NYSERDA Bulk Energy Storage Program

Program Manual

June 2025

NEW YORK STATE | NYSERDA

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1. Introduction

This document constitutes the Program Manual of the Bulk Energy Storage Program administered by the New York State Energy and Research Development Authority (NYSERDA). The Bulk Energy Storage Program was approved by the New York Public Service Commission (PSC) in its June 2024 Energy Storage Order; the program's Implementation Plan was approved with modifications in a March 2025 Bulk Approving Order and revised and filed on April 18, 2025. The 2025 Bulk Approving Order directed NYSERDA to file within 2 weeks of program launch a Program Manual addressing specific technical items.

1.1 Background

To support the expanded energy storage target of 6 gigawatts (GW) installed by 2030 across the residential, retail, and bulk storage segments, the 2022 NYSERDA/DPS Energy Storage Roadmap proposed a new Bulk Energy Storage Program utilizing an Index Storage Credit (ISC) mechanism modeled in part on the Index Renewable Energy Certificate (REC) and Offshore Wind Index Renewable Energy Certificate (OREC) mechanisms employed in the State's Clean Energy Standard and Offshore Wind programs. In both cases the certificate, procured by NYSERDA following commercial operation of the contracted Project, is intended to provide Project owners (Sellers) with greater revenue certainty through hedging, thereby improving the Project's financeability and overall cost.

As indicated in the revised Implementation Plan, this Program Manual focuses on technical requirements related to Quality Assurance, Measurement & Verification, and Fire Safety. These topics are covered in Sections 3-6, following an overview of Project eligibility in Section 2. This manual is intended to complement the Request For Proposals and Standard Form Agreement or ISC Agreement documents that will accompany each of the program's solicitations. As directed it will be updated throughout the program's lifecycle as fire safety and other technical requirements evolve.

2. Program Eligibility

Projects that propose to an ISC solicitation and execute a provisionally awarded agreement will be required to evidence at the time of bid submission, and maintain throughout development, construction, and operation, adherence to a number of program, system, and project eligibility requirements. The following sections lay out requirements that are currently intended to apply across the program's solicitations. Please refer to the current RFP for solicitation-specific eligibility requirements, such as the Minimum Eligibility Thresholds for Step 2 evaluation.

2.1 General Eligibility Requirements

To be eligible to participate in a NYSERDA ISC solicitation, the proposed Project must demonstrate it meets or will meet the following requirements.

2.1.1 General Program Eligibility

- Energy storage system must be electrically interconnected in New York to the transmission, sub-transmission, or distribution system for the life of the system. Electrical interconnection will be determined in accordance with industry practice.
- All components of each energy storage system including charge controllers, wiring, and metering equipment must be new equipment and certified as meeting the requirements of all

relevant national, New York State, local codes and standards, and any additional requirements of the local Authority(ies) Having Jurisdiction (AHJ).

- Project must utilize storage technology that is electrical, chemical, mechanical, or thermo-electric.
- Project must store energy for electrical discharge to the grid at a later time.
- Project must have a minimum capacity of 5 megawatts AC power.
- Project must be electrically interconnected into New York's transmission, sub-transmission, or distribution system.
- Project may not be receiving, have received, or plan to receive other incentives through NYSERDA's Market Acceleration Bridge Program, Retail Energy Storage Program, Tier 1 REC or OREC Programs (unless such contracts are adjusted accordingly); the Value of Distributed Energy Resources (VDER) mechanism; or the Utility Bulk Dispatch Rights Program.

2.1.2 Energy Storage System Requirements

- The system must be installed in accordance with the design and system components submitted in the application and approved by NYSERDA as part of the Peer Review process (See Section 3) 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.
- 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.

2.1.3 In-Service Date Requirements

- The system must be placed-in-service by December 31, 2030 (for Projects awarded incentives authorized by the 2024 Storage Order). NYSERDA, in its sole discretion, may extend these deadlines at the participating Seller's request for Projects that have experienced in-service delays due to conditions beyond the control of the participating Seller, and upon receiving verification that Project construction has commenced on or before December 31, 2030. Examples of when construction is considered to have commenced include:
    - When physical work of a significant nature begins on the Project. This includes activities like clearing the site, excavating, or installing components necessary for the operation of the system.
    - Commencement of utility mobilization of distribution system upgrades necessary to interconnect the system as identified in the Project's Coordinated Electric System Interconnection Review (CESIR) study.

2.2 Demonstrating Continued Project Eligibility and Viability

To be eligible for ISC payments via the Bulk Energy Storage Program, the proposed Project must be provisionally awarded an ISC Agreement under an ISC solicitation administered by NYSERDA. Following the receipt of a provisional award, the Seller will be required to maintain all Project- and Proposer-specific eligibility requirements until the provisionally awarded agreement is executed, at which time the Agreement and the Program Manual will be the controlling documents.

2.2.1 Progress Reports

All Sellers will be required to provide quarterly progress reports to NYSERDA, commencing after the execution of a provisionally awarded ISC Agreement and continuing throughout development and construction until the Project has completed Operational Certification (as defined in the ISC Agreement). Quarterly progress reports must include updates on all Project development processes outlined in Section 6.2 of the ISC Agreement, including but not limited to:

- Interconnection studies, key interconnection deposits and cost allocation decisions, and the execution of a NYISO Interconnection Agreement.
- All non-ministerial and ministerial permits and approvals, including any applicable federal, state, and local (e.g., AHJ permits/approvals, Fire Department reviews/approvals) permits or approvals required to construct and operate the Project.
- Status of key equipment supply and labor agreements, if applicable, needed to procure the major equipment for and construct the proposed Project.
- Status of any outstanding financing needs to proceed to construction of the Project, including financial close or demonstration of self-financing.
- Any planned changes of control of the Project, which will be subject to Section 5.4 of the ISC Agreement.
- Prevailing wage requirements as outlined in Section 18.10 of the ISC Agreement.

2.3 Other Seller Roles and Responsibilities

Sellers are fully responsible for all aspects of their energy storage Projects receiving ISC payments under the Bulk Energy Storage Program. The Seller must provide at minimum a single point of contact for the Seller's lead individual responsible for completing development activities, construction and installation, and operations and maintenance for life of the Project, beginning once the Project is provisionally awarded by NYSERDA. The Seller may use subcontracted teams to fulfill these obligations. Regardless of the teaming arrangement, however, the Seller remains fully responsible for all aspects of the Project.

All participating Sellers will be responsible for:

- Meeting all program requirements, as set forth in this Bulk Storage Program Manual, as may be updated by NYSERDA from time to time.
- Compliance with applicable local, state, and federal laws and regulations, including obtaining all necessary permits and approvals to construct the Project.
- Adherence to all obligations under the ISC Agreement.
- Installation and maintenance of the Project, including compliance with local siting regulations.

All Sellers must be registered to do business in New York State. The Seller must meet all program requirements, including required insurance coverage and have the capability to provide or ensure that

warranty services are provided on all storage systems installed. A participating Seller must comply with all local authority requirements for registration and licensing. Participating Sellers are prohibited from using NYSERDA's logo on their website or any marketing materials.

2.3.1 Payment/Incentive Structure

Projects contracted through the Bulk Energy Storage Program will not receive ISC payments until the Project has 1) satisfactorily completed all Peer Review process requirements, 2) completed construction, 3) completed all QA Inspection requirements and 4) completed all NYSERDA Operational Certification requirements. Once the Project has completed these steps, the Seller will be paid on a monthly basis for the duration of the contract delivery term.

See the most current ISC solicitation (ISCRFP25-1, Section 3) and ISC Agreement for further detail on how each month's ISC payment will be calculated.

2.3.2 Participating Seller Resources

Local permitting authorities, electric utilities, Sellers, and integrators in New York State will have access to technical assistance resources through NYSERDA. Services include market information and guidance, technical assistance, trainings, project technical and economic screenings, permitting and interconnection guidance, and site visits by expert consultants that have been retained by NYSERDA. Participating contractors can also access fact sheets, guides, webinars, and workshops or conferences online at https://www.nyserda.ny.gov/All-Programs/Energy-Storage-Program/Developers-and-Contractors/Bulk-Storage-Incentives or by contacting bulkstorage@nyserda.ny.gov.

3. Peer Review Milestone

To ensure conformance to relevant codes, standards and industry best-practices for fire safety, the Bulk Energy Storage Program contains a Peer Review milestone requirement for all **battery energy storage system (BESS) Projects sited outside New York City**. For non-BESS technologies, NYSERDA will work with the Seller to develop a peer review process, where appropriate, along with other safety considerations.

Following the execution of an ISC Agreement with NYSERDA and/or the receipt of an ISC provisional award, the awarded Seller will be required to undergo a peer review program (Peer Review) whereby the design of the proposed energy storage system will undergo a multi-step technical design review. Throughout the Peer Review process, NYSERDA and its quality assurance contractors will review technical specifications, including the site plan and drawing, for compliance with program rules as detailed in this section of the Program Manual.

ISC Proposers may request to start the Peer Review process at any time, regardless of ISC Agreement execution status, if they have achieved key milestones (as described in Section 3.1.1), **but prior to commencement of construction.**

3.1 Peer Review Pre-Construction Site Design Review

The first step of Peer Review will consist of a pre-construction (desktop) review (Peer Review Site Design). The initial 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, will be conducted by qualified,

independent third-party Peer Review contractors that are subject matter experts (Peer Reviewers), commissioned by NYSERDA at no cost to the Seller.

In order to initiate the Peer Review Site Design step, the Seller will be required to provide to NYSERDA the deliverables listed in Section 3.1.1 below. The Peer Review Site Design step may be initiated any time after the Seller has obtained non- ministerial permits and project design documents have reached at least 60% completion. Sellers will be required to finalize the Project's major equipment (include modules, inverters, and transformers) before submitting Peer Review documentation and commencing the Peer Review Site Design step.

3.1.1 Peer Review Site Design Required Documents, Reports, and Data Sheets

The full list of Peer Review Site Design required documents is shown below and can be summarized as including 1) a narrative/cover letter with Project information and current permitting/AHJ status; 2) detailed Project drawings; 3) applicable Project datasheets and manuals; 4) a site-specific Emergency Response Plan, inclusive of safety training plans and materials; 5) commissioning and decommissioning plans; and 6) historical fire and thermal events.

Narrative/Cover Letter, Permitting Status

- Narrative or cover letter clearly describing scope of proposed Project including, but not limited to:
    - Address and size (footprint) of the proposed installation;
    - BESS manufacturer name, product name, and model number;
    - Type of chemistry (NMC, LFP, etc.);
    - Capacity of Project (both MW and MWh);
    - Brief summary of Authority Having Jurisdiction (AHJ), emergency services, and community engagement at time of Peer Review submission;
    - Any partnerships relevant to Project safety, e.g., hazard mitigation support, subcontractors, peer reviewers (if applicable), etc.;
    - Intended use of proposed installation.
- Non-ministerial permits or related documentation received from AHJ, e.g., local planning/zoning approval, summary of AHJ communications and permit status at the time of Peer Review submission.
- All Project documentation that has been or will be submitted to AHJ.

Project Drawings

- All Project drawings (BESS, fire alarm, electrical, etc.), including but not limited to:
    - Location and layout diagrams of the area where BESS will be installed;
    - Details of all nearby exposures in the drawings;
    - Distances between the BESS and the following exposures;
        - Lot lines;
        - Public streets, fire apparatus access road, public walkways and other public ways;
        - Any vehicle parking;
        - Any building/structure with indications of entrances, doors, openable windows, access hatches, or ventilation intakes;

        - Any egress features from a building or outdoor area;
        - Any hazardous materials or combustible materials storage facility or area;
        - Any storage facility or area for high-piled combustible materials or other combustible items;
        - Overhead power lines or other aboveground electrical installation, measured from the boundary of the utility easement or, if there is no easement, from the vertical plane of the installation at its widest point;
        - Any public utility or transportation infrastructure;
        - Any other on-site equipment.
    - Container layout drawing;
    - Container/enclosure HVAC design;
    - Diagram of Energy Management System design and communication;
    - Fire alarm drawings including Sequence of Operations / IO Matrix (60% drawings);
    - Electrical design drawings (60% drawings);
    - Mechanical design drawings (60% drawings);
    - Civil drawings (60% drawings);
    - Drawings must include environmental conditions (temperature range, humidity range, site elevation);

Project Datasheets and Manuals

- All BESS and fire protection system datasheets, including but not limited to:
    - BESS specifications sheet;
    - Power Conversion System specifications sheet;
    - Fire Alarm Control Panel (FACP) specification sheet;
    - EMS/ESMS specifications sheet;
    - Site Controller specifications sheet (if used);
    - Cell specifications sheet and performance data;
    - Battery Management System specifications and performance data;
    - Summary of BESS fire safety features (detection, alarms, fire suppression, sequence of operations of system response to thermal runaway event);
    - Summary of BESS thermal management systems;
    - Summary of BESS explosion control or mitigation strategy.
- O&M manual BMS manual, Installation manual.
- Communications architecture (SCADA interface, communication protocols, data connectivity requirements).
- Equipment Listings and certifications for the proposed model in the relevant categories (UL 9540 equipment listing and full report for the whole system, UL 1973 / IEC 62619 / UN38.3. certification for Li-ion batteries, UL 1741 or UL 62109 certification for inverters, appropriate indoor/outdoor NEMA or IP rating for enclosures).
- Full UL 9540A large-scale fire test reports (cell-level, module-level, and unit-level test reports. Installation level test reports will be required for BESS which have not met unit-level performance criteria).

Emergency Response Plan & Fire Safety

- Site-specific draft Emergency Response Plan (ERP), including:
    - First responder training;
- Site-specific Hazard Mitigation Analysis (HMA) that includes analysis of at least the following failure modes:
    - Thermal runaway or mechanical failure in a single BESS unit;
    - Failure of an energy storage system that is not covered by the product listing Failure Modes and Effects Analysis (FMEA);
    - Failure of a required protection system, e.g., HVAC, exhaust ventilation, smoke or fire detection, fire suppression, or gas detection.
- Site-specific Safety Training Plan (STP), including:
    - Plans for safety training;
    - Safety training materials;
    - Site map complete with hazard identification.
- Deflagration analysis or full-scale explosion testing demonstrating that the explosion control system(s) shall function as designed to adequately prevent or mitigate the effects of a deflagration event. Acceptable forms of substantiating documentation include:
    - Computational Fluid Dynamics (CFD) modeling;
    - Independent NFPA 68 and/or NFPA 69 technical reports per the relevant explosion protection or prevention systems of the BESS product (e.g., NFPA 68 deflagration vent panel sizing calculations);
    - Full-scale testing of respective BESS enclosure and constituent battery components demonstrating that a deflagration shall be effectively managed by the provided explosion control system(s).
- Substantiation of explosion control design, including UL 9540 Report, completed by a reputable third party, under the most current edition of the Standard, indicating compliance with Section 24.5 and one or more of the following additional documents:
    - Deflagration Hazard Analysis based on applicable UL 9540A test results and data, demonstrating that the flammable gas concentration remains below 25% of Lower Flammability Limit (LFL). This may be completed by the manufacturer or a suitable third-party engineer;
    - Technical report substantiating compliance with either NFPA 68 or NFPA 69 requirements or approved equivalent. This report should provide sufficient detail for Peer Reviewers to reasonably validate the conclusions reached in granting the UL 9540 Listing and Seller may submit manufacturer documentation used in the UL 9540 Listing process, if desired;

Commissioning and Decommissioning Plans

- Commissioning and decommissioning plans (should include details on emergency decommissioning in addition to details about hazard support personnel). The plan must also fulfil all Fire Code requirements for both commissioning and decommissioning.
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- Central Station, 24/7 Network Operations Center (NOC), and video monitoring contracts.
- Central Station listings and certifications.

Historical Fire and Thermal Events

Sellers intending to propose any technology (1) that it, its affiliates or parent companies have used in a prior project, (2) that has been involved in a fire or thermal event anywhere in the world and (3) that necessitated a root cause analysis, shall submit the root cause analysis and related documentation to NYSERDA as part of the Peer Review application package. This documentation will be shared with the Peer Review team for review. For confidentiality considerations, please refer to ISCRFP25-1, Section 8.1.

3.2 Post-Site Design Review

Once all Peer Review Site Design documentation has been submitted, NYSERDA will confirm with the Seller that the submission package is complete, and that the Peer Review Site Design step has commenced. NYSERDA will confirm with the Seller if the Peer Review Site Design documentation is incomplete and will request any updates needed directly from the Seller.

Once NYSERDA approves the Peer Review milestone, the Seller must notify NYSERDA of any future modifications to the Project's site plan or system design. Changes may require the Project to re-enter Peer Review. Failure to notify NYSERDA of changes to a Project's design or product specifications may result in the inability for the project to successfully complete the Operational Certification process, and therefore inability to invoice under the awarded ISC Agreement. Any Seller that moves forward with the installation of a Project that is found to be materially different from the design and product specifications approved at Peer Review does so at the Seller's own financial risk. Please also refer to Section 2.12 of the ISC Agreement for a Seller's obligations for material modifications to a Project.

The Project will be deemed to have passed the Peer Review milestone when any and all deficiencies identified in the Peer Review have been addressed to the satisfaction of the Peer Reviewers and NYSERDA. Once the Peer Reviewers have reviewed all applicant materials and subsequent revisions and found them to be satisfactory, NYSERDA will generate a Peer Review Report, upon which the Peer Review milestone will be approved.

While the Peer Review Report is funded by NYSERDA, this does not replace the Seller's responsibility for obtaining and complying with all relevant local, state, and federal permits and approvals. Subject to the terms of any non-disclosure agreement between a Seller and NYSERDA, Seller may share the Peer Review Report, at the Seller's discretion, with relevant AHJs but neither NYSERDA nor the Peer Reviewers may be held liable for the findings. The Peer Review Report will also be prepared in consultation with the QMS Team (see Section 4.2.2) before and during the QA Inspection Milestone (as defined in Section 4.2 below).

More information and guidance regarding the Peer Review process can be found in NYSERDA's Peer Review Program Guidebook Manual at NYSERDA's Energy Storage webpage.

4. Quality Assurance

4.1 Quality Assurance Overview

NYSERDA maintains the integrity of its programs through an independent Quality and Market Standards team (QMS Team), which manages the Quality Assurance (QA) system for the program. 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 Quality Assurance Policies and Procedures Manuals provide details on the QA system and are available at the NYSERDA Energy Storage webpage. The QA program has several components, including a review of qualifications and credentials, paperwork audits, establishment of program standards, and comprehensive field and photo inspections. 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.

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 QMS Team, or its representatives, may make a reasonable number of visits to the customer site before, during, and after installation of an energy storage system to assess overall compliance. Details of the post-inspection Quality Assurance milestone requirement, which is a prerequisite for achieving Operational Certification, are provided in Section 5 of this Program Manual.

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 be available in the NYSERDA Portal and 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 Seller is responsible for correcting all nonconformances identified, within a timeframe determined by NYSERDA at its sole discretion based on the degree of nonconformance. Sellers are required to submit reasonably satisfactory proof to NYSERDA demonstrating correction of all items identified. Sellers may also be moved into Probation status, Suspended status, or Terminated status based on the results of QA inspection, failing to correct identified nonconformances, 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.

NYSERDA may select any completed Project for a photo or field inspection based on customer complaints, warranty-related issues, a review of the work done by the Seller or any builder under status review or program disciplinary action, or for circumstances that relate to public safety or otherwise deemed by NYSERDA, for the duration of the contract delivery term. All Sellers and builders are encouraged to perform in-house quality control of their Projects.

All Projects participating in the Bulk Energy Storage Program will be subject to the QA process. NYSERDA, without providing prior notice or seeking consent from a Seller, has the right to provide a copy of the QA report or specific information from the field or photo inspection directly to the AHJ, or the NYISO or interconnecting utility based on health, safety, and compliance concerns. In an emergency, NYSERDA or its representatives may shut down the system and will notify the Seller of such action as soon as is possible.

4.2 QA Inspection Milestone

After Peer Review Milestone approval is complete, the next key milestone—QA Inspection—will occur following the substantial completion of the energy storage Project. At that time, a quality assurance field inspection (QA Inspection) must be conducted by NYSERDA and a QA contractor.

4.2.1 Pre-QA Inspection Required Documents

Prior to scheduling the QA Inspection, the Seller must submit the required deliverables (Pre-QA Inspection Required Documents) to each of NYSERDA and the QA contractor detailed below.

- Photos of constructed energy storage system
- Proof of UL 9540 Equipment Listing and UL 9540A test results and other relevant safety certifications, as detailed in Section 6
- Proof of executed storage system 10-year warranty
- Submission of final as-built three-line drawing stamped by a New York State professional engineer (PE)
- Site plan, demonstrating compliance with local AHJ requirements and the New York State Uniform Fire Prevention and Building Code
- Commissioning plan
- Operations and Maintenance manual for the system
- Manufacturer's O&M for the energy storage system
- Name, address, phone number and email contact information of the relevant operations and maintenance service agency for the system.
- Decommissioning plan
    - The plan provided to NYSERDA must address the manner in which the energy storage system and its components will be recycled or safely disposed of at the end of life or following system damage or failure, including the methods and tools necessary to indicate how the system and its components will be decommissioned and removed from the site, and how the site will be restored to its original state, if necessary.
    - The decommissioning plan must include disposal options that comply with applicable New York State Environmental Conservation Law requirements, transportation requirements from the New York State Department of Transportation, and any other applicable laws or regulations, including State and federal environmental laws and requirements of the local AHJ.
- For Projects sited outside of New York City: Documentation of any modifications made to the Project design after passing the Peer Review milestone.
    - For modifications to the Project design that occur after the Peer Review process and are deemed by NYSERDA to be non-material, the Peer Reviewers will issue an updated

report noting the modifications. This updated report must be completed before the QA Inspection.

- Modifications to the Project design that occur after the Peer Review process and are deemed by NYSERDA to be material will trigger re-entry into Peer Review, and an updated Peer Review Report will be issued upon approval of the reentered Peer Review. The QA Inspection will be postponed until the Peer Review process is complete and the system design is approved.
- For Projects that must re-enter Peer Review as a result of material design modifications, the Peer Reviewers may identify necessary improvements to the design as a result of these modifications. Failure to implement these improvements may result in revocation of the incentive reservation or nonpayment of the incentive.

4.2.2 QA Inspection

Following the review of the Pre-QA Inspection Required Documents, NYSERDA will schedule a QA Inspection with Seller and the QA contractor.

- The system must be in a substantially complete state for the QA Inspection to occur, including installation of all fire safety systems and features, including detection, alarms, fire suppression, battery management system and thermal management systems.
- The QA inspection may take place prior to or after the system has achieved Commercial Operation (as defined in the ISC Agreement); however, the system must be in a de-energized state for the QA Inspection.
- The system must also be in a state that allows for evaluation of all items in NYSERDA's QA Inspection checklist for bulk energy storage Projects as listed in the Field Inspection Reference located on NYSERDA's Bulk Energy Storage webpage. Sellers are strongly encouraged to submit the Pre-QA Inspection Required Documents and complete the NYSERDA QA Inspection before inspection by the local AHJ and the utility.

QA contractor may provide a list of deficiencies after the QA inspection in the form of a "Corrective Action Request". All Corrective Action Requests resulting from the QA Inspection relating to critical or major non-conformances must be addressed by the Seller before NYSERDA can approve the QA Inspection milestone. More information on the QA Inspection process can be found in the Quality Assurance Policy and Procedure Manual located at the NYSERDA Energy Storage webpage.

5. Operational Certification Milestone

Following the completion of the QA Inspection, the Seller will be required to complete the NYSERDA Operational Certification process. While the Peer Review and QA Inspection processes are focused on ensuring the energy storage Project has been planned and constructed in line with NYSERDA's bulk energy storage requirements, the Operational Certification process is specific to ensuring NYSERDA has received all required information from the Seller prior to the commencement of invoicing and settlement under an executed ISC Agreement.

Sellers are advised to closely coordinate with NYSERDA during and immediately following the completion of the QA Inspection to enable a timely review of all remaining documentation needed to complete the Operational Certification process.

5.1 Pre-Operational Certification

To complete the Operational Certification process, the Seller will need to 1) complete the QA Inspection detailed in Section 4.2 above and 2) provide to NYSERDA all documentation detailed in Section 5.1.1 below.

5.1.1 Operation Certification Required Documents

- Operational Certification request letter, indicating the Seller is formally seeking to complete Operational Certification and has submitted all required documents.
- Name, title, phone, email for the Billing Manager and Asset Manager.
- W-9 for the entity the Seller wants NYSERDA to remit payment to under the ISC Agreement (and as applicable, additional required payment documentation).
- Copy of the Seller's corporate organizational chart depicting the Seller in relation to relevant entities such as the parent company and the entity listed in the W-9 (if different than the Seller).
- Documentation evidencing the Project has achieved final completion, if not provided as part of the QA Inspection documentation.
- Final Commissioning Plan.
- Fully executed Interconnection Agreement, including FERC acceptance if applicable.
- Acceptance and recognition of the Project's Commercial Operation Date by the Independent System Operator and Connecting Transmission Owner, including verification of the Project's PTID.
- Copy of the CARC waiver submitted to NYISO.
- Links to and/or copies of all permits and approvals required to construct and operate the facility.
- Copies of all executed PILOT, host community benefit, or other local agreements with the AHJ(s).
- List of all contractors and subcontractors that completed construction and installation scopes of work the Project with a dollar value equal to or greater than $100,000, including but not limited to:
    - EPC/Prime Balance of Plant (BOP)
    - Civil
    - Electrical
    - Medium/High Voltage
    - Operations and Maintenance Provider
- If applicable, list of any organized labor entities (e.g., NYS Building & Construction Trades Council, IBEW, LIUNA, etc.) that were involved in the Project's construction.
- Prevailing Wage compliance documentation covering the time period between the most recent Progress Report and the date of the Operational Certification request.

Once all Operational Certification documentation has been submitted, NYSERDA will confirm with the Seller that the submission package is complete, and that the Operational Certification review has commenced. NYSERDA will request any updates needed directly from the Seller. Following NYSERDA's review of all documentation, NYSERDA will issue a letter to the Seller deeming the Project has achieved Operational Certification.

5.2. Post-Operational Certification

The Seller may commence operations following the Project reaching Commercial Operation with the NYISO and applicable Transmission Owner(s). However, NYSERDA's obligation to receive and pay for ISCs is subject to Seller's achievement and maintenance of Operational Certification throughout the entire

term of the ISC Agreement. For the avoidance of doubt, Operational Certification is an ongoing process: the Seller must notify NYSERDA of any future modifications to the Project's site plan or system design. NYSERDA, in its sole discretion, may require the Project to re-enter the Operational Certification process based on the extent of such proposed changes. Failure to notify NYSERDA of changes to a Project's design or product specifications may result in NYSERDA revoking a Project's Operational Certification.

Please refer to Section 4 of this Program Manual for specifics relating to any QA inspections that NYSERDA may commence after Operation Certification is achieved.

6. Measurement and Verification

Upon a Project's passing the QA Inspection and achievement of Operation Certification, the Project will be required to undergo Measurement and Verification (M&V) by NYSERDA's Measurement and Verification team or its representative over the life of the contract. NYSERDA will use M&V data obtained from Seller's meter to 1) following Commercial Operation, verify the bulk storage system is operating as intended and 2) on an ongoing basis, measure and understand the performance and impact of the Bulk Energy Storage Program's portfolio of Projects. This metering data will not be used to calculate Operational Availability (as defined in the ISC Agreement) for ISC creation. Instead, that calculation will be based on the Monthly Availability Report as described in Section 8.2 of the ISC Agreement. However, the data may be used for auditing such Monthly Availability Reports. All Projects receiving ISCs under the Bulk Energy Storage Program must utilize a revenue grade meter to record the net energy charged and discharged (MWh) from the energy storage system. All Projects receiving ISC payments under the Bulk Energy Storage Program must utilize a revenue grade meter to record the net energy charged and discharged (MWh) from the energy storage system. If a NYISO or electric distribution utility revenue grade meter is available for use and can provide the required data, data from this meter may be used for reporting in the Bulk Energy Storage Program. The meter must be accurate to within ±0.5% according to all applicable ANSI C-12 testing protocols and certified for accuracy by a Nationally Recognized Testing Laboratory (NRTL).

The Seller must provide NYSERDA's M&V team or its representative with the 15-minute interval data for the following points from the energy storage system through an automated data transfer:

- Net charge and discharge
- Peak charge per interval
- Peak discharge per interval
- State of charge
- MWh available

At their own discretion, Sellers may choose to install metering on different sections of batteries, rather than solely depending on the point of interconnection (POI) meter. This may also be necessary due to site constraints. This ensures that if the POI meter is malfunctioning, the data may still be reported. Meters installed for this purpose should be revenue grade meters. Data for all meters should be transferred to NYSERDA's M&V team or its representative, along with data from the POI meter, to ensure that data loss does not occur. The automated data transfer process will be established prior to the QA Inspection.

7. Other Post-Operational Requirements

This section provides an overview of Seller's technical requirements subsequent to achieving Operational Certification. These are in addition to the ongoing QA and M&V activities and ongoing fire safety requirements discussed in previous sections of the Program Manual and are in certain instances supplemented with additional detail in the ISC Agreement.

7.1 Contract Administration

If a provisional award is made, the Salesforce Portal will be used to manage Project details, submit milestones and deliverables, and approve invoice payments. For initial awardees who do not have access to the Portal, an email will be sent from the Portal granting Seller access to the Project. Once granted access, please select Project Name from the options in the Projects tab and complete the Contracting Form by clicking the "Contracting Form" button in the Project profile.

7.2 Monthly Availability Report

Each month, Sellers must submit a Monthly Availability Report to NYSERDA or its representative in accordance with Section 6.02 of the ISC Agreement. The report must include, for the month in question, hourly planned outage and forced outage data as is generally reported via GADS to the NYISO through its outage notification process. The data will be utilized to calculate the Monthly Availability Percentage (as defined in the ISC Agreement) that will determine the monthly creation of ISCs and the Monthly ISC Payment settlement process set forth in the ISC Agreement. For additional details please refer to the ISC Agreement.

7.3 Quarterly Operating Report

After a Project achieves Operational Certification, Sellers shall submit to NYSERDA on a quarterly basis an operating report that includes information depicting the performance of the Project for the reporting year, major operations and maintenance activities performed and planned, planned or unplanned outages, and curtailment directives, or dispatch issues. For additional details please refer to Section 6.02 of the ISC Agreement.

7.4 Program Manual Updates

Awarded Projects will be expected to keep up with updates to the manual as they relate specifically to safety training and Emergency Response Plans.

As noted in Section 6.07 of the ISC Agreement, Sellers must strictly comply with Peer Review, Emergency Response Plan & Fire Safety training, and commissioning and decommissioning requirements set forth in this Program Manual. The Program Manual may be updated by NYSERDA at any time, and NYSERDA will provide notice of all such changes to Sellers in accordance with the ISC Agreement.