitional system capability the resource holds. See PJM RAA, art. 1 ("Effective Nameplate Capacity' shall mean . . . for each Limited Duration Resource, the sustained level of output that the unit can provide and maintain over a continuous period, whereby the duration of that continuous period matches the characteristic duration of the corresponding ELCC Class . . ."); See PJM Interconnection, LLC, PJM Manual 21B: PJM Rules and Procedures for Determination of Generating Capability 33 (Jan. 22, 2026), <https://www.pjm.com/-/media/DotCom/documents/manuals/m21b.pdf> ("PJM Manual 21B") ("Permanent reductions in the MWh energy storage capability of an Energy Storage Resource due to ordinary battery cell degradation . . . is recognized with a decrease in Effective Nameplate Capacity."). In this example, the characteristic duration is ten hours, so the effective nameplate capacity is the project's energy storage capability in MWh divided by 10 hours. If energy storage capability begins at 400 MWh and decreases at a rate of 10 MWh per year, then the energy storage capability values in the first five years of commercial operation are 400 MWh, 390 MWh, 380 MWh, 370 MWh, and 360 MWh. Dividing each of those values by 10 hours results in effective nameplate capacities of 40 MW, 39 MW, 38 MW, 37 MW, and 36 MW respectively.

²⁸ Preliminary ELCC Class Ratings.

GSESP Program Registration Process and Requirements

Staff recommends requiring applicants to submit a complete GSESP registration after they receive an award through the solicitation. Staff or the GSESP Program Administrator would then send applicants notice of conditional approval before they commence construction of their projects.

For awarded projects, Staff proposes creating a new registration process and portal for the GSESP in coordination with the GSESP Program Administrator. All forms and instructions regarding the GSESP registration process would be posted on a subpage of the GSESP webpage, which is located at <https://cleanenergy.nj.gov/programs/energy-storage>.

Staff recommends that applicants awarded a GSESP transmission-scale incentive be given 30 days following the Board Order announcing the award to register their GSESP-eligible facility with the Board. Within 30 days of receiving an incentive award letter, the applicant must submit a report to the Board detailing the estimated dates for the following project milestones, as applicable:

- Evidence of interconnection progress appropriate for program participation. Definitive application requirements will be included in the final application instructions and published at the opening of the application window;
- Fully executed engineering, procurement, and construction agreement;
- Developer financial closing;
- Commencement of energy storage system construction;
- Planned COD; and
- Guaranteed COD.

Applicants who receive an incentive award must submit a complete registration package before beginning construction of their energy storage projects.

Staff recommends that the registration package include the following:

- A registration form;
- A description of the project, including type of proposed installation, MW, and MWh capacity of project, GIS coordinates and shapefiles including attribute data, if available, project address, municipality, county, block, lot, and number of acres proposed for development;
- A contract between the primary installer or the third-party owner, as applicable, and the applicant or customer of record;
- A site plan signed and sealed by a licensed professional engineer, as defined in the pre-qualification section of this order, showing all proposed and installed GSESP-eligible facilities;

- A Milestone Reporting Form;
- Evidence of the project's accepted bid into the GSESP; and
- For storage paired with grid supply solar, MWh of proposed storage facility, description of the storage technology, and project ID or confirmation of solicitation of paired solar project must be included.

Staff recommends that registration packages submitted to the GSESP follow the same general review process as Tranche 1, except that missing signatures will now be considered minor instead of major deficiencies. Specifically, registration packages would be reviewed by Staff or the GSESP Program Administrator, who would verify the project's eligibility to participate in the GSESP and determine whether the registration package is complete, incomplete, or deficient. Registrations deemed incomplete due to a minor deficiency, would be flagged by Staff or the GSESP Program Administrator, with the applicant notified of the deficiency and granted seven (7) business days to correct it. Registrations deemed incomplete, containing a major deficiency, or failing to correct minor deficiencies within the allotted time would be rejected.

Minor deficiencies would include such items as an inconsistency between the signatures on different sections of the registration form, failure to complete one or more sections on the registration form; failure to label technologies or to indicate system components on the site plan; a missing or incorrect premise address or missing installer information on the site plan; failure to enter complete equipment information in the relevant registration materials; an incomplete section or sections on any required form; failure to include all required signatures on any required form or document, or other similar clerical error.

Major deficiencies would include such items as failure to submit the registration form; failure to submit the certified site plan; failure to submit the Milestone Reporting Form; failure to submit any other required form; and failure to provide evidence of an accepted bid.

Registrants that submit a complete registration package or that corrected all minor deficiencies in the time allowed, and that meet the eligibility and qualification requirements for a GSESP project, would be issued a conditional approval letter by Staff or the GSESP Program Administrator. Construction of the energy storage system as described in the initial registration package may only begin once applicants receive a conditional approval letter.

Staff recommends that an on-site inspection be performed, at a minimum, upon construction completion. If the energy storage system is built as described in the initial registration package, Staff or the GSESP Program Administrator will issue a final approval letter. This final approval will be granted once Staff or the GSESP Program Administrator receives a complete post-construction certification package and verifies that the system has passed the program inspection and obtained permission to operate.

Application Fees and Compliance Requirements

Consistent with the framework established in the Tranche 1 Order, Staff recommends that the Board continue to apply the same overall approach to application fees, project development milestones, delay deductions, and post-COD performance requirements for Tranche 2 transmission-scale energy storage projects. Staff further recommends that all security requirements, milestones, and fees for Tranche 2 be set prior to the solicitation and posted on the Board's website, as was done in Tranche 1, to ensure fairness across all projects. The specific

requirements for Tranche 2 are also described below.

Application Fees

Staff recommends that transmission-scale energy storage projects be required to pay a non-refundable application fee of \$200 per MW for Tranche 2, with funds used to offset administrative costs of the GSESP. Projects that specify their capacity as a range in MW must calculate and submit the application fee using the upper end of that range. For example, an applicant proposing a project that will have a nameplate capacity of 80 MW to 100 MW should submit an application fee of \$20,000 (\$200/MW multiplied by 100 MW), and *not* \$16,000 (\$200/MW multiplied by 80 MW). Staff further recommends that projects benefiting public entities be exempt from the application fee. Staff also recommends that the Board waive the bid fee for applicants who did not receive an award in Tranche 1 and who submitted a substantially similar project in Tranche 2. A project would be considered substantially similar if its footprint overlaps with the footprint of the first project. If the nameplate capacity of the project offered in Tranche 2 exceeds the nameplate capacity of the substantially similar project proposed in Tranche 1, Staff recommends the applicant be required to pay a non-refundable application fee on the incremental nameplate capacity. For example, an applicant proposing a project with nameplate capacity of 110 MW that is substantially similar to a 100 MW project bid into but not awarded in Tranche 1 should submit an application fee of \$2,000 (\$200/MW multiplied by the 10 MW increase in nameplate capacity).

Delay Penalties

For Tranche 2, Staff recommends that Staff retain the ability to reduce the first annual incentive payment if the project does not achieve commercial operation by its planned COD date, unless the Division Director grants an extension of the planned COD deadline of up to 180 calendar days. An applicant experiencing a delay must submit evidence and demonstrate to Staff's satisfaction that the applicant sought to avoid said delays and advance the project in good faith to qualify for an extension of up to 180 calendar days. Staff may only extend the COD deadline by more than 180 calendar days if the applicant submits evidence and demonstrates to the Division Director's satisfaction that the applicant experienced a force majeure event²⁹ that the applicant took all possible steps to avoid. The deduction from the first annual incentive payment shall equal the lesser of the entire first annual incentive payment or \$1,000 per MW of the project's installed capacity for each calendar day of delay, beginning on the calendar day after the project's planned COD if the Division Director does not grant an extension, or the calendar day after the date to which Staff extended the COD deadline if the Division Director granted an extension. The Board, or the Program Administrator if the Board decides to delegate this authority, may revoke the incentive award if the applicant misses their guaranteed COD by 36 months, adjusted for any grace period otherwise established by the Board, though the Board may waive this penalty if the applicant demonstrates good cause for relief in writing.

Post-COD Dispatch Availability Requirements and Incentive Payment Deductions for Lack of Dispatch Availability and Degradation

Staff recommends that a transmission-scale energy storage project's continued receipt of the full value of its annual fixed incentive award payments should be contingent on two factors. First, consistent with Tranche 1, Staff recommends that a project must be available for dispatch in a

²⁹ "Force majeure event" means an event that is not attributable to the fault or negligence of the system owner and is caused by factors beyond the system owner's reasonable control.

minimum number of hours per year to receive their full incentive payment. Specifically, Staff recommends requiring awarded transmission-scale energy storage projects to be available for dispatch for at least 7,900 hours per year (approximately 90% of the 8,760 hours in a non-leap year) to receive their full annual fixed incentive payment.

If a project is available for dispatch for less than 7,900 hours in a given year, Staff recommends proportionately reducing the annual incentive payment for the relevant year by an amount equal to the number of hours the project fell short of the 7,900-hour requirement divided by 7,900 hours. For example, if a project was only available for dispatch for 7,505 hours in the relevant year, it would have fallen short of the requirement by 495 hours. As 495 hours is 5% of 7,900 hours, the project's annual fixed incentive payment would then be reduced by 5%.

Second, Staff recommends that, in addition to being tied to annual dispatch availability, annual incentive payments should be reduced if projects lose part of their storage capability to battery cell degradation (or any analogous process for non-battery storage systems). Accounting for degradation is a new requirement in Tranche 2. The purpose of this requirement is to (1) accurately reflect the reduced value a project that has lost part of its energy storage capability provides and (2) provide an incentive for project owners and operators to take steps to counteract degradation.

Staff recommends accomplishing this by basing incentive payments on what PJM refers to as *effective nameplate capacity* rather than conventional nameplate capacity or installed capacity. This is a change from Tranche 1 where incentive payments were based on the nominal nameplate capacity. The effective nameplate capacity metric by definition accounts for how long an energy storage resource can discharge a given level of power, and thus decreases when an energy storage resource suffers degradation.³⁰ Thus, incentive payments would be based on dispatch availability and each project's actual annual effective nameplate capacity. Applicants would be required to submit an incentive price in \$/MWh of effective nameplate capacity.

To illustrate, assume a certain energy storage project has a nameplate capacity of 100 MW and initially 400 MWh of energy storage capability. Such a project could in principle continuously discharge 100 MW of power for 4 hours. It would thus have a characteristic duration of 4 hours and an effective nameplate capacity of 100 MW, as that is the maximum amount it could continuously discharge for 4 hours. Further assume that after some years pass battery cell degradation reduces the energy storage resource's energy storage capability to 360 MWh—90% of its original energy storage capability. The project's effective nameplate capacity would then only be 90 MW, as that is the maximum amount of power it could continuously discharge for 4 hours now that it can only store a maximum of 360 MWh. This means the project's effective nameplate capacity would likewise only be 90% of its original effective nameplate capacity. The project's annual incentive payment would thus only be 90% of what it would have been had the project maintained its original effective nameplate capacity.

To track degradation, Staff recommends that the Board require applicants to submit a projected degradation profile as part of their application, and require awarded projects to submit information

³⁰ See PJM RAA, art. 1 (“Effective Nameplate Capacity’ shall mean . . . for each Limited Duration Resource, the sustained level of output that the unit can provide and maintain over a continuous period, whereby the duration of that continuous period matches the characteristic duration of the corresponding ELCC Class”); PJM Manual 21B at 33 (“Permanent reductions in the MWh energy storage capability of an Energy Storage Resource due to ordinary battery cell degradation . . . is recognized with a decrease in Effective Nameplate Capacity.”).

on degradation on an annual basis. More specifically, Staff recommends requiring awarded projects to submit copies of any net capability testing data or documentation submitted to PJM pursuant to Manual 21B requirements,³¹ including but not limited to summer and winter performance, net capability determinations from PJM, and any reports or other documentation a storage resource provides to PJM notifying it of a permanent reduction in the MWh energy storage capability of an energy storage resource. Staff or the Program Administrator would then use this information to calculate the project's effective nameplate capacity for the relevant year and the annual payment due.

The actual annual incentive payment would equal the project's effective nameplate capacity in MW for the relevant year multiplied by their awarded incentive rate in dollars per MW if the project was available for dispatch in at least 7,900 hours in the relevant year. If the project was available for less than 7,900 hours, the annual incentive payment would equal the project's effective nameplate capacity, multiplied by its awarded incentive rate, then multiplied again by the number of hours the project was available, then divided by 7,900 hours.

Reconciliation of the reports submitted to the Board and those submitted to PJM will occur on an as-applied basis, which is expected to occur at least every five years. If after reconciliation an inconsistency is identified and the project's reported performance is deficient, the incentive payment for the following year will be adjusted to address the inconsistency. Incentive payments for the final year of the incentive period will be withheld until the true-up process has been completed.

For the purposes of determining dispatch availability and effective nameplate capacity, Staff further recommends defining the relevant year as an energy year (June 1 to May 31). Staff also recommends designating the first full energy year following the date a project achieves commercial operation as the first energy year in which its compliance with dispatch availability requirements is assessed. Thus, if a project achieves commercial operation anytime between June 1, 2027, and May 31, 2028, Staff or the Program Administrator would start to assess compliance with the 7,900-hour and effective nameplate capacity requirements on June 1, 2028. Staff or the Program Administrator would then continue to assess the project's compliance every energy year through May 31, 2043 (the end of the 15-year period in which the project receives fixed incentives).

Staff notes that these requirements will also enable the Board to cease making incentive payments to transmission-scale projects that outright fail to continue operating. A project that, for any reason, failed to continue functioning would not be available for dispatch in any hours. If such a project was out of service for an entire year, it would have its annual incentive payment reduced to zero. Thus, this requirement will also ensure ratepayers are not forced to pay for failed projects that provide no ongoing benefit to the grid.

Siting and Permitting

In order to ensure compliance with Executive Order No. 2, Staff recommends that, just as in Tranche 1, the Board impose no siting restrictions that limit eligibility for Tranche 2 incentives.³²

³¹ See generally PJM Manual 21B.

³² See Exec. Order No. 2, § 5(b) (directing State entities to "initiate all steps that, in the State entity's determination, are necessary and appropriate to prospectively and liberally waive compliance with" permitting and siting restrictions for "electricity generation and grid stabilization projects").

Staff notes that GSESP projects would remain subject to all applicable local and state regulations that may limit where a GSESP project can be sited, absent waivers from the appropriate authorities.

Technical Requirements

Consistent with the eligibility framework established in the Tranche 1 Order, Staff recommends that the transmission-scale energy storage applicants for Tranche 2 continue to be limited to government or private entities (not EDCs). Staff further recommends that eligible systems use new equipment, be planned resources interconnecting to the PJM transmission network in a New Jersey transmission zone, and not have commenced construction at the time they apply for incentives. Staff also recommends maintaining the Tranche 1 requirements that system owners meet COD obligations by submitting as-built drawings and proof of permission to operate, and that all projects comply with all applicable federal and state laws, regulations, codes, standards, licensing, and permitting requirements. As in Tranche 1, all incentivized energy storage systems must be certified to UL 9540, and tested against UL 9540A, or an equivalent standard, with systems not covered under UL 9540A required to demonstrate safety equivalency through third-party testing. Projects must continue to meet the latest version of the NFPA 855 fire safety standards, and inverters must meet UL 1741 SB and IEEE 1547-2018 standards. Staff reiterates that the Board reserves the right to update certification requirements if superior standards become available via a future Board Order. Other existing standards that projects should adhere to include the EPA's Resource Conservation and Recovery Act hazardous waste regulations and the DEP's Universal waste provisions.³³

Monitoring and Reporting

Consistent with the reporting framework established in the Tranche 1 Order, Staff recommends that transmission-scale energy storage project participating in Tranche 2 continue to be subject to both project-level reporting by system owners and program-level reporting by the Board or the Program Administrator. System owners must continue to submit construction updates before operation and provide monthly reports on system performance once active. Monthly reporting may be changed to another cadence in future program rules or Board Orders. System owners must also notify the Board of any changes in ownership, development, or operation.

Specifically, the following reports and notifications are required:

- During system operation, the system owner shall provide a report with key operational metrics, including, but not limited to the number of hours it was experiencing a forced outage and the number of hours it was out of service due to a planned outage, to the Board or the Program Administrator within five business days after the last day of each month.
- Within thirty (30) days of a change in system owner, the new system owner shall notify the Board of their individual and/or corporate names, tax identification number, address, contact telephone number, and the percentage of the energy storage system they own. The new system owner shall update any pre-development security as necessary.

³³ See 40 C.F.R. pts. 239-282; N.J.A.C. 7:26A-7.1 to 7.9.

- Within thirty (30) days of a material change in the project operator, either the system owner or the new project operator shall notify the Board of their individual and/or corporate names, tax identification number, address, and contact telephone number.
- Within thirty (30) days of a material change in the project developer, including a change in a subcontractor, either the system owner or the new project developer shall notify the Board of their individual and/or corporate names, tax identification number, address, and contact telephone number.

Additionally, transmission-scale energy storage systems must have meters and telemetering equipment to track energy exchange and report data.

If a transmission-scale energy storage system receiving a fixed incentive award is co-located with an existing generation resource, or an electric generator is subsequently co-located with the transmission-scale energy storage system, Staff recommends that the Board require the system owner to install a revenue-quality meter or meters capable of measuring the power and energy discharged by the transmission-scale energy storage system separately from the power and energy produced by the generation resource, along with telemetering equipment and data acquisition services sufficient for producing monthly operating reports pertaining to the transmission-scale energy storage system.

Staff recommends that the project-level reporting requirements track progress against the GSESP goals. Staff recommends that the Board authorize Staff to specify detailed reporting requirements in the program application. Such requirements could include, but are not necessarily limited to, the elements listed in Table 3, below.

Table 3. Project-Level Reporting Requirements

GSESP Goals: Transmission Projects	Metrics: Per year and cumulative to date
(1) Achieve the 2030 energy storage goal of 2,000 MW by 2030	Installed capacity
(2) Promote deployment of low-cost private (non-utility and non-NJBPU) capital into New Jersey storage projects	<ol style="list-style-type: none"> 1. Total project cost (\$, \$/kW, \$/kWh) 2. Fixed, performance, and total Incentives (\$, \$/kW, \$/kWh) 3. Percent of total project cost funded by New Jersey ratepayers, private capital, and other federal and state funding sources
(3) Decrease Greenhouse Gas (“GHG”) emissions by enabling higher levels of renewable resources to interconnect to the grid	GHG emissions related to peak, non-peak, and total MWh charged and discharged, as can be reasonably measured or estimated
(4) Support deployment of energy storage systems interconnected to the transmission or distribution system of a New Jersey EDC	<ol style="list-style-type: none"> 1. Timeliness: Days from application to completion 2. Capacity: Rates of participation in each PJM market available to storage (i.e., energy, capacity, ancillary services) 3. Generation Shifting: Peak, non-peak, and total MWh charged and discharged

(5) Grow a sustainable energy storage industry that gradually requires decreased incentives to deploy additional storage systems and ensure that the benefits of energy storage last well beyond the term of the GSESP	Incentive levels as total value of installed cost over time
(6) Support overburdened communities with energy resilience, environmental improvement, and economic benefits derived from energy storage	Transmission-scale systems that asserted they will provide these community benefits should provide quantitative evidence that those benefits were realized to the extent feasible, using metrics tailored to the specific claimed benefits
(7) Encourage storage deployment that accelerates the clean energy transition, including facilitating deployment of renewable energy, electric vehicle or other DERs, and resiliency	N/A for individual projects; applicable to program-level reporting only
(8) Establish a Program Administrator at the Board who would oversee the efficient implementation of GSESP	N/A for individual projects
(9) Reduce electricity costs for ratepayers	N/A for individual projects; applicable to program-level reporting only

Staff also recommends that projects be required to report their project revenues, annual degradation metrics, construction costs and operations and maintenance costs.

DISCUSSION AND FINDINGS

Energy storage is a critical component of New Jersey’s clean energy transition, supporting grid stability, decarbonization, and economic growth. Tranche 2 is expected to provide a modest boost to New Jersey’s economy by reducing electricity costs, attracting investment in new infrastructure, modernizing the state’s grid, improving reliability, reducing environmental impact, enhancing public health, and creating new jobs.

Furthermore, the Board believes it is critical to deploy as much new capacity as fast as possible to maintain both reliability and affordability in the face of rapidly accelerating load growth. The transmission-scale energy storage projects procured in Phase 1 of the GSESP will constitute the bulk of the new capacity brought online in New Jersey over the next few years. The importance of storage as a source of new capacity is because such projects make up most of the capacity in New Jersey that either has, or is close to obtaining, interconnection approval, and because supply chain constraints likely render the commercial operation of new greenfield gas-fired capacity infeasible until the early 2030s.³⁴ It is therefore essential to continue competitively procuring

³⁴ See Samuel A. Newell et al., The Brattle Grp., Brattle 2025 CONE Report for PJM: Informing Parameters for PJM’s RPM Auctions for Delivery Year 2028/29 through 2031/32 at 2 (2025), <https://www.pjm.com/>

large-scale energy storage in New Jersey.

At the same time, the Board **FINDS** that reducing the cost of incentive awards as the market matures is also a central goal of the GSESP. Consequently, while continuing to actively pursue the development of new storage projects through the GSESP, the Board will seek a reduction in incentive levels in the program over time as additional storage is deployed, with the ultimate goal of phasing out incentives once the market is established within the State.

After reviewing the record and Staff's recommendations, the Board **HEREBY ORDERS** the establishment of Tranche 2 of the GSESP pursuant to N.J.S.A. 48:3-121.3, with the pre-qualification window opening on May 20, 2026, and final bid closing on August 7, 2026. The Board **FURTHER ORDERS** that projects shall be selected to receive Tranche 2 GSESP incentives through the competitive procurement process recommended by Staff and established by this order.

The Board **HEREBY ORDERS** that Tranche 2 be open to qualifying transmission-scale energy storage projects and qualifying transmission-scale renewable-plus-storage projects that are ineligible for storage incentives under the Board's SuSI Program. The Board **FURTHER ORDERS** Staff and the GSESP Program Administrator to conduct the Tranche 2 solicitation for 645 MW of energy storage capacity on the schedule recommended by Staff. Awarded projects shall receive fixed incentives payments disbursed over a period of 15 years, subject to the conditions and limitations recommended by Staff herein. The Board **FURTHER ORDERS** that submitted bids shall remain valid for a period of nine months from the date of the final deadline for bid submission.

The Board **HEREBY DIRECTS** Staff to establish eligibility criteria for energy storage systems seeking to qualify for Tranche 2 GSESP incentives that are consistent with Staff's recommendations stated above. The Board **FURTHER DIRECTS** Staff and the GSESP Program Administrator to ensure that, at the time of application, transmission-scale energy storage systems meet the eligibility criteria Staff establishes and any additional requirements the Board may set by future order. The Board **HEREBY ORDERS** all Tranche 2 GSESP-eligible project entities to comply with the pre-qualification application and application criteria set forth in or authorized by this Order.

The Board **HEREBY ORDERS** that, as recommended by Staff, incentives will be awarded to qualifying transmission-scale energy storage projects by selecting the lowest-cost projects in price-ranked order, subject to the Board's discretion to make awards to slightly higher-cost projects when doing so is in the public interest, including but not limited to circumstances in which a project demonstrates greater maturity, more advanced interconnection progress, or an earlier anticipated commercial operation date, after community benefits are considered.

/media/DotCom/committees-groups/committees/mic/2025/20250411-special/item-1-02-revised-cone-report-final.pdf ("The supply of gas-fired combustion turbines, transformers, and switch gear is scarce Supply shortages and volatile price premiums may last for several years until supply chains can develop sufficient capacity to support demand. . . . [This] limit[s] the pace of new supply entry of gas-fired generation plants"); Diana DiGangi, Gas Turbine Manufacturers Expand Capacity, but Order Backlog Could Prove Stubborn, Util. Dive (Sept. 5, 2025), <https://www.utilitydive.com/news/mitsubishi-gas-turbine-manufacturing-capacity-expansion-supply-demand/759371/> ("Over the last few years, the wait time for a large gas turbine has increased from around two-and-a-half or three years to as long as seven years.").

The Board **FINDS** that minimizing the cost of energy storage incentives and thereby maximizing net savings to ratepayers is a critical policy goal of the GSESP and is needed to effectuate Executive Orders Nos. 1 and 2.³⁵

The Board **THEREFORE DIRECTS** Staff to develop metrics that the Board can use to determine if awarding requested incentives to a transmission-scale energy storage system in Tranche 2 would constitute an unduly expensive means of advancing the State's energy storage goals. In conducting this evaluation, the Board will consider factors including but not limited to confidential gap analysis results, adjustments for market conditions (such as tariffs), and potential savings for ratepayers (such as capacity savings). The Board **FURTHER DIRECTS** Staff to develop an incentive benchmark for evaluating the reasonableness of requested incentive levels using Staff's recommended methodology. In order to protect ratepayers from excessive costs, the Board **HEREBY RESERVES THE RIGHT** to exercise its discretion to reject bids that exceed this benchmark, do not result in capacity savings, or would otherwise constitute an unduly expensive means of achieving the State's energy storage goals, notwithstanding any impact on the 645 MW procurement target.

The Board **FURTHER FINDS** that it is in the best interest of ratepayers to foster additional price competition in Tranche 2 by relaxing COD requirements and thereby increasing the pool of eligible projects. Therefore, pursuant to its statutory authority under P.L. 2025, c.136, the Board **HEREBY WAIVES** the December 31, 2030, deadline by which guaranteed CODs for GSESP transmission-scale projects must occur.³⁶

However, the Board recognizes that projects that can achieve commercial operation sooner may provide more immediate reliability benefits and greater capacity savings to ratepayers. Therefore, the Board **HEREBY ORDERS** that a project that has a guaranteed COD within 42 months of the solicitation application closing date may be awarded before a lower-priced project with a later guaranteed COD if the Board determines that the additional benefits the former project provides, including but not necessarily limited to greater capacity savings, outweigh the additional cost of the higher incentive award.

Consistent with Staff's recommendations described above, the Board **DIRECTS** Staff to require applicants to submit a projected degradation profile as part of their application and require awarded projects to submit all information necessary to support degradation tracking and reconciliation on an ongoing basis. The Board **FURTHER DIRECTS** Staff to reduce annual incentive payments for awarded projects in accordance with the verified rate of degradation reflected in the data submitted to the Board and the resulting changes in projects' effective nameplate capacity. The Board **FURTHER DIRECTS** Staff to reconcile project reports from awarded projects with PJM data on an as-applied basis at least every five (5) years. If reconciliation identifies a discrepancy in an awarded project's reported degradation, the Board

³⁵ See Exec. Order No. 1, § 3-4 (directing the Board to review the Clean Energy Program budget, which is used to fund the GSESP, and revise it to "prioritize funding for direct ratepayer relief," which will likely require minimizing GSESP expenditures); Exec. Order No. 2 (noting that the main policy objective of accelerating solar and battery storage deployment is to address "the region's electricity supply shortage" that is "a significant driver of the electricity affordability crisis").

³⁶ See N.J.S.A. 48:3-121.3(b)(2) (requiring transmission-scale energy storage systems to "have an anticipated commercial operations date of no later than December 31, 2030, *unless the board permits an exception*" to qualify for Tranche 2 (emphasis added)).

DIRECTS Staff to adjust the incentive payment for the subsequent year to correct for any resulting error in prior incentive payments. The Board **FURTHER DIRECTS** Staff to withhold the incentive payments to awarded projects for the final year of the incentive period until the true-up process is complete.

The Board **HEREBY ORDERS** that if a recipient of a Tranche 2 incentive award misses their planned COD, Staff or the GSESP Program Administrator shall impose deductions from the first-year incentive award in the amounts recommended by Staff. The Board **HEREBY GRANTS** the Director of the Division of Clean Energy the authority to extend the COD deadline by up to 180 calendar days due to project delays if an applicant demonstrates to the Division Director's satisfaction that the applicant sought to avoid said delays and advance the project in good faith. The Board **FURTHER GRANTS** the Division Director the authority to extend the COD deadline by more than 180 calendar days if the applicant demonstrates to the Division Director's satisfaction that the project was delayed by more than 180 calendar days due to a force majeure event that the applicant took all possible steps to avoid. The Board **FURTHER ORDERS** that any deductions from the first-year incentive award for missing a COD deadline shall be calculated using the date of the extended COD deadline instead of the planned COD in the event that the Division Director grants an extension.

The Board **HEREBY ORDERS** that any applicant awarded an incentive shall lose its award if it fails to achieve commercial operation within 36 months of its guaranteed COD, or within another period of time established by a future Board Order, although the Board may waive this penalty if the applicant demonstrates good cause for relief in writing.

The Board **HEREBY DIRECTS** Staff or the GSESP Program Administrator to establish a non-refundable application deposit in the amount of \$200 per MW of installed capacity for Tranche 2, or other amount calculated using the upper end of any capacity range specified by a project, and to adjust this deposit as necessary for future solicitations. The Board **HEREBY DIRECTS** Staff to waive the Tranche 2 bid fee for applicants who were not awarded in Tranche 1 and who submit a substantially similar project, defined by an overlapping footprint. Applicants proposing increased nameplate capacity in Tranche 2 must pay a non-refundable fee on the incremental capacity.

The Board **HEREBY DIRECTS** Staff and the GSESP Program Administrator to develop all program documents and resources that shall be necessary for the operation of the Tranche 2 solicitation, including but not limited to creation of a new registration portal or website for GSESP solicitations, updates to the NJCEP website, and development of application forms and checklists.

The Board **FURTHER DIRECTS** Staff and the GSESP Program Administrator to develop all program documents and resources that are necessary for the registration of qualified projects in Tranche 2 of the GSESP and to ensure consistency for market participants.

The Board **FURTHER DIRECTS** Staff and the GSESP Program Administrator to take action to communicate the establishment of Tranche 2 of the GSESP to the public. Communication may include listserv messages, website notices, and informational webinars.

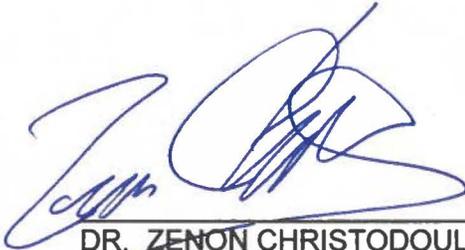
Finally, unless stated otherwise in this section, the Board **HEREBY APPROVES** all recommendations made by Staff above.

The effective date of this Order is March 11, 2026.

DATED: March 4, 2026

BOARD OF PUBLIC UTILITIES
BY:


CHRISTINE GUHL-SADOVY
PRESIDENT

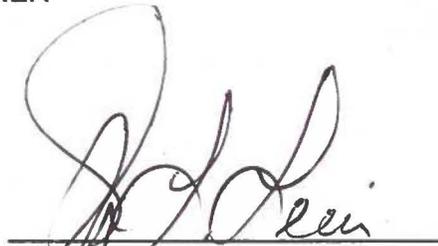

DR. ZENON CHRISTODOULOU
COMMISSIONER


MICHAEL BANGE
COMMISSIONER


EMMA REBORN
COMMISSIONER


JOSEPH COVIELLO
COMMISSIONER

ATTEST:


SHERRILL LEWIS
BOARD SECRETARY

I HEREBY CERTIFY that the within
document is a true copy of the original
in the files of the Board of Public Utilities.

IN THE MATTER OF THE GARDEN STATE ENERGY STORAGE PROGRAM PHASE 1,
TRANCHE 2

DOCKET NO. QO25120634

SERVICE LIST

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**APPENDIX A: GARDEN STATE ENERGY STORAGE PROGRAM – ANALYSIS OF
POTENTIAL CAPACITY MARKET NET SAVINGS FOR PHASE 1, TRANCHE 2
TRANSMISSION-SCALE STORAGE RESOURCES**

I. Introduction

The Garden State Energy Storage Program (GSESP) is designed to provide incentives for the installation of eligible energy storage systems. The program establishes two incentivized market segments: a transmission segment for large energy storage systems and a distribution segment for smaller systems that interconnect either behind-the-meter (BTM) or in front-of-the-meter (FTM) to a distribution grid.

Transmission-scale energy storage systems are considered a capacity resource by the Pennsylvania-Jersey-Maryland Interconnection (PJM) and can participate in PJM's wholesale capacity market. Recently, capacity shortages have contributed to an increase in the clearing price of the PJM Base Residual Auction (BRA), resulting in an increase in electricity prices for New Jersey ratepayers. Energy storage is one of the few resources that can provide new dispatchable capacity in the near-term,¹ thereby improving system reliability and hopefully lowering the clearing price in upcoming capacity auctions. As a result, incentivizing energy storage systems has the potential to decrease electricity costs for New Jersey ratepayers.

This appendix describes the results and key assumptions underlying the analysis of the potential capacity market savings from GSESP incentives for transmission-scale energy storage systems, with a focus on incremental savings that may result from Phase 1, Tranche 2 of the GSESP. While smaller energy systems incentivized by the distribution segment of GSESP will also add capacity and likely reduce ratepayer costs, the launch of the distribution segment is further into the future, and its impact is more difficult to model at this time. For these reasons, the analysis focuses solely on the potential capacity market savings from transmission-scale energy storage systems. It does not consider other benefits to New Jersey from these projects, such as increased energy resilience, economic development, or avoided environmental costs. The analysis also does not account for community benefits of the storage projects, such as jobs creation, benefits to overburdened communities, and Brownfield redevelopments, which are part of the evaluation criteria for the GSESP solicitation. These other benefits are highlighted in the main body of the GSESP award order, but are outside the scope of this analysis.

II. Background on the Capacity Market

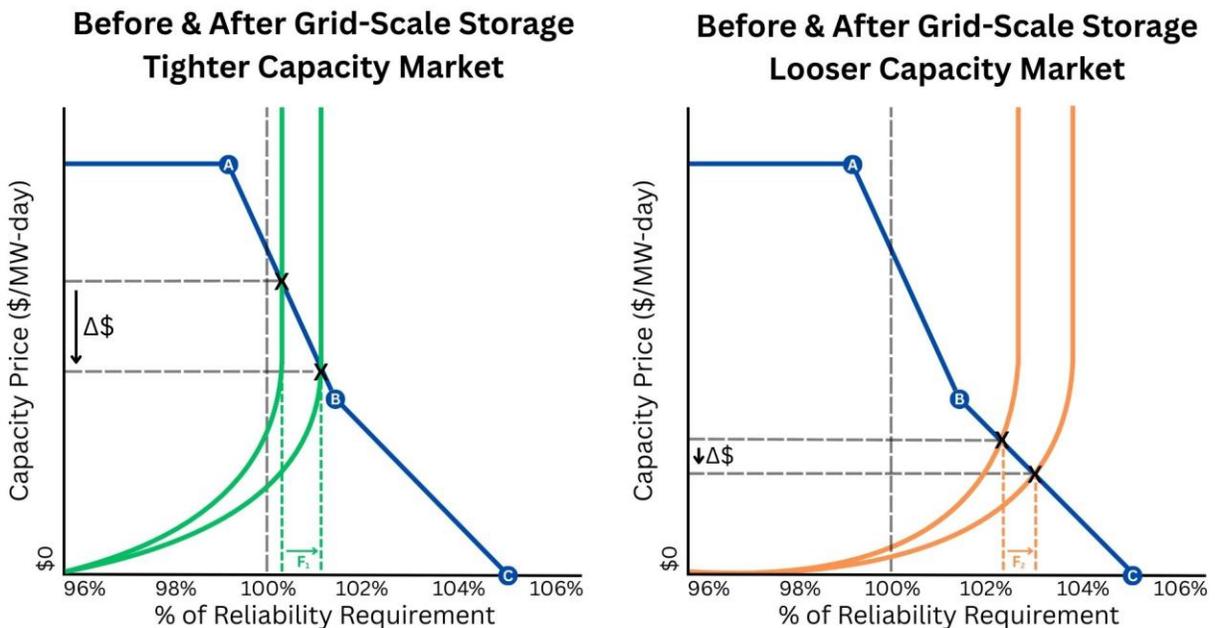
PJM's capacity market is meant to ensure long-term grid reliability by securing power supply

¹ Storage resources account for one-third of the capacity in the PJM interconnection queue (region-wide; storage resources account for the outright majority of capacity in the PJM queue seeking to interconnect in New Jersey) and have shorter development lead times compared to other resources. For example, new gas-fired power plants face significant order backlogs for necessary equipment, pushing development timelines to seven to eight years. Kevin Clark, Long Lead Times are Dooming Some Proposed Gas Plant Projects, Power Engineering, (Feb. 20, 2025), <https://www.power-eng.com/gas/turbines/long-lead-times-are-dooming-some-proposed-gas-plant-projects/>. Likewise, building additional nuclear capacity is expected to take at least seven years, and likely substantially longer, depending on various factors. See Global Nuclear Industry Performance, World Nuclear Assoc., <https://world-nuclear.org/our-association/publications/world-nuclear-performance-report/global-nuclear-industry-performance> (last updated Aug. 20, 2024).

resources needed to meet predicted energy demand in the future.² The BRA was designed to be an annual auction conducted by PJM to secure electricity capacity for a delivery year three years in the future, but auction delays in recent years have altered the schedule. Capacity providers, such as energy storage systems, bid the amount of capacity they can offer and the price they are willing to accept. The BRA results in a clearing price across the PJM region, with some variability in Locational Deliverability Areas (LDAs) to account for transmission constraints that limit the ability of some parts of the grid to import capacity from other areas.

The demand for capacity in the market is administratively determined by PJM and modeled as the Variable Resource Requirement (VRR) curve. The shape of the VRR curve is based upon the reliability requirement which represents the amount of capacity needed to serve load during peak demand and other stressed system conditions. PJM calculates the reliability requirement by considering forecasts for peak loads, the periods of greatest reliability risk, and the ability of the expected generation mix to serve load during those periods. The capacity supply curve includes all capacity providers bidding into the auction, based upon their aggregate accredited unforced capacity (UCAP). Figure 1 provides illustrative insight into the behaviors of the supply and demand curves, where fluctuations in pricing within the PJM capacity market are highlighted by the changing intersections (i.e., the clearing price) from before and after transmission-scale storage enters the market.

Figure 1 – The capacity market shifts are a function of the capacity pricing and percent (%) reliability required to meet peak capacity demand.



The addition of energy storage systems to aggregate capacity in PJM will likely shift the supply curve to the right (F_1 and F_2) resulting in a lower market clearing price ($\Delta\$$). The magnitude of the shift depends upon the degree to which supply is constrained. If supply is tightly constrained, as

² An Introductory Guide for Participation in PJM Processes, Fed. Energy Reg. Comm'n, <https://www.ferc.gov/introductory-guide-participation-pjm-processes> (last updated Apr. 11, 2025).

occurred in the BRAs for the 2025/2026 and 2026/2027 delivery years, the clearing price will fall between points A and B on the demand curve (assuming PJM is not critically short capacity such that the market clears to the left of point A at the maximum possible price, or alternatively that an administratively determined price cap has been implemented as in the last two BRAs). As more supply comes online in response to market signals, the clearing price may fall between points B and C, resulting in a looser capacity market and reducing potential savings.

The following analysis attempts to quantify the potential capacity market savings resulting from energy storage systems bidding additional capacity in future BRAs. This analysis focuses solely on the addition of transmission-scale storage potentially awarded in Phase 1, Tranche 2 of the GSESP and its impact on the capacity market. Deployment of distributed energy storage, as incentivized in the second phase of GSESP, will also likely result in capacity market savings due to its ability to reduce peak load. While PJM accounts for the load reducing impact of distributed storage in the peak load forecast it uses to determine the amount of capacity BRAs need to procure,³ modeling the potential savings from distributed resources is beyond the scope of this analysis and will likely be explored in the future.

III. Assumptions

- **Capacity Interconnection Rights for Transmission-scale Energy Storage Resources**
 - Capacity Interconnection Rights (CIRs) represent the amount of generation output or storage discharge from a capacity resource that is deliverable to load under all system conditions. The number of CIRs limits a capacity resource's accredited unforced capacity (UCAP) value.
 - Consistent with most transmission-scale storage projects awarded in Phase 1, Tranche 1, this analysis assumes that projects hold CIRs commensurate with their nameplate capacity. Under PJM's current rules, a storage project's effective nameplate capacity used for capacity accreditation is limited to the number of CIRs it holds.
- **Effective Nameplate Capacity**
 - UCAP is calculated from effective nameplate capacity. Effective nameplate capacity is the amount of output in megawatts that the resource can continuously put to the grid for the number of hours of its ELCC class (e.g. 4, 6, 8, or 10 hours), subject to CIR constraints. Consequently, a resource's effective nameplate capacity may not exceed the amount of CIRs it holds, but its effective nameplate capacity rating may be smaller than the number of CIRs it holds. Energy storage capability (in MWh) degrades over time in relationship to patterns of operation. Storage projects typically maintain their effective nameplate capacity through some combination of "overbuilding" (initially building excess storage capacity so that the minimum rating can be maintained in spite of some degradation) and "augmentation" (periodically investing over the life of the project to replace components to offset degradation losses). Two of the awarded projects in Phase 1, Tranche 1 indicated they plan to use this approach to maintain 100% of effective nameplate capacity over the 15-year incentive period. One of the projects estimated that its effective nameplate capacity will degrade about 20% over the same period. This analysis assumes that projects awarded in Phase 1, Tranche 2 will utilize overbuilding and augmentation to offset some degradation, but will

³ PJM Res. Adequacy Planning Dep't, [2025 Long-Term Load Forecast Report](https://www.pjm.com/-/media/DotCom/library/reports-notice/load-forecast/2025-load-report.pdf) 6 (2025), <https://www.pjm.com/-/media/DotCom/library/reports-notice/load-forecast/2025-load-report.pdf>.

nonetheless see effective nameplate capacity degrade to 90% over the 15-year incentive period. Estimated capacity savings account for this degradation as a reduction in accredited capacity assumed to clear in the BRAs over time.

- **Effective Load Carrying Capacity (ELCC) Rating**
 - The ELCC metric quantifies a resource’s ability to contribute to grid reliability. The value is estimated for each resource type and is used to determine the accredited UCAP eligible to bid into the BRA. Specifically, the amount of UCAP a resource can bid into the BRA is equal to its ELCC class rating multiplied by its effective nameplate capacity, subject to certain unit specific adjustments. The values utilized in the analysis for each delivery year are displayed in Table 1, below, based on a PJM forecast of ELCC class ratings.⁴ Note that the actual ELCC class ratings for storage in the 2027/2028 BRA, which occurred in December 2025, were higher than PJM’s forecast.⁵ This indicates that these projections are conservative. Potential changes in the ELCC calculations proposed by PJM would also result in higher ELCC class ratings for storage, further supporting the thesis that these projections err on the conservative side.⁶

Table 1 – ELCC Class Rating Projections

<u>Delivery Year</u>	<u>Projected 4-hour Storage Resource ELCC</u>
2028/2029	55%
2029/2030	51%
2030/2031	49%
2031/2032	42%
2032/2033	42%
2033/2034	40%
2034/2035	38%
2035/2036	34%
2036/2037	30%
2037/2038	26%
2038/2039	22%
2039/2040	18%

⁴ PJM Interconnection, LLC, Preliminary ELCC Class Ratings for Period Delivery Year 2026/27 – Delivery Year 2034/35 (2024), <https://www.pjm.com/-/media/DotCom/planning/res-adeq/elcc/preliminary-elcc-class-ratings-for-period-2026-2027-through-2034-2035.pdf>.

⁵ Compare ibid. (projecting that 4-hour storage resources would have an ELCC class rating of 52% in the 2027/2028 delivery year), with PJM Interconnection, LLC, ELCC Class Ratings for the 2027/2028 Base Residual Auction (2025), <https://www.pjm.com/-/media/DotCom/planning/res-adeq/elcc/2027-28-bra-elcc-class-ratings.pdf> (showing that 4-hour storages resources had an ELCC class rating of 58% in the BRA for the 2027/2028 delivery year).

⁶ See PJM Interconnection, LLC, ELCC Accreditation Methodology: Update on Sensitivity Analyses 28 (May 22, 2025), <https://www.pjm.com/-/media/DotCom/committees-groups/task-forces/elccstf/2025/20250522/20250522-item-02---elcc-accreditation-methodology-update-on-sensitivity-analyses---pjm-presentation.pdf> (showing that storage ELCC class ratings would increase under all proposed changes to the ELCC methodology that PJM modeled).

2040/2041	14%
2041/2042	10%
2042/2043	10%
2043/2044	10%
2044/2045	10%
2045/2046	10%

- **Load Forecast**
 - PJM's 2025 load forecast is utilized to estimate peak load over the period.
- **New Jersey Zones' Capacity Purchase Obligations**
 - Capacity Purchase Obligations are based upon the 2025/2026 BRA values. A 0.86% annual growth rate is applied to the Capacity Purchase Obligations based upon the weighted average of projected summer load growth in PJM's 2025 load forecast for ACE, JCP&L, PSE&G, and RECO. This assumption likely errs on the side of underestimating the growth in Capacity Purchase Obligations for New Jersey zones, as winter peak load is growing at a much faster rate and winter risks are increasingly driving capacity needs. Underestimating future Capacity Purchase Obligations in turn underestimates savings from lower future capacity prices, making this a conservative assumption.
- **GSESP Energy Storage Capacity Deployment**
 - The analysis assumes 645 MW of nameplate capacity participates in the BRA for 2030/2031 delivery year as a result of Phase 1, Tranche 2, and for each subsequent delivery year through 2045/2046. This assumption is based on the Tranche 2 projected award date in October 2026. Though that date falls before the December 2026 BRA for the 2029/2030 delivery year, PJM requires projects to submit binding notices of intent to participate in that BRA 180 days before the auction commences.⁷ This analysis therefore assumes that the first BRA Tranche 2 projects will offer into is the 2027 BRA for the 2030/2031 delivery year. The accredited capacity amount assumed in each delivery year is determined by multiplying the effective nameplate capacity (subject to degradation) times the projected ELCC class rating. In capacity constrained periods, the ratio of the change in cleared capacity to the change in offered UCAP is assumed to be 1:1. In less constrained periods, this ratio is assumed to be 0.5:1.
- **Discount Rate**
 - 7.0% discount rate is assumed for net present value calculations.
- **Reliability Requirement**
 - Based upon PJM's projections for peak load growth, the Reliability Requirement is derived by multiplying the estimated peak load for a given delivery year by the Forward Pool Requirement (FPR) value for the 2026/2027 delivery year and subtracting the capacity needs met outside the capacity market.

⁷ See PJM Interconnection, LLC., PJM Manual 18: PJM Capacity Market 63 (Dec. 17, 2025), <https://www.pjm.com/-/media/DotCom/documents/manuals/m18.ashx>.

- **VRR Curve**

- This analysis is informed by the VRR parameter recommendations in Brattle's Sixth Quadrennial Review report to PJM.⁸ The report provides recommendations for an updated methodology to determine the VRR Curve, including the adoption of a Marginal Reliability Impact (MRI) VRR Curve with prices that reflect incremental reliability value. Additionally, the report advocates for adopting a "Reference Price" to replace the Net Cost of New Entry (CONE) parameter and a price cap in the range of 1.5-1.75 x Reference Price. A linear approximation of the "Curve 2" version of MRI VRR Curve is the basis for the BRA modeling in the scenarios presented below.⁹
- Staff is aware that PJM ultimately did not move forward with the MRI curve design. Moreover, FERC approved a few changes to the shape of the VRR curve on January 21, 2026, that were not explicitly modeled in Staff's main analysis.¹⁰ However, sensitivity analyses with these recently approved parameters resulted in similar capacity savings estimates to those that resulted from using MRI parameters, largely because the approved changes had similar effects to Brattle's proposed MRI design. For example, the MRI design and the shift in Point C's quantity parameter from 104.5% to 106.0% of the reliability requirement both reduced the slope of the VRR curve between points B and C by similar amounts, resulting in similar impacts on capacity savings when the capacity market is loose. As such, Staff decided to continue using VRR parameters based on a linear approximation of the "Curve 2" version of the MRI curve to maintain consistency with the analysis Staff used for Tranche 1.¹¹

IV. Methodology

The following analysis estimates the total net capacity savings, defined as gross capacity savings from GSESP transmission-scale storage less GSESP transmission-scale incentive costs from additional energy storage resources in the capacity auctions for delivery years 2028/2029 through 2045/2046.¹² It does so by comparing the estimated cost of capacity with and without additional energy storage resources incentivized by GSESP. The 18-year study period aligns with the study period used to analyze net benefits of projects awarded in Phase 1, Tranche 1.¹³

⁸ See Kathleen Spees et al., the Brattle Grp., Sixth Review of PJM's RPM VRR Curve Parameters for Planning Years 2028/29 through 2031/32 at 6-12 (2025), <https://www.brattle.com/wp-content/uploads/2025/04/Sixth-Review-of-PJMs-Variable-Resource-Requirement-Curve.pdf>.

⁹ Id. at 6, fig.2.

¹⁰ See PJM Interconnection, LLC, 194 FERC ¶ 61,049 at P 19, 44-45 (2026).

¹¹ See GSESP Launch Order at 74.

¹² Note that even though the 2028/2029 and 2029/2030 delivery years are included in the study period, Tranche 2 projects are assumed to only enter the market in the 2030/2031 delivery year. The 2028/2029 delivery year and 2029/2030 delivery years were nonetheless included in the study period to ensure the capacity savings for both Tranche 1 and Tranche 2 were modeled over the same time period and discounted to the same extent. Had Staff started the Tranche 2 analysis period in the 2030/2031 delivery year, the net present value of Tranche 2 capacity savings would have been discounted less than Tranche 1 capacity savings. That would misleadingly inflate the relative importance of Tranche 2 capacity savings in any comparison to Tranche 1 capacity savings.

¹³ In re the Garden State Energy Storage Program Phase 1, Tranche 2, BPU Docket No. QO22080540, Order dated March 4, 2026.

Total Capacity Savings (CS) for GSESP is described as total CS throughout the lifetime of the program ($n=18$ -years), including the Net Present Value NPV_{CS} , with a discount rate $r=7.0\%$, defined as:

$$NPV_{CS} = \sum_{t=0}^n \frac{CS}{1 + r^n}$$

Total Transmission-Scale Incentive Costs (TIC) for GSESP is described as a total TIC throughout the lifetime of the program ($n=18$ -years), including the Net Present Value NPV_{TIC} , with a discount rate $r=7.0\%$, defined as:

$$NPV_{TIC} = \sum_{t=0}^n \frac{TIC}{1 + r^n}$$

Total Transmission-Scale Net Benefit (TNB) for GSESP, is described as a function of $TNB = CS - TIC$ throughout the lifetime of the program $n=18$ -years, including the Net Present Value NPV_{TNB} , with a discount rate $r=7.0\%$, defined as:

$$NPV_{TNB} = \sum_{t=0}^n \frac{TNB}{1 + r^n}$$

V. Scenarios

Modeling capacity benefits requires assumptions about uncertain future variables. Staff performed a scenario analysis to test how alternative assumptions about a few key variables impact estimated capacity savings. For context, in April 2025, FERC approved the implementation of price collars for the BRAs for the 2026/2027 and 2027/2028 delivery years. The price collars were developed due to fears from consumers and their representatives that short supply would yield unduly high clearing prices even as other barriers (including shorter lead times for the auctions and interconnection backlogs) would prevent the price signals (no matter how high) from enticing new capacity entry. In fact, both auctions did clear at the FERC-approved price cap, and would have cleared at higher prices had the cap not been in place.

The 2026/2027 and 2027/2028 price collars were temporary, and there is currently no such price collar imposed on future auctions. However, it is possible that FERC will approve similar measures in future BRAs. Moreover, even under the standard market design, there is an effective price cap when cleared supply falls below 99% of the reliability requirement. To the left of this point, the VRR curve is flat (see Figure 1 above) and marginal changes in cleared supply have no impact on the clearing price.

Scenario 1: Constraints ease by 2032/2033

This scenario assumes that no administrative price cap is in effect after the 2027/2028 auction, and the auction clears enough supply to meet at least 99% of the reliability requirement. This means additional qualifying capacity offered into the capacity market would reduce the clearing price. The auction is assumed to clear between points A and B on the VRR Curve until delivery

year 2031/2032. Thereafter, the auction is assumed to clear between points B and C on the VRR curve.

Scenario 2: Price Cap to 2030/31, constraints ease by 2034/2035

This scenario assumes that either an administrative price cap binds or the amount of supply that clears the auction is less than 99% of the reliability requirement (with or without GSESP program storage projects entering the market) through the 2030/2031 BRA. If an administrative or effective price cap is binding, marginal changes in offered capacity will have no effect on the clearing price. Since this represents a particularly supply-constrained future, this case also assumes that the BRA remains highly constrained (i.e., clears between points A and B on the VRR curve) through 2033/2034 and is less constrained (i.e., clears between points B and C on the VRR curve thereafter).

Incentive Cost Assumptions

Phase 1, Tranche 2 projects will be awarded incentives paid annually for 15 years at a rate of dollars per MW of *effective* nameplate capacity. This represents a slight change from Tranche 1 projects, which were awarded incentives paid at a rate tied to “normal” nameplate capacity. Based on projections of effective nameplate capacity for the three awarded Phase 1, Tranche 1 projects, the average incentive payment rate is equivalent to about \$83,000/MW of effective nameplate capacity.

The two market scenarios are evaluated with three potential values for incentives for transmission-scale storage systems:

- \$65,000 per MW per year for 15 years
- \$83,000 per MW per year for 15 years (average awarded Phase 1, Tranche 1 incentive value)
- \$100,000 per MW per year for 15 years

These incentive values are for illustrative purposes only and are not indicative of any specific minimum or maximum value. Actual incentives values will be determined by the results of a competitive solicitation.

VI. Results

Table 2 - Results for the Net Present Value of the Total Net Benefit (TNB) across two scenarios and three incentive levels modeled.

Scenario	LDA Capacity Constraint	Incentive Value (\$/MW per Year)		
		\$65,000	\$83,000	\$100,000
1	Constraints Ease 2032/33	\$240,917,163	\$151,068,917	\$66,212,241
2	Price Cap to 2030/31; constraints ease 2034/35	\$279,936,191	\$190,087,946	\$105,231,269

The Total Net Benefit (TNB) in capacity savings is positive across the two scenarios and three incentive levels. These results indicate that the potential additional capacity supply provided by

energy storage systems in Phase 1, Tranche 2 would likely provide capacity market savings to New Jersey ratepayers that exceed the cost of GSESP incentives. Note that the TNB is measured against a counterfactual scenario in which the money that would be spent on the GSESP is instead allocated to direct ratepayer relief, not a scenario in which the overall Clean Energy Program budget is held constant. A positive TNB thus indicates that funding GSESP transmission-scale incentives will ultimately save ratepayers more money than simply reducing societal benefits charge collections by the same amount.

The TNB is inversely correlated with the incentive value because the amount of storage and thus gross capacity savings in each scenario is held constant. Consequently, increases in incentive costs provide no offsetting increase in capacity savings, and thus the TNB decreases when incentive values increase.

None of the scenarios studied assume price separation for New Jersey LDAs. If supply constraints at the MAAC, EMAAC, or the PSEG/JCPL/AECO LDAs result in price separation, the capacity benefits of adding storage in these LDAs would be significantly higher. The existence of ongoing transmission constraints in New Jersey's LDA makes such price separation possible.

VII. Conclusion

Energy storage systems are valuable capacity resources that can help meet peak load and increase grid reliability.¹⁴ By incentivizing additional energy storage capacity to enter the market in the near-term, the GSESP has the potential to lower ratepayers' costs by reducing the clearing price in upcoming capacity market auctions.

If the capacity market remains constrained, then the amount of potential savings will increase provided the market does not clear at a price cap. Given the supply constraints for new capacity resources, such as natural gas and nuclear, it is likely that the capacity supply will remain constrained into the next decade.¹⁵ Based upon this analysis, even if the capacity constraints are alleviated by the end of 2031 and do not materialize again for the next fifteen years, additional energy storage capacity still provides net savings to New Jersey ratepayers. Similarly, this analysis also indicates that even if the market clears critically short and at an administrative price cap through the end of the current decade, capacity savings in the 2030s and onwards will exceed incentive costs.

The opportunity to ease the constrained supply of capacity in the PJM market and thereby lower costs for ratepayers is one potential benefit of the GSESP. Securing these savings will depend upon the program successfully facilitating the rapid deployment of new energy storage facilities in the State.

¹⁴ N.J. Bd. of Pub. Utils. et al., 2019 New Jersey Energy Master Plan: Pathway to 2050 at 127 (2020), https://nj.gov/bpu/pdf/publicnotice/NJBPU_EMP.pdf

¹⁵ Advait Arun, The Natural Gas Turbine Crisis, Heatmap (Feb. 26, 2025), <https://heatmap.news/ideas/natural-gas-turbine-crisis>; Mitchel Beer, Turbine Shortage Could Crimp Canadian Utilities' Plans to Scale Up Gas, The EnergyMix (Mar. 27, 2025), <https://www.theenergymix.com/turbine-shortage-could-crimp-canadian-utilities-plans-to-scale-up-gas/>.