NYSERDA Residential and Retail Energy Storage Market Acceleration Incentives

2024-2030 Implementation Plan

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Case 18-E-0130, In the Matter of Energy Storage Deployment Program.

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1 INTRODUCTION

This Implementation Plan (hereafter the "2024-2030 Residential and Retail Storage Implementation Plan", or the "Plan") sets forth the program goals and implementation strategies for the Residential and Retail energy storage programs authorized by the New York Public Service Commission (PSC) in its Order establishing an updated energy storage goal and deployment policy[1], issued June 20, 2024 (the "2024 Storage Order"). This Plan is submitted pursuant to the 2024 Storage Order and describes New York State Energy Research and Development Authority (NYSERDA) -administered programs that will deploy project-level incentive funding to cost-effectively procure 200 megawatts (MW) of residential energy storage and 1,500 MW of commercial-scale distributed ("retail") energy storage by 2030 towards achieving New York's target of 6,000 MW of energy storage by 2030, adopted by the PSC in the 2024 Storage Order.[2] The Residential program, with total authorized funding of $100.0 million, will support projects interconnected behind a residential customer's electric meter and interconnected to the local electric utility's distribution system. The Retail program, with total authorized funding of $675.0 million, will support projects meeting the following criteria: (1) up to five megawatts of AC power (MW-AC); (2) whose value is monetized under an Investor-owned Utility (IOU) tariff in the form of bill savings or credits, including delivery charges or the Value of Distributed Energy Resources (VDER or Value Stack) tariffs; and (3) that are either interconnected (a) behind a customer's electric meter, or (b) directly into the distribution system. Both the Residential and Retail programs will be implemented through a "MWh Block" design – a standard offer, fixed-rate, dollar per kilowatt-hour ($/kWh) of installed capacity incentive program with funding, capacity allocations and incentive rates being set specific to individual regions across the state.

1.1 Background

New York's first Energy Storage Roadmap ("2018 Storage Roadmap"), developed by the New York State Department of Public Service (DPS) and NYSERDA, was published in June 2018, and set forth recommendations to build a sustainable, market-driven energy storage sector reflecting the principles underpinning the PSC's Reforming the Energy Vision (REV) initiative. Following additional stakeholder input, the PSC issued the *Order Establishing Energy Storage Goal and Deployment Policy* ("2018 Storage Order") in December 2018, establishing a 2030 storage goal of 3,000 MW, subsequently codified as a legislative mandate by the passage of the Climate Leadership and Community Protection Act of 2019 (CLCPA or Climate Act),[3] and an intermediate target of 1,500 MW by 2025. The 2018 Storage Order also established a suite of deployment policies and actions to help achieve these targets, including authorizing NYSERDA to use approximately $394 million of allocated funds to support, implement and administer incentive programs for large-scale, transmission-connected ("Bulk") and Retail energy storage

[1] Case 18-E-0130, In the Matter of Energy Storage Deployment Program, Order Establishing Updated Energy Storage Goal and Deployment Policy (issued June 20, 2024).
[2] Program design, requirements, performance metrics and other details related to the Bulk storage program authorized by the 2024 Storage Order are described in a separate Implementation Plan.
[3] Public Service Law §66-p(5).

projects between 2019 and 2025, known as the Market Acceleration Bridge Incentive programs.[4] This funding added to previously approved NY-Sun Clean Energy Fund (CEF) funding of $40 million for retail storage projects paired with PV systems and $55 million in energy storage incentive funds for retail and residential storage projects located on Long Island, funded through the Regional Greenhouse Gas Initiative (RGGI).

The Retail storage incentive program launched in April 2019 and was followed by the launch of the Long Island Single-Family Residential Storage Incentive in July 2019, which provides incentives for residential storage systems paired with solar PV as a means to drive clean resiliency benefits for Long Island residents. Procurements carried out under these incentive programs, along with additional procurements under the Clean Energy Standard, by utilities, as well as legacy energy storage installations, led to 1,301 MW of energy storage projects being deployed or contracted as of the end of 2021.[5]

In January 2022, New York Governor Kathy Hochul announced as part of her annual State of the State address an intention to double the state's energy storage target to 6,000 MW of storage by 2030. The adoption of an expanded target was motivated by the rapid growth in renewable energy expected over the next decade, and the role that electrification of transportation and buildings is expected to play in achieving New York State's future carbon-neutral economy. These directives are outlined in the Climate Act, which calls for the state to achieve 70 percent renewable electricity by 2030 and 100 percent zero-emissions electricity by 2040.[6] To accelerate the deployment of storage towards the 6,000 MW by 2030 target and to support the transition to a clean electric grid, Governor Hochul directed DPS and NYSERDA to publish an updated Storage Roadmap.

New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage (the "2022 Storage Roadmap"), filed by DPS and NYSERDA in December 2022 in Case 18-E-0130, analyzed the need for an increased 6,000 MW by 2030 target, assessed prevailing barriers to the deployment of storage in New York, and provided policy recommendations to help the state achieve the 6,000 MW target. The 2022 Storage Roadmap recommended adoption of the target of 6,000 MW by 2030 by the PSC, and the development of new NYSERDA programs towards the procurement of an additional 4,700 MW of new Bulk, Retail and Residential energy storage projects across the state. Specifically, the 2022 Roadmap recommended that new programs should include 1,500 MW of program blocks for Retail storage projects and 200 MW for Residential storage projects.

On June 20, 2024, the PSC issued the 2024 Storage Order adopting the recommendations of the 2022 Storage Roadmap, including the expanded 6,000 MW by 2030 target,[7] and authorizing $775.0 million in program funding to support the deployment of an additional 200 MW of

[4] Program design, requirements, budgets, performance metrics and other details related to the programs authorized by the 2018 Storage Order are described in a separate Implementation Plan.
[5] 2022 Storage Roadmap, p. 6.
[6] Public Service Law §66-p(2).
[7] 2024 Storage Order, p. 3.

Residential storage[8] ($100.0 million) and 1,500 MW of Retail storage[9] ($675.0 million) statewide through a series of "MWh Block" incentives offered on a $/kWh basis. In keeping with the Climate Act's mandates pertaining to disadvantaged communities and environmental justice, the 2024 Storage Order directed that a minimum of 35 percent of procurements for bulk and off-site retail projects be located in NYISO's G-K Capacity Zones, with at least 30 percent of total procurements in Zone J (New York City), and that a minimum of 35 percent of residential and on-site retail energy storage projects be located within disadvantaged community census tracts.[10] Additionally, it instituted a programmatic requirement for payment of prevailing wage for storage projects with installed capacity of one megawatt AC power (MW-AC) and above.[11]

NYSERDA has conducted additional engagement with energy storage stakeholders following the issuance of the 2024 Storage Order. This Plan reflects input obtained from these discussions, in addition to feedback obtained from further engagement with DPS, IOUs, Long Island Power Authority (LIPA) and other stakeholders. NYSERDA will continue to engage with energy storage stakeholders through program implementation and will propose modifications to this Plan as needed, in consultation with DPS.

2 MWH BLOCK PROGRAM

The MWh Block program consists of a series of capacity-based funding "blocks" or segments, with incentive rates (in $/kWh of installed capacity) and funding amounts set for predetermined blocks that are subdivided by market segment and region. This program design provides certainty and transparency regarding incentive levels, accounts for regional and segment-specific differences, and allows for the reduction or elimination of incentives when and where market conditions support doing so. The total incentive funding for a project is calculated by applying the incentive rate associated with the block from which a project was awarded an incentive to the project's usable installed energy storage capacity measured in AC power.[12]

This Plan continues with the structure of the MWh Block programs implemented as a consequence of the 2018 Storage Order, adds additional capacity to the previously established New York City, Con Edison Westchester, and Rest of State Blocks, and introduces new Residential MWh blocks for the Con Edison and Rest of State regions.

2.1 MWh Block Incentive Application and Awards

For both the Residential and Retail MWh Block programs, incentive applications will be submitted through a central database managed by NYSERDA. Allocated and available capacity will be monitored in real-time through the online MWh dashboards on NYSERDA's Energy Storage website. NYSERDA will track the status of each MWh block on these dashboards, which includes the date that each block was initiated, the incentive level for each block, and the

[8] 2024 Storage Order, p. 46-47.
[9] 2024 Storage Order, p. 41.
[10] 2024 Storage Order, p. 59.
[11] 2024 Storage Order, p. 54-55.
[12] In the case of the Retail program, this capacity will be verified through NYSERDA's Quality Assurance inspection process. See Section **Error! Reference source not found.**.

date a block closes. Through the MWh Block dashboard on NYSERDA's Energy Storage website[13], contractors can monitor block status, current incentive levels, and have real-time access to information regarding likely timing for incentive changes. Blocks for each region and market segment are tracked separately, and regional and segment-specific demand will dictate the rate at which each block is subscribed. Project-level data on statewide energy storage projects is available online at Open NY.[14]

Incentives will be awarded to approved applications based on the block open at the date of application submission. When each open block becomes fully subscribed, the incentive level may change in subsequent blocks. If a project cancels its application or is terminated, and the block under which it was granted an incentive is still open, these funds will be placed back into that block. If the block under which the incentive was granted is no longer open, NYSERDA will allocate those funds to a subsequent block.

An updated Program Manual that details the rules and regulations specific to both programs will be published at NYSERDA's Energy Storage program website prior to the launch of the programs. The Program Manual will describe project and customer requirements for participation, incentive application requirements, project milestone requirements, and additional rules and processes related to incentive payments.

2.2 Participating Contractors

In the case of both the Residential and Retail programs, energy storage systems will be incentivized for customers through a network of Participating Contractors who will contract directly with the customer and NYSERDA. Contractors will be approved by NYSERDA to enter the program based on their experience and references, with specific requirements defined in the Program Manual. A list of Participating Contractors will be posted on NYSERDA's Storage Incentive website.

Participating Contractors will be held responsible for meeting all program requirements as detailed in the version of the Program Manual in effect at the time. The Participating Contractor will work directly with the customer, receive the incentive payment (unless assigned to another approved entity), be responsible for adhering to its obligations under contract with NYSERDA, and be responsible for customer complaints, warranties, and any production guarantees or bill savings that their contract with the customer may provide. The Participating Contractor will be responsible for the installation and quality of the project, including compliance with local siting regulations.

Participating Contractors will be responsible for all aspects of their energy storage projects funded under the Program. The Participating Contractor must provide a single point of responsibility for the installation, maintenance, and operation of the storage system. Subcontractors may help fulfill these obligations. Regardless of any subcontracting arrangement, however, the Participating Contractor will remain responsible for all aspects of the project.

[13] https://www.nyserda.ny.gov/All-Programs/Energy-Storage-Program/Developers-and-Contractors/Retail-Incentive-Offer/Incentive-Dashboard.
[14] https://data.ny.gov/Energy-Environment/All-Statewide-Energy-Storage-Projects/hspb-4n4p/about_data.

2.3 Flexibility to Adapt to Market Conditions

The incentive levels and block sizes listed in this Implementation Plan may be adjusted based on market factors and NYSERDA's periodic monitoring of uptake in each region and sector. When necessary to optimize the MWh Block program's ability to achieve the overall targets of 200 MW for the Residential sector and 1,500 MW for the Retail sector, NYSERDA may redesign the MWh Block structure, which may include the reallocation of funding and capacity among sectors and regions, and/or the reallocation of funds from cancelled projects. NYSERDA may also exercise the authority to modify program rules to optimize program administration.

NYSERDA will share information with all stakeholders regarding program progress and market conditions by making data and analysis available to stakeholders. If program changes are necessary, NYSERDA will provide sufficient notice to enable a smooth transition after gathering market data, consulting with stakeholders, and guidance from DPS staff. Program changes will be published on NYSERDA's Energy Storage website and subsequently reflected in periodic amendments to the Program Manual. If the necessary program changes conflict with the provisions contained herein, NYSERDA will file an addendum or a revised Implementation Plan as necessary.

3 RESIDENTIAL STORAGE PROGRAM

The Residential MWh Block program offers fixed-rate incentives per kWh of system energy capacity for grid-connected residential energy storage projects (i.e., installed behind a residential meter) on a standard offer, first-come first-serve basis. The storage project may be standalone or paired with a new or existing solar project retrofitted to add a new energy storage system. Systems may be installed in or at new or existing residences or buildings.

3.1 Customer and Project Eligibility

Systems awarded incentives from the Residential program authorized by the 2024 Storage Order must meet the following criteria:

- The energy storage system equipment must be new and commercially available.
- The system must be electrically interconnected to the distribution grid after the date that NYSERDA receives the incentive application.
- The energy storage system must be physically and permanently located at the same site.
- The system must be grid-connected and connected on the customer's side of the electric meter.
- Where available and practicable, the system must enroll in a utility Dynamic Load Management (DLM) program or other qualifying program, as described in the Program Manual.
- The system must be listed to specific UL or CAN standards listed in the Program Manual.
- All inverters must be certified as meeting all applicable standards of IEEE and UL and approved by the electric distribution utility that the system will be interconnected within.
- The system must have an appropriate interconnection agreement that meets New York State Standard Interconnection Requirements. The participating contractor must ensure that the system is installed in compliance with that interconnection agreement.

- The system must be installed in accordance with the design and system components submitted in the application and approved by NYSERDA, and must satisfy the requirements of the local AHJ.
- A minimum 10-year system warranty is required for purchased systems.
- The system must be designed to maintain a minimum round-trip efficiency as described in the Program Manual.
- The system must be installed in compliance with all manufacturers' installation requirements, applicable laws, regulations, codes, licensing, and permit requirements including, but not limited to, the International Building Code Series as amended by the New York State Uniform Code Supplement; the National Electric Code; New York State's Standard Interconnection Requirements and the utility's interconnection agreement; the applicable fire code; and all applicable State, city, town, or local ordinances or permit requirements.
- The energy storage system must be placed in-service by December 31, 2030.
- The system may be a standalone energy storage system or paired with a solar photovoltaics (PV) system.

3.2 Contractor and Builder Program Participation Requirements

As described in Section 2.2, new energy storage systems will be incentivized for customers through a network of Participating Contractors ("Contractors") who will contract directly with the customer and NYSERDA. The energy storage system's installation will be overseen by a Participating Builder ("Builder"). A contracting firm can apply for approval, by NYSERDA, for either participation as a Contractor only, a Builder only, or as both Contractor and Builder, by completing an online Contractor Application Form located at the NYSERDA Energy Storage website. NYSERDA's primary financial and contractual relationship will be with the Participating Contractor. The application process requires Contractors and Builders to describe their experience with energy storage installations and provide references.

Participating Contractors:

- Participating Contractors shall execute a binding Participation Agreement with NYSERDA;
- Contractors are responsible for the Builder's performance;
- Contractors must remain compliant with all applicable program; rules; and
- Contractors will receive incentive payments.

Participating Builders:

- Participating Builders are responsible for the installation and quality of projects under the supervision of a Participating Contractor;
- Builders must employe at least one technically competent certified installer that must hold one of the four certification options described below; and
- Must agree to the terms of Builder / Contractor Relationship Agreement, which require, among other things, the maintenance of liability insurance.

NYSERDA requires that Builders employ at least one technically competent credentialed installer that has at least one of the four following builder credentials:

- North American Board of Certified Energy Practitioners (NABCEP) Energy Storage Installation Professional Certification (ESIP),
- NABCEP PV Installation Professional Certification with at least 40 hours of energy storage-specific training,
- Journeymen Electrician, with documented International Brotherhood of Electrical Workers (IBEW)-National Electrical Contractor Association (NECA) energy storage training and experience, such as the Energy Storage and Microgrid Training and Certification Program (ESAMTAC), or a minimum of 40 hours energy storage training,
- UL (Underwriters Labs) PV System Installer with at least 40 hours of energy storage specific training.

The Program Manual and NYSERDA Energy Storage website will be updated to reflect additional certification pathways if and when they become available.

Additionally, Contractors as well as the installations must meet all local requirements, including those of the utility service provider. A list of Participating Contractors will be posted on NYSERDA's Energy Storage website.

3.3 Application Submission

Participating Contractors will be provided access to the NYSERDA online portal to submit project applications. Project applications requirements include the below information that NYSERDA will review and approve. Additional application submission requirements will be described in the Program Manual.

- Energy storage system/product specification sheet (technology type, supplier, kW and kWh nameplate capacity rating);
- Energy storage system and customer location and metering configuration;
- Proof of any UL safety listings currently obtained;
- Energy storage system warranty;
- A description of the energy storage system including storage technology type, manufacturer, installed power and energy capacity, and roundtrip efficiency;
- Site plan;
- Electrical drawing.

3.4 Residential MWh Block Design

3.4.1 MWh Blocks and Incentive Levels

The 2024 Storage Order authorizes total funding of $100.0 million to procure a total of 200 MW of installed energy storage capacity via the Residential MWh Block incentive program.[15] The Residential program segments the New York market into three regions: Con Edison (which comprises New York City and Con Edison Westchester), PSEG Long Island ("Long Island"), and

[15] 2024 Storage Order, p. 88-89.

Rest of State (encompassing the utility territories of Orange & Rockland, Central Hudson Gas & Electric, National Grid, New York State Gas & Electric, and Rochester Gas & Electric).

Tables 3-1 and 3-2 show funding amounts, estimated capacity allocations in MW[16] and MWh, and associated incentive rates for initial Residential storage MWh blocks for the Con Edison and Rest of State regions respectively.[17] Subsequent MWh block sizes and incentive levels will be published on the MWh Block dashboard and announced to subscribers of NYSERDA's Energy Storage stakeholder email mailing list[18] prior to full allocation of currently open block capacity, as reflected on the MWh Block dashboard, based on analysis of prevailing market conditions, regional incentive uptake trends, and project economics.

Table 3-1. Con Edison Residential MWh Block Capacity Allocations and Incentive Levels

	Block Capacity		Incentive Rate	Funding
	MW	MWh	$/kWh	$
Block 1	10	25	$250	$6,250,000
Blocks 2+	TBD			

Table 3-2. Rest of State Residential MWh Block Capacity Allocations and Incentive Levels

	Block Capacity		Incentive Rate	Funding
	MW	MWh	$/kWh	$
Block 1	10	25	$200	$5,000,000
Blocks 2+	TBD			

The total incentive funding for a project is calculated by applying the $/kWh incentive rate associated with the block from which a project was awarded an incentive to the project's installed storage capacity in kilowatt-hours measured in alternating current (AC) based on the manufacturer specifications available when the system is initially installed (the usable energy available at the beginning of system operation).[19]

3.4.2 Disadvantaged Communities Program Design

The Residential program will allocate 40 percent of total program capacity, or 80 MW, towards the Residential Inclusive Storage Incentive (Residential ISI), an incentive offering for eligible

[16] MW capacity for all new Residential MWh blocks is estimated assuming an average duration of 2.5 hours. Actual MW procurements for a given block may vary.

[17] Due to the still-evolving nature of indoor lithium-ion battery storage permitting for New York City residences, the yet-to-be-determined nature of LIPA's participation in the entirety of the Residential program, and the dynamic nature of battery and storage system pricing, NYSERDA does not believe it is possible to effectively set regional capacity allocations and incentive rates for the entirety of the 200 MW Residential program at the time of filing this Plan.

[18] https://www.nyserda.ny.gov/All-Programs/Energy-Storage-Program/Connect-with-Us

[19] The incentive will be capped based on a maximum system size threshold that shall be described in the Program Manual.

residential storage projects available statewide.[20] To be eligible for this incentive, a project must meet all eligibility requirements of the Residential MWh Block incentive program and meet one of the following criteria:

- Be located within a disadvantaged community census tract as identified by the Climate Justice Working Group;
- Service the owner-occupied residence with household income less than 80% of the Area Median Income (AMI) or 80% of the State Median Income (SMI), whichever is higher;
- Service a residential (1-4 unit) affordable housing property; or
- Service a customer who has notified their utility of a serious illness or condition that could become life-threatening if electricity is disconnected.

As shown in Table 3-3, NYSERDA will allocate an initial capacity of 10 MW/25 MWh at an incentive rate of $450/kWh to the first block of Residential ISI. Capacity allocations and incentive rates for future Residential ISI blocks will be determined based on analysis of prevailing market conditions, uptake trends, and stakeholder feedback.

Table 3-3: Statewide Residential Inclusive Storage Capacity Allocations, Incentive Rates and Funding

	Allocated Capacity		Incentive Rate	Funding
	MW	MWh	$/kWh	$
Block 1	10	25	$450	$11,250,000
Blocks 2+	TBD (total allocation of 70 MW/175 MWh)			

3.4.3 Long Island Single-Family Residential Storage Incentive

Residential customers of PSEG Long Island ("PSEG-LI") are eligible for the Long Island Single-Family Residential Storage Incentive, which was launched in in July 2019 and is currently funded through RGGI. This incentive supports residential storage systems paired with solar PV; both new solar-plus-storage systems as well as existing solar projects retrofitted to add a new energy storage system are eligible. As of Block 2 of this incentive, projects have been required to enroll in PSEG-LI's Dynamic Load Management (DLM) Program or other qualifying residential storage DLM Program offerings, future offerings included, as verified by PSEG-LI. An additional incentive of $150/kWh is available for residential solar projects paired with energy storage that meet the requirements of the NY-Sun Affordable Solar Residential Incentive for low-to-moderate income (LMI) homeowners. Rules and requirements associated with this incentive are governed by the NY-Sun Upstate + Long Island Program Manual.

3.5 Payment

The contractor receives the total project incentive in one installment. To request the incentive payment, the project invoice must be submitted in the portal for approval. To receive the

[20] As with market-rate Residential MWh Block incentives authorized by the 2024 Storage Order, availability of the ISI for projects sited in the Long Island region is dependent on LIPA's voluntary participation in the Residential program, which, at the time of filing this Plan, had not been determined.

incentive payment, the project invoice must include: (i) the utility interconnect permission to operate (PTO) letter(s); and (ii) the building permit for the system.

3.6 Quality Assurance (QA)

The QA process for the Energy Storage programs provides guidance and oversight for energy storage projects that receive NYSERDA incentives to ensure that the commissioned system meets applicable code requirements and high safety and performance standards. The overall goal is to ensure that contractors can consistently provide customers with properly installed, safe, reliable energy storage systems that produce the projected amount of energy over their expected lifecycle. For the Residential program, NYSERDA will select a representative sample of completed projects for onsite field inspections and/or as-built photo evaluation based upon the Contractor or Builder's demonstrated quality performance and production volume.

The QA process consists of an onsite field inspection, conducted when the system is mechanically complete and in an unenergized state, and/or construction photo documentation. Inspections will be conducted by a qualified independent third party, using comprehensive field and photo inspection QA checklists and inspection processes approved by NYSERDA. These checklists will be available for review on NYSERDA's Energy Storage website and will be updated as needed; projects will be inspected based on the checklists in place at the time of inspection.

The QA inspection will provide NYSERDA with an opportunity to evaluate the accuracy of the site analysis and design paperwork, verify the system was installed according to applicable code and program requirements, and include selected health, safety, and performance items. Following an inspection, NYSERDA will produce a detailed QA inspection report and determine whether the project fully complies with all program requirements and meets acceptable standards of workmanship. The QA inspection report will provide a list of any nonconformances observed. Projects that have nonconformances related to critical (health and safety) or major (system performance) attributes will automatically fail. Projects that have only nonconformances related to minor or incidental attributes may pass or fail based on the number and type of nonconformances observed.

The Participating Contractor is responsible for correcting all nonconformances identified in the time required by NYSERDA, determined by NYSERDA at its sole discretion based on the degree of nonconformance. Contractors are required to submit proof to NYSERDA demonstrating correction of all items identified. Contractors may also be moved into probation status, suspended status, or terminated based on the results of QA inspection or violating program requirements.

QA records will be maintained by NYSERDA in the program database. Specific functions such as inspection sampling, scheduling and field data collection will be maintained in a separate QA module. The program database is available to program staff, installers and QA contractors and can be used to sample and review applications, identify installation status, and ascertain quality performance.

4 RETAIL STORAGE PROGRAM

The Retail MWh Block program offers fixed-rate incentives per kWh of system energy capacity for eligible grid-connected nonresidential energy storage projects up to 20 MWh in AC system energy capacity on a standard offer, first-come, first-serve basis. The Retail Program will support customer and distribution-sited storage projects up to 5 MW-AC, and whose value is monetized under an IOU tariff in the form of bill savings or credits. These projects are expected to shift a customer's electric demand to off-peak periods, time-shift solar PV generation to more valuable times, and/or charge off-peak to discharge during peaks to relieve grid constraints. As with the Residential MWh program, this incentive will be deployed in a series of funding blocks (MWh blocks), with each block having a prespecified funding amount and incentive rate in dollars per kWh of system energy capacity, supported through Commission-authorized funds in the 2024 Storage Order.

4.1 Customer and Project Eligibility

New projects that meet the minimum project maturity requirements described below and as listed in the Program Manual are eligible to apply for incentives. New projects are those that have not received permission to operate (PTO) from the interconnecting utility prior to NYSERDA's approval of the project application.

Eligible projects include:

- Retail, demand-metered customers that install energy storage (either standalone or paired with on-site generation such as solar PV) behind the customer's electric meter (BTM);
- Energy storage (standalone or paired with an eligible generation source such as solar PV) connected directly into the distribution system and compensated under the VDER Value Stack tariff; and
- Retail, non-demand metered customers that install energy storage paired with a solar PV system BTM. Retail, non-demand metered customers that install standalone storage BTM are not eligible for incentives.
- Projects may also pursue revenue through an Investor-Owned Utility ~~program~~ or ~~the~~ NYISO program, including the NYISO DER and Aggregation participation model.~~.~~

Projects must also meet the following requirements:

- The energy storage system must be a new, permanent, stationary system designed and installed by an eligible Participating Contractor. The storage system may be standalone, or interconnected with an existing form of on-site generation such as PV solar. Storage systems that may be moved on a temporary basis for needed maintenance and related issues, including floating, barge-based systems, shall be deemed permanent and stationary provided that they have a permanent grid interconnection and do not provide services at other locations without prior approval.
- The storage system must be electric grid-connected chemical, thermal, or mechanical storage and operated primarily for electric load management or shifting electric generation to more beneficial time periods while operating in parallel with the utility grid.

The system may also provide other customer benefits such as backup power during a grid outage or power quality.

- The storage equipment must consist of commercial products carrying at least a 10-year manufacturer's warranty. The warranty must cover the entire energy storage system, including ancillary equipment, pumps, thermal management, and power electronics.
- Experimental, beta, or prototype equipment is not eligible. The terms of the warranty are to be negotiated between the Participating Contractor/manufacturer and customer.
- The system must have an appropriate interconnection agreement that meets New York State Standard Interconnection Requirements. The participating contractor must ensure that the system is installed in compliance with that interconnection agreement.
- The system must be installed in accordance with the design and system components submitted in the application and approved by NYSERDA, and must satisfy the requirements of the local AHJ.
- The storage system must be certified to meet minimum safety requirements by a Nationally Recognized Testing Laboratory as evidenced by applicable UL listings. These listings will be described in the Program Manual and will evolve to meet current best practices over time. These UL listings must be received by the time that the system enters commercial operation.
- The system must be designed to maintain a minimum round-trip efficiency defined in the Program Manual and installed in accordance with the design and system components submitted in the project application and approved by NYSERDA.
- All inverters must be certified as meeting all applicable standards of IEEE and UL and approved by the electric distribution utility that the system will be interconnected within.
- The system must be installed in compliance with all manufacturers' installation requirements, applicable laws, regulations, codes, licensing, and permit requirements including, but not limited to, the International Building Code Series as amended by the New York State Uniform Code Supplement; the National Electric Code; New York State's Standard Interconnection Requirements and the utility's interconnection agreement; the applicable fire code; and all applicable State, city, town, or local ordinances or permit requirements including the New York State Environmental Quality Review (SEQR) (or the City Environmental Quality Review (CEQR)); Article 10; and any additional requirements of the local AHJ.
- The system must be placed in-service by December 31, 2030. NYSERDA may extend this deadline at the participating Contractor's request for projects that have experienced in-service delays due to conditions beyond the control of the Participating Contractor, and upon receiving verification that project construction has commenced on or before December 31, 2030.

The following projects are ineligible:

- Projects that have received permission to operate (PTO) from the interconnecting utility prior to application submission.

- Projects that have executed a contract to participate in a Non-Wires Alternative (NWA) or Non-Wires Solution (NWS) project or program on or before February 14, 2025~~Projects selected under an IOU NWA or NWS procurement prior to application submission, and projects that submitted a proposal to an open NWA or NWS prior to application submission and are pending decision or negotiation~~.[21]
- Projects previously awarded a NYSERDA Retail incentive contract may not cancel and reapply for a NYSERDA MWh block offering at a higher rate or higher total incentive amount.
- Projects owned by IOUs.
- Projects in which the energy storage is compensated under the Clean Energy Standard through a NYSERDA-awarded Renewable Energy Certificate (REC) for a paired renewable and storage system.
- Projects that receive a Bulk Storage incentive or are awarded an IOU Bulk Dispatch Rights contract.

4.2 Application Submission

Participating Contractors will be provided access to the NYSERDA online portal to submit project applications. Project applications requirements include the below information that NYSERDA will review and approve; additional application submission requirements will be described in the Program Manual.

- The location of the storage system, metering configuration, facility type where it is installed, and customer information (if the system is serving on-site load);
- The intended use of the energy storage system;
- A description of the energy storage system including storage technology type, manufacturer, installed power and energy capacity, and roundtrip efficiency;
- Proof of any UL safety listings currently obtained and storage system warranty;
- Site plan and electrical drawing;
- Estimate of total project cost;
- Customer electric utility bill and usage data (if located BTM);
- If the utility requires a coordinated electric system interconnection review (CESIR), confirmation from the utility of interconnection upgrade payment;
- If the utility does not require a CESIR for the project, a copy of the signed and executed interconnection agreement;
- Completed Planning and Zoning Confirmation Form identifying all local land use approvals required for the project, or identifying if no such approvals are required;
- Planning and Zoning Board approval, if applicable;
- Approved special use permit from the local municipality (if required);

[21] ~~NYSERDA may allow incentive eligibility for certain NWA or NWS~~utility procured ~~projects, such as those procured via a prescriptive incentive program (e.g., Con Edison's BQDM Prescriptive Energy Storage System Incentive Offering).~~

- A negative declaration under the State Environmental Quality Review Act (SEQRA) or City Environmental Quality Review Act (CEQR) as evidenced by meeting minutes or written approval from the local government/lead agency (if required by the lead agency);
- For projects in a State-Certified Agricultural District, Notice of Intent to Undertake an Action within an Agricultural District Submission Form;
- Participating contractor, payee (if applicable), and customer (if applicable) certifications.

Once an application has been received, the project may undergo a desktop design review examining the technical feasibility of the system's sizing compared to its intended use case. In this review, NYSERDA or its designee may examine technical specifications, including the site plan and drawing, and system sizing.

The Participating Contractor may assign the project and NYSERDA award or payments to subsequent purchasers pursuant to the Program Manual rules in effect at the time.

4.3 Retail Program MWh Block Design

4.3.1 MWh Blocks and Incentive Levels

The 2024 Storage Order authorizes total funding of $675.0 million to procure a total of 1,500 MW of installed energy storage capacity via the Retail MWh Block incentive program. The Retail program segments New York State into four regions: (i) New York City; (ii) the area served by Con Edison in Westchester ("Con Edison Westchester"); (iii) the area served by PSEG Long Island ("Long Island"); and (iv) Rest of State (encompassing the utility territories of Orange & Rockland, Central Hudson Gas & Electric, National Grid, New York State Gas & Electric, and Rochester Gas & Electric).

Tables 2-2, 2-3 and 2-4 show funding amounts, estimated capacity allocations in MW[22] and MWh and associated incentive rates for new Retail storage MWh blocks for the New York City, Con Edison Westchester, and Rest of State regions respectively. Eligible projects not awarded incentives from these opening blocks (New York City Block 6, Con Edison Westchester Block 2, or Rest of State Block 5) will be awarded incentives from subsequent MWh blocks. The availability of Retail MWh block incentives and funding levels and capacity allocations for projects sited in the Long Island region are subject to LIPA's voluntary participation in the Retail Storage program, which, at the time of filing this Plan, had not been determined.

Due to the rapidly evolving landscape for commercial-scale lithium-ion battery storage system permitting across the state, the dynamic nature of battery and storage system pricing, and uncertainty related to funding for the Long Island MWh blocks, capacity allocations and incentive rates for subsequent regional Retail MWh blocks will be determined and announced[23] prior to full allocation of opening block capacity, as reflected on the MWh Block dashboard, based on analysis of prevailing market conditions, regional incentive uptake trends, and project

[22] MW capacity for all new market-rate Retail MWh blocks is estimated assuming an average duration of 3.75 hours. Actual MW procurements for a given block may vary.

[23] Subsequent MWh block sizes and incentive levels, when determined, will be published on the MWh Block dashboard and announced to subscribers of NYSERDA's Energy Storage stakeholder email mailing list (https://www.nyserda.ny.gov/All-Programs/Energy-Storage-Program/Connect-with-Us).

economics. However, in accordance with the 2024 Storage Order's directives relating to disadvantaged community considerations (see Section 4.3.2) as well as in recognition of the high value of deploying storage and the robust retail storage market in the downstate region[24][25], of the 1,500 MW of total Retail storage program capacity, a minimum total of 750 MW (50 percent) will be allocated to the New York City region, and a minimum total of 150 MW (10 percent) will be allocated to the Con Edison Westchester region.

Table 4-1. New York City Retail MWh Block Capacity Allocations and Incentive Levels[26]

	Block Capacity		Incentive Rate	Funding
	MW	MWh	$/kWh	$
Block 2[27] (Existing)	15	60	$300	$31,250,000
Block 3 (Existing)	16	65	$240	$30,000,000
Block 4 (Existing)	50	200	$100	$18,750,000
Block 5 (Existing)	119	478	$125	$58,500,000
Block 6 (New)	300	1,125	$125	$140,625,000
Blocks 7+ (New)	TBD			

Table 4-2. Con Edison Westchester Retail MWh Block Capacity Allocations and Incentive Levels[28]

	Block Capacity		Incentive Rate	Funding
	MW	MWh	$/kWh	$
Block 1 (Existing)	25	85	$175	$14,875,000
Block 2 (New)	100	375	$125	$46,875,000
Blocks 3+ (New)	TBD			

[24] See 6 GW Storage Roadmap, p.4.
[25] As of May 31, 2024, there was a total of 1,435 MW of energy storage in Con Edison's distributed energy resource interconnection queue. See https://dps.ny.gov/distributed-generation-information.
[26] Funding for New York City Blocks 2-5 was authorized by the 2018 Storage Order.
[27] Both New York City and Rest of State projects were eligible to receive funding from Rest of State Block 1; however, no New York City projects ultimately received Block 1 awards, as prevailing FDNY rules did not allow for the permitting of outdoor stationary battery energy storage systems.
[28] Funding for Con Edison Westchester Block 1 was authorized by the 2018 Storage Order.

Table 4-3. Rest of State Retail MWh Block Capacity Allocations and Incentive Levels[29]

	Block Capacity		Incentive Rate	Funding
	MW	MWh	$/kWh	$
Block 1 (Existing)	25	100	$350	$35,000,000
Block 2 (Existing)	30	125	$250	$31,250,000
Block 3 (Existing)	40	150	$200	$30,000,000
Block 4 (Existing)	40	150	$125	$18,750,000
Block 5 (New)	150	563	$175	$98,437,500
Blocks 6+ (New)	TBD			

The total incentive funding for a project is calculated by applying the $/kWh incentive rate associated with the block from which a project was awarded an incentive to the project's usable installed energy storage capacity measured in AC power, up to a maximum of 20 MWh. This capacity will be verified through NYSERDA's Quality Assurance inspection process (see Section **Error! Reference source not found.**). Incentive rates listed will be provided at the dollar value listed for each of the first four hours of a system's duration and decline to 25 percent of this dollar value for hours five and six of duration with no incentive for any duration beyond six hours.

Capacity allocations for MWh blocks were determined based on the volume of projects deemed likely to have similar project economics and "missing money" requirements, as well as the volume of projects deemed likely to apply to those blocks based on assessment of DER interconnection queue maturity. Incentive rates were determined based on NYSERDA-conducted "missing money" modeling analysis, informed by feedback from third-party consultants, IOUs, and energy storage developers. This analysis identifies region-specific incentive levels necessary to result in the achievement of a minimum acceptable rate of return (also known as a hurdle rate) for a representative project likely to qualify for the relevant regional MWh block, based on likely system, interconnection, labor, operations and maintenance costs, federal tax credits, and projected VDER revenues.

For all regions, the representative project was assumed to be a 5 MW-AC, 4-hour duration standalone lithium-ion battery system. Project dispatch was optimized to maximize revenue under the VDER Value Stack tariff, net of relevant utility charging tariffs. Capacity allocations

[29] Rest of State Blocks 1-4 were funded by $40 million in NY-Sun program funding for energy storage systems paired with solar PV, supplemented by additional funds authorized by the 2018 Storage Order.

for these blocks were determined based on analysis of utility interconnection queue data (filtered for eligible projects) and historical regional Retail MWh block uptake rates.

4.3.2 Disadvantaged Communities Benefit Program Design

The 2024 Storage Order directs that a minimum of 35 percent of procurements for off-site ("front-of-the-meter") Retail projects be located in NYISO's G-K Capacity Zones, as they are most likely to benefit disadvantaged communities and reduce peaker plant emissions.[30] Additionally, the 2024 Storage Order requires that at least 30 percent of total procurements shall be in Zone J (New York City) and at least 5 percent shall be in Zones G, H, I, and/or K.[31] These carveouts recognize that the largest potential pool of peaking plant replacement is in New York City, while also acknowledging that other areas of the State are deserving of energy storage investment based on benefits to disadvantaged communities and associated emission reductions.

To comply with the above directives, the Retail Storage program shall have a programmatic focus on the downstate region, particularly New York City, based on geographic allocation of program capacity. Specifically, of the 1,500 MW of total Retail storage program capacity, a minimum of 50 percent, or 750 MW, will be allocated to the New York City region, and a minimum of 10 percent, or 150 MW, will be allocated to the ConEd Westchester region (~~located~~ encompassing ~~in~~ NYISO Zones H and I). Off-site Retail procurements in Zone K, subject to LIPA's participation in the Retail program, would be additive to these downstate allocations.

With regard to on-site ("behind-the-meter") Retail projects, the 2024 Storage Order directs that a minimum of 35 percent of procured energy storage for such projects be located within disadvantaged community census tracts, consistent with CLCPA requirements and findings from the Climate Justice Working Group.[32] To comply with this directive, NYSERDA will provide a targeted incentive, available statewide,[33] termed as the Retail Inclusive Storage Incentive (Retail ISI), for eligible storage projects sited at eligible critical facilities located in disadvantaged community census tracts. To be eligible for the Retail ISI, a project must meet all eligibility requirements of the Retail program, be located in a disadvantaged community census tract, and satisfy additional requirements specific to the Retail ISI, which will be determined based on disadvantaged community stakeholder input and engagement and described in the Program Manual.

The list of critical facilities that may be eligible for the Retail ISI includes, but may not be limited to:

- Affordable housing properties
- Food banks
- Homeless and emergency shelters supported by state, local or tribal governments
- Community cooling centers

[30] 2024 Storage Order, p. 59.
[31] 2024 Storage Order, p. 59.
[32] 2024 Storage Order, p. 59.
[33] As with market-rate Retail MWh Block incentives authorized by the 2024 Storage Order, availability of the ISI for projects sited in the Long Island region is dependent on LIPA's voluntary participation in the Retail Storage program, which, at the time of filing this Plan, had not been determined.

- Medical facilities including hospitals, skilled nursing facilities, nursing homes, blood banks, health care facilities, dialysis centers, and hospice facilities
- Independent living centers

Based on historical deployment trends, interconnection activity, and program uptake of on-site and off-site Retail projects, NYSERDA estimates that on-site Retail procurements are not likely to exceed 10 percent of overall Retail procurements, or 150 MW of the 1500 MW Retail storage program authorized by the 2024 Storage Order. Accordingly, NYSERDA will allocate 60 MW, or 40 percent of the expected upper bound of on-site Retail procurements to the Retail ISI, with additional allocations subject to on-site Retail procurement levels. As shown in Table 4-4, NYSERDA will allocate capacity of 15 MW/45 MWh at an incentive rate of $350/kWh to the first block of the Retail ISI, with capacity allocations and incentive rates for future Retail ISI blocks to be determined based on analysis of prevailing market conditions, uptake trends, and stakeholder feedback.

Table 4-4. Inclusive Retail Storage Incentive Capacity Allocations, Incentive Rates and Funding

	Allocated Capacity		Incentive Rate	Funding
	MW	MWh	$/kWh	$
Block 1	15	45	$350	$15,750,000
Blocks 2+	TBD (minimum total allocation of 45 MW/135 MWh)			

NYSERDA will conduct additional engagement with disadvantaged community stakeholders leading up to program launch to finalize the list of eligible critical facilities and additional eligibility criteria for the Retail ISI as well as associated verification requirements and documentation, which, following finalization, will be listed in the Program Manual.

4.4 Requirements for Prevailing Wage or Project Labor Agreement

Energy storage projects with an installed capacity of 1 MW-AC or greater that are awarded Retail storage incentive funding authorized by the 2024 Storage Order must pay Prevailing Wage or enter into a project labor agreement for construction activities associated with project development and installation as a programmatic requirement.

The Retail program participation agreement will be updated to require the covered projects to pay prevailing wage to all laborers, workmen and mechanics, within the meaning of NYS Labor Law Article 8, performing on-site construction activities whether through long-term or short-term employment and when completed prior to the project in-service date. The prevailing wage requirement will apply to direct employees of the developer and of developer's subcontractor(s).

The applicable Prevailing Wage in the area where the eligible energy storage facility will be situated, erected and used, will be as required pursuant to New York State Labor Law Article 8 and any regulations promulgated thereunder, including but not limited to the applicable New

York State Department of Labor prevailing wage schedule[34] or the equivalent Prevailing Wage requirements of the jurisdiction where the covered energy storage facility is located. While the program participation agreement will refer to the NYS Labor Law Article 8, such reference will be limited to establish the amount of the Prevailing Wage required to be paid pursuant to the 2024 Storage Order and the categories of persons required to be paid such Prevailing Wage. The NYS Labor Law Article 8 shall not apply to the program participation agreement as a matter of law; however, the prevailing wage requirement established thereunder will apply to the participation agreement as a matter of policy.

Construction activities within the scope of this requirement include but are not limited to the clearing, grubbing, grading, staging, installation, erection and placement of the facility, electrical interconnection, as well as start-up and commissioning of the facility during the construction period. The construction period will begin on the first day of construction activities and end on the day the covered project achieves commercial operation. Compliance requirements, including those pertaining to payroll and time record-keeping and proof of payment of wages, shall apply pursuant to NYS Labor Law Article 8. NYSERDA will require contractors to submit an addendum or update to the program participation agreement prior to NYSERDA's approval of the first covered project submitted by each contractor. NYSERDA will enforce this contractual requirement pursuant to the Retail program implementation rules, and may request documentation from the contractor demonstrating compliance with this requirement. The legal statute(s) addressing prevailing wage requirement for covered energy storage facilities may change and result in a change in the compliance requirements and enforcement protocols.

4.5 Quality Assurance (QA)

The QA process for the Energy Storage programs provides guidance and oversight for energy storage projects that receive NYSERDA incentives to ensure that the commissioned system meets applicable code requirements and high safety and performance standards. The overall goal is to ensure that contractors can consistently provide customers with properly installed, safe, reliable energy storage systems that produce the projected amount of energy over their expected lifecycle. All projects participating in the Retail Storage program will be subject to the QA process.

The QA process consists of an onsite field inspection, conducted when the system is mechanically complete and in an unenergized state, and/or construction photo documentation. Inspections will be conducted by a qualified independent third party, using comprehensive field and photo inspection QA checklists and inspection processes approved by NYSERDA. These checklists will be available for review on NYSERDA's Energy Storage website and will be updated as needed; projects will be inspected based on the checklists in place at the time of inspection. As of the time of filing this Plan, Retail Storage QA inspection checklists were under review to incorporate learnings from NYSERDA field assessments of in-service commercial

[34] For NYS DOL Prevailing Wage Schedules, please visit: https://labor.ny.gov/workerprotection/publicwork/PWContents.shtm

energy storage projects, undertaken under the auspices of the interagency Fire Safety Working Group (see Section 4.6).

The QA inspection will provide NYSERDA with an opportunity to evaluate the accuracy of the site analysis and design paperwork, verify the system was installed according to applicable code and program requirements, and include selected health, safety, and performance items. Following an inspection, either field or photo, NYSERDA will produce a detailed QA inspection report and determine whether the project fully complies with all program requirements and meets acceptable standards of workmanship. The QA inspection report will provide a list any nonconformances observed. Projects that have nonconformances related to critical (health and safety) or major (system performance) attributes will automatically fail. Projects that have only nonconformances related to minor or incidental attributes may pass or fail based on the number and type of nonconformances observed.

The Participating Contractor is responsible for correcting all nonconformances identified in the time required by NYSERDA, determined by NYSERDA at its sole discretion based on the degree of nonconformance. Contractors are required to submit proof to NYSERDA demonstrating correction of all items identified. Contractors may also be moved into probation status, suspended status, or terminated based on the results of QA inspection or violating program requirements.

QA records will be maintained by NYSERDA in the program database. Specific functions such as inspection sampling, scheduling and field data collection will be maintained in a separate QA module. The program database is available to program staff, installers and QA contractors and can be used to sample and review applications, identify installation status, and ascertain quality performance.

4.6 Fire Safety Requirements

In July 2023, following a series of fires at three grid-scale battery energy storage system locations across New York State, Governor Hochul convened an interagency Fire Safety Working Group (FSWG) to address fire safety concerns related to battery storage systems.[35] The primary focus areas of the FSWG include:

i. Incident Analysis of the 2023 battery energy storage fires, including contaminant testing, emergency response actions, and Root Cause Analysis;
ii. A full review of current codes, standards, and regulations applicable to battery energy storage systems;
iii. Identification of gaps in codes and industry best-practices;
iv. Recommendations for revisions and enhancements to the Fire Code of New York State (FCNYS), submitted for consideration to the New York State Fire Prevention and Building Code Council (Code Council); and
v. Field assessments of in-service commercial energy storage projects exceeding 600 kWh.

[35] https://www.nyserda.ny.gov/All-Programs/Energy-Storage-Program/New-York-Inter-Agency-Fire-Safety-Working-Group.

The culmination of the FSWG's activities will be the publication of a report summarizing all of its findings and recommendations, with the aim of establishing New York as a national and international leader in fire safety mitigation relating to stationary energy storage systems.

The 2024 Storage Order directed NYSERDA to consider and include fire safety requirements in its Implementation Plans, and specifically, to describe in its Implementation Plans how it will incorporate any recommendations issued by the FSWG. While the FSWG's activities had not concluded at the time of filing of this Plan, a final version of its Fire Code Recommendations report was published and submitted to the Code Council and New York State Department of State in July 2024.[36] In addition to updating its QA inspection checklists based on field inspections of in-service commercial projects, the Retail Storage program will adopt the below applicable recommendations of the Fire Code Recommendations report, incorporated as milestone requirements for the Retail storage program for projects not sited in New York City. These requirements will be described in further detail in the Program Manual. NYSERDA will incorporate any additional applicable recommendations issued by the FSWG upon its culmination and file an updated Implementation Plan reflecting those requirements as necessary.

4.6.1 Peer Review Milestone

The FSWG Fire Code Recommendations report states that local AHJs may lack the resources or expertise to understand and interpret critical BESS permitting documents, and recommends that peer reviews be mandatory for all lithium-ion battery energy storage systems exceeding 600 kWh.[37] Accordingly, to ensure conformance to relevant codes and standards, as well as industry best-practices for fire safety, the Retail storage program will institute a Peer Review milestone requirement for projects with a nameplate capacity rating of over 600 kWh sited outside New York City.[38] The Peer Review requirement will consist of a pre-construction review of the project's product and project design documents, including but not limited to site plans, electrical drawings, and large-scale fire test reports, conducted by a qualified, independent third-party Peer Reviewer contracted by NYSERDA, to ensure the project's compliance with the FCNYS and industry best-practices relating to fire risk mitigation. The project will be deemed to have passed the Peer Review milestone when all deficiencies identified in the Peer Review have been addressed to the satisfaction of the Peer Reviewer and NYSERDA. Funding necessary to implement the Peer Review milestone requirement is estimated to be approximately $3.5 million, and will draw from funding authorized for implementation support activities in the 2024 Storage Order.

[36] https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Energy-Storage/Fire-Code-Recommendations-Report.pdf.
[37] 600 kWh is the energy capacity threshold established for lithium-ion batteries in Table 1206.12 of the 2020 FCNYS, which the Fire Code Recommendation report references.
[38] Projects sited in New York City are already subject to a Peer Review process funded by NYSERDA and implemented by the New York City Department of Buildings' Office of Technical Certification and Research (NYC DOB OTCR) as part of the existing permitting process for lithium-ion battery storage systems.

4.6.2 Emergency Response Plan

In accordance with Fire Code Recommendations report, projects sited outside New York City[39] that enter the Retail program will be required to provide documentation verifying that the facility is equipped with an Emergency Response Plan (ERP) for first responders, maintained on-site outside the fence line of the project, and shared with the local fire department, as a Project Completion milestone requirement. Whenever possible, this ERP should be developed in consultation with the local fire department to ensure it is in alignment with their operating procedures, capabilities, and resources.

4.6.3 First Responder Training

Lithium-ion battery storage projects sited outside New York City[40] will be required to offer annual, site-specific training for the local fire department to familiarize fire department personnel with the project, hazards associated with lithium-ion battery energy storage systems, and procedures outlined in the ERP.

4.7 Measurement and Verification

Measurement and Verification (M&V) refers to NYSERDA review of the performance of the system during a discharge test prior to project completion and ongoing operations. M&V will occur for every project awarded a Retail Storage incentive.

All projects funded under the Retail Storage Program must install a revenue-grade meter to record the energy storage system's charge and discharge activity. All projects will be required to undergo M&V to verify that the system is operating as intended and within the expectations established during the design review phase of the project application. The Contractor will be required to provide NYSERDA's M&V contractor with interval data showing charge and discharge for a period of up to five years.

In order to show progress in achieving the State's storage goals, and to highlight projects and use cases, NYSERDA will list all storage projects deployed on the NYSERDA DER Integrated Data System at https://der.nyserda.ny.gov/. This will include non-proprietary data on individual projects deployed and may include aggregated total kWh discharged through an energy storage system.

4.8 Payment

No incentive funding will be paid until the following items have been submitted and approved by NYSERDA:

- All required siting and permitting approvals;
- Permission to operate from the utility;
- Final Professional Engineer-stamped system designs;
- Installed project cost data;
- A decommissioning plan;

[39] Fire Department of New York (FDNY) Rule 3 RCNY 608-01 already requires the development of an emergency management plan or protocol for outdoor stationary storage battery systems.
[40] FDNY personnel already receive extensive training specific regarding battery storage fire hazards and first responder best-practices through FDNY's Bureau of Training and Fire Academy.

- Completion of NYSERDA's QA inspection and resolution of any issues identified; and
- Completion of M&V discharge test.

The specific invoicing and payment process will be outlined in the Program Manual and may change over time.

4.9 VDER Storage Calculator

NYSERDA has developed and published a Value Stack calculator[41] to help developers estimate project compensation for distributed solar and storage systems under the Value of Distributed Energy Resources (VDER) tariff. As of March 2024, the calculator can be used for standalone energy storage projects, standalone solar projects, and storage projects paired with solar in all IOU territories and LIPA. The calculator is updated periodically to incorporate changes to VDER value stack element pricing, policy changes, stakeholder feedback, and modeling and user interface best-practices, and stakeholders may sign up to a NYSERDA mailing list to be notified when the calculator is updated.[42]

4.10 Statewide Solar for All Program Participation

In May 2024, the PSC issued an Order approving a Statewide Solar for All (SSFA) program.[43] Community solar and distributed energy storage projects will be eligible to enroll in the SSFA program, which will provide a streamlined method for project developers to minimize their customer acquisition and management costs, while receiving a single monthly payment directly from the utility, in accordance with the terms set forth below.

SSFA Compensation

- Projects enrolled in the SSFA program shall receive payments according to a Standard Offer compensation level established by NYSERDA. The Standard Offer will take the form of a specified percentage of the project's total Value Stack compensation, paid to the project for its monthly generation by the applicable IOU via the net crediting mechanism. The IOU will allocate the remainder of the projects Value Stack (VDER) credits to a Customer Share credit pool, with those credits later distributed to customers enrolled in the IOU's low-income energy affordability program (EAP), and an IOU administration fee.
- The Standard Offer compensation level will be calculated by NYSERDA for each utility service territory and/or NYISO load zone, and for projects receiving the Federal Low-Income Communities Bonus Credit (Category 4), the Community Adder, the Market Transition Credit, the Multifamily Affordable Housing Incentive Adder, and the Community Credit. For any project receiving NY-Sun incentives, the Customer Share shall be at least 10% plus any utility fee. For any project receiving Retail Storage Incentives, the Customer Share shall be at least 5% plus any utility fee. Standard Offer

[41] https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Value-of-Distributed-Energy-Resources/Solar-Value-Stack-Calculator
[42] https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contact-Us/Email-Updates
[43] Case 21-E-0629, In the Matter of the Advancement of Distributed Solar, Order Approving Statewide Solar for All Program with Modifications (issued and effective May 16, 2024).

compensation levels will be reviewed by DPS staff prior to adoption and shall be subject to review and adjustment by NYSERDA on an annual basis.

- The current Standard Offer compensation levels will be available on the NYSERDA Energy Storage Program dashboard.[44]

Eligibility and Enrollment

- Distributed front-of-the-meter energy storage projects up to 5 MW-AC in size (both standalone storage as well as storage paired with solar PV), with an interconnected utility account and receiving compensation under the VDER Value Stack tariff, shall be eligible to enroll and participate in the SSFA program prior to the project's interconnection date.
- Each IOU shall offer eligible projects the opportunity to enroll in the IOU's Solar for All tariff at the time the project makes its initial (25%) interconnection deposit payment or executes a Standard Interconnection Contract.
- Operational projects enrolled in the SSFA program shall be permitted to disenroll by providing a minimum of 12 months written of notice of the project's intent to disenroll to the applicable IOU.

NYSERDA shall make available data regarding project enrollment and participation in the SSFA through publicly accessible Open NY datasets.

4.11 Predevelopment and Technical Assistance

NYSERDA will continue to support predevelopment activities and technical assistance to address barriers ~~to~~ related to energy storage permitting as well as energy storage deployment for~~ing energy storage projects serving~~ LMI households, disadvantaged communities, and regulated affordable housing by drawing from funding authorized for implementation support activities in the 2024 Storage Order. With regard to permitting, ~~,~~ NYSERDA will continue to fund New York City-specific permitting review support for DOB and FDNY and will maintain technical resources on its Energy Storage website to assist customers and developers navigate the permitting process for indoor and outdoor lithium-ion energy storage in New York City.

With regard to energy storage deployment for LMI households, disadvantaged communities, and affordable housing, Program Opportunity Notice (PON) 3414: Affordable Solar and Storage Predevelopment & Technical Assistance Program ("Predevelopment Program"), funded by the NY-Sun program, provides technical assistance grants for solar and/or storage projects that will benefit LMI households, affordable housing, environmental justice communities, and disadvantaged communities, in addition to having viable project economics for developers, investors and other partners. The Predevelopment Program funds predevelopment activities related to securing project financing, organizing a project business model, development of cooperative or community ownership models, early-stage project planning, site identification, team organization, customer marketing/management, customer outreach, and benefit models unique to affordable housing tenants. Selection criteria include project-level considerations such as size, household/community impact, cost-effectiveness, replicability, incorporation of

[44] https://www.nyserda.ny.gov/All-Programs/Energy-Storage-Program/Developers-and-Contractors/Retail-Incentive-Offer/Incentive-Dashboard

efficiency measures, incorporation of resiliency measures, and related factors. Additional portfolio-level considerations include geographic balance, diversity of approaches, and overall number of distinct awardees. Eligible applicants include affordable housing providers, community-based organizations, local government entities, housing authorities, technical assistance providers, and other entities with direct capacity to aggregate LMI households or services to LMI households.

In addition to PON 3414, NYSERDA may also issue separate solicitation(s) for additional technical assistance resources targeting specific energy storage market segments, in consultation with energy storage stakeholders. state and local affordable housing agencies. ~~Funding for such activities will draw from implementation support funding authorized in the 2024 Storage Order.~~

5 PROGRAM ADMINISTRATION AND IMPLEMENTATION

Program administration and implementation costs include salary and fringe benefit costs for NYSERDA staff involved in managing programs, allocable salary and fringe benefit costs for administrative support staff, direct program management expenses (travel and other costs), consultant support for techno-economic analysis, technical assistance grants, QA, Peer Review implementation, M&V, and allocable overhead, administrative, facility and equipment expenses.

The 2024 Storage Order authorized funding of approximately $27.6 million ($14.5 million for program administration and $13.1 million for implementation) in addition to the $22.7 million previously authorized by the 2018 Storage Order for program administration and implementation costs.[45] NYSERDA will manage the Residential and Retail Energy Storage programs within the administration budget, optimize administration of the programs to the best of its ability, and keep DPS Staff informed of actual costs over time.

6 PERFORMANCE METRICS AND EVALUATION

6.1 Performance Metrics

The following performance metrics will continue to be measured and reported annually in the annual State of Storage Report as required by the 2018 Storage Order[46] and reiterated by the 2024 Storage Order[47]:

- Average total installed cost of energy storage systems
- Total MWs and MWhs deployed, including those funded by NYSERDA incentive funds
- Major progress during the year in reducing soft costs and deployment cycle time
- New impediments to deployment that have been identified and proposed solutions
- Adjustments to market acceleration incentive funds

[45] 2024 Storage Order, p. 88.
[46] 2018 Storage Order, p. 108.
[47] 2024 Storage Order, p. 55.

The number of projects awarded, MWs and MWhs incentivized, and total incentive funds committed will be available on the NYSERDA Energy Storage website.

6.2 Evaluation

It is anticipated that Impact, Market and Process evaluation components will continue to be necessary to support optimization of the Energy Storage program through the 2030 funding period authorized by the 2024 Storage Order. Given the long-term funding authorization and the desire to be responsive and flexible to evolving needs, this section outlines likely evaluation activities at a high level, while purposefully leaving flexibility for the specific direction and study plans.

6.2.1 Impact

Impact evaluations will be conducted to verify actual operation of installed storage systems, investigate reasons for differences, if any, in actual vs. projected economics, verify annualized first year system performance, and examine long term persistence of system performance over time. Impact evaluation will deploy a sampling approach to cost-effectively address the population and potentially various segments or types of installed projects. The specific impact evaluation objectives, approaches and timelines will be further defined by NYSERDA and DPS staff with stakeholder input. An independent, third-party impact evaluation pertaining to projects supported by incentives authorized by the 2018 Storage Order as well as solar-plus-storage projects funded by the NY-Sun program was completed in 2024 that assessed projects installed from 2020 to 2022.

6.2.2 Market and Process Evaluation

Market and Process Evaluations will assess important market indicators over time to understand the impact of the program and to help position the program for maximum effectiveness. Market and Process evaluation will likely be applied to understand indicators including but not limited to system hard and soft costs, deployment cycle time, barriers to adoption, evolution of business models in key market sectors, and installer and customer satisfaction over time. The details of this potential evaluation area will also be determined by NYSERDA and DPS staff with stakeholder input. Market evaluations completed by an independent third party pertaining to previously incentivized projects have been completed in 2018, 2020 and 2021.

The incremental budget for evaluation of the Residential and Retail programs, as authorized by the 2024 Storage Order, is $3.0 million from 2024 through 2032. This budget will be managed over the duration of the programs in consultation with DPS staff to deliver these studies and others as may be needed. The evaluation funding will also support internal NYSERDA staffing requirements and external consultant activities pertaining to evaluation.

7 BUDGET

This Implementation Plan reflects total funding for the Residential and Retail Commercial MWh Block program structure as authorized by the 2018 and 2024 Storage Orders, through 2030 without annual budget constraints. Budget allocations for specific program elements are outlined in Table 7-1 and include budgets through 2030, as well as for administering post-completion

performance payments, reporting, and other "close-out" activities beyond 2030.

Table 7-1. NYSERDA Energy Storage Program Budget 2019-2030[48][49]

Program Budget Element	Budget
Residential Energy Storage Incentives	$100,000,000
Retail Commercial Energy Storage Incentives[50]	$891,579,750
Bulk Energy Storage Incentives[51]	$133,420,250
Program Administration	$37,272,778
Implementation, Quality Assurance, and Measurement and Verification	$23,107,232
Consumer Education	$2,000,000
Evaluation	$8,000,000
State Cost Recovery Fee	$13,401,130
Total	**$1,208,781,140**

[48] This Table includes incentive funding awarded between 2019-2030 as described in this Plan and program implementation/administration, quality assurance, M&V, and evaluation costs related to administering these awards through the 2031-2032 State Fiscal Year, at which time NYSERDA anticipates all projects will have been fully paid.
[49] This table does not include RGGI funds allocated by NYSERDA to support energy storage deployment for customers served by PSEG Long Island.
[50] Includes $40 million in approved CEF funds.
[51] Includes $68.2 million in approved Utility Bulk Dispatch Rights funds.