



**NYSERDA**

# **Bulk Energy Storage Incentive Program**

**May 2, 2019**

# Webinar Housekeeping

- Slides and recording will be posted at [www.nyserda.ny.gov/retailstorage](http://www.nyserda.ny.gov/retailstorage) within 5 business days
- Attendees are in listen-only mode
- Use the Q&A box (not the Chat Box) for questions which will be addressed at the end
- We are holding two webinars, one for the [Bulk Incentive Program](#) and one for the [Retail Incentive Program](#)
- You can always reach us at [energystorage@nyserda.ny.gov](mailto:energystorage@nyserda.ny.gov)  
We will respond within 24 hours

# Topics Covered

- Program Authorization
- Incentive Design
- Project and Contractor Eligibility
- Submitting a Project Application
- Demonstrating Continued Project Viability
- Quality Assurance and M&V
- Payment Terms
- Storage Permitting Guide and Requirements
- NY Green Bank
- Q&A

# NY PSC Storage Order

- Comprehensive strategy to enable deployment of 1,500 MW of energy storage by 2025, expanding to 3,000 MWs by 2030
- Policy actions within seven categories including retail rates, utility roles, clean peak actions, wholesale market recommendations and bridge incentives
- Order was issued December 13, 2018 and is available [here](#)

# NYSERDA Market Acceleration Incentives

## \$400 million in total incentive funding through 2025

- \$350M for IOU service territories. Initial allocations follow:
  - \$130M for retail incentives
  - \$150M for bulk incentives
  - \$70M is currently unallocated
  - Flexibility to adopt to market conditions and project economics
- \$53M in RGGI funds to enable deployment on Long Island
- Chemical, thermal and mechanical systems are eligible

# Two Paths to Receive a Bulk Incentive

1. NYSERDA Standard Offer declining incentive (not currently available in Con Ed / Long Island), **or**
  2. Utility Bulk Dispatch Rights contract
- Both offerings draw from same budget
  - In addition, projects may alternatively seek a NYSERDA REC payment for a paired renewable + storage project

# Incentive Structure

- Incentives offered at a fixed amount per usable kWh of installed storage capacity measured in AC upon entering Commercial Operation
- Projects providing only energy arbitrage and/or ancillary services will receive 75% of the stated incentive rate
- There is no maximum project size; however, the total NYSERDA incentive will not exceed \$25 million on a single project
- All projects will reserve and lock in their incentive rate at the time a complete application is submitted

# Incentive Structure

## Incentive Levels for Projects *Up to 20 MW* in Total Size

2019	2020	2021	2022	2023	2024	2025
\$110/kWh	\$100/kWh	\$90/kWh	\$80/kWh	\$70/kWh	\$60/kWh	\$50/kWh

## Incentive Levels for Projects *Greater than 20 MW* in Total Size

First NYISO Class Year to Begin After Filing of this Plan (estimated to begin in 2019)	Second NYISO Class Year to Begin After Filing of this Plan (estimated to begin in 2021-22)
\$85/kWh	\$75/kWh

# Incentive Structure

- Projects 20 MW and less will have 18 months to achieve commercial operation upon NYSERDA contract execution
- Projects exceeding 20 MW will have 24 months to achieve commercial operation upon completion of the NYISO Class Year process
- NYSERDA may extend this time period based on extenuating circumstances outside the developer's control, as determined at NYSERDA's sole discretion

# Project Eligibility

- Above 5 MW providing wholesale energy, ancillary services, and/or capacity services
- Compliant with the requirements in the [Battery Energy Storage System Guidebook](#) published by NYSERDA
- Commercially available systems physically located within NY and interconnected into NY's bulk transmission system or an IOU's transmission or distribution system; Currently not available in Con Ed service territory or on LI; Projects in municipal utility/co-op distribution networks are not eligible
- In Stage 9 of the NYISO interconnection queue or later, or at an equivalent level of maturity if connecting directly into the distribution network

## *NYISO Interconnection Queue Stages*

1. Scoping Meeting with NYISO Pending
2. Feasibility Study Pending
3. Feasibility Study in Progress
4. System Impact Study Pending
5. System Impact Study in Progress
6. System Impact Study Approved
7. Facility Study Pending
8. Rejected Cost Allocation/Next Feasibility Study
- 9. Facility Study in Progress**
10. Accepted Cost Allocation
11. Interconnection Agreement
12. In Construction
13. In-Service for Test
14. In-Service

# Project Eligibility

The following projects are not eligible for the Bulk Storage Declining Incentive program:

- Projects that have been dispatched by the NYISO into the day-ahead, real-time, or ancillary services markets prior to March 11, 2019
- Projects owned by IOUs or the New York Power Authority
- Paired renewable and storage system projects that are compensated through a NYSERDA-awarded Renewable Energy Certificate (REC) contract as a paired system
- Projects awarded an IOU Bulk Dispatch Rights contract
- Projects that receive a NYSERDA Retail Storage Incentive

# Contractor Eligibility

- Must be registered to do business in New York State
- Must provide a single point of responsibility for the installation, maintenance, and operation of the storage system for the life of the project; Contractor is responsible for complying with program requirements, QA, and data reporting
- In its first project application to NYSERDA, the contractor must submit evidence demonstrating that the contractor and core project team have prior experience developing bulk energy storage, wind, PV, or other electric power generation installations
- No additional contractor registration is required prior to project application

# Clean Energy Siting

## Assistance for Local Governments



### New York Battery Energy Storage System Guidebook for Local Governments



Chapter 1 – Battery Energy Storage Model Law

Chapter 2 – Battery Energy Storage Model Permit

Chapter 3 – Battery Energy Storage Inspection Checklist

***NYSERDA offers local governments free one-on-one technical assistance to help implement Guidebook Chapters.***

If you have a question on the Guidebook, or need help siting your project, email [cleanenergyhelp@nyserra.ny.gov](mailto:cleanenergyhelp@nyserra.ny.gov) and we'll respond to you within 24 hours.

# Submitting a Project Application

## The following documentation must be submitted with project applications

- Documentation of project maturity
- Executed agreement of site control
- Negative SEQR declaration
- Article 10 compliance, if applicable
- Approved Special Use Permit
- Type of storage system and product description
- Site plan and layout
- Installation schedule
- Total project cost estimate
- Completed and signed NYSERDA Application Form

Applications are submitted online through link on [Bulk Storage Incentive web page](#)

# Once an Application is Submitted

- NYSERDA will perform a design review of project documentation to ensure consistency with Program requirements and identify infeasible project sizing or market participation
- Upon application approval, NYSERDA will provide an award letter and issue a contract to the Participating Contractor
- Project MWs or MWs may not be increased after Contractor has received an executed contract. Project site cannot change.
- Contractor may request that NYSERDA assign the incentive payment to another entity
- Contractor may request that NYSERDA assign the award and executed contract to a purchaser of the project in compliance with the Program Manual and Contract

# Demonstrating Continued Project Viability

- Project must maintain good standing in NYISO or distribution utility interconnection queue to continue reserving incentive funds.
- NYSERDA will verify progress through advancement in the interconnection queue, discussions with NYISO or distribution utility, and reports from Contractor demonstrating progress meeting project development milestones.
- The following documentation must be submitted when the requirement is achieved and before incentive payment is made:
  - Electrical 3-line drawing PE stamped
  - Decommissioning plan
  - Proof of required UL safety certifications
  - Proof of storage system manufacturer warranty

# Demonstrating Continued Project Viability

The following project development milestones must be demonstrated to NYSERDA within 30 days of being achieved in order to continue reserving incentive funds:

- Accept the interconnection cost allocation to continue reserving incentive funds
- Execute the interconnection agreement
- Apply for and receive all required permits and approvals, keep current and not expired
- Close project financing or demonstrate evidence of self-financing
- Commence construction and complete construction
- Provide NYSERDA with a commissioning report documenting results in accordance with manufacturer specifications
- Enter Commercial Operations defined as when the project has begun being dispatched by the NYISO into the wholesale day-ahead, real-time, or ancillary services markets

# Quality Assurance

- Provide effective and efficient in-field Quality Assurance and technical services to support NYSERDA investments into clean energy technologies.
- QA field and photo inspections include verification of the contracted project, accuracy of the site analysis, comparison of installation to submitted design drawings, and the overall delivered quality of the energy storage installation
- Usable installed storage energy capacity will be verified during the field inspection
- The participating contractor is responsible for ensuring compliance of the system with all applicable laws, regulations, rules, and standards, including requirements of the local AHJ, and demonstrating compliance with the requirements in the [Battery Energy Storage System Guidebook](#) published by NYSERDA

# Quality Assurance

- Post-commissioning field inspections will be conducted on each project funded under this program; A pre-commissioning inspection may also be conducted
- QA field and photo inspections are conducted by a qualified independent third party, using comprehensive field inspection QA checklists that will be made available to participating contractors and inspection processes approved by NYSERDA
- Following an inspection, NYSERDA will produce a detailed report and determine whether the project fully complies with all program requirements and meets acceptable standards of workmanship
- The participating contractor is responsible for correcting all nonconformances identified in the time required and determined by NYSERDA at its sole discretion based on the degree of nonconformance

# Measurement & Verification (Data Collection)

- A data transfer must be established to provide the net energy charged/discharged in 15-minute intervals
- All projects will undergo 90 days of M&V to verify the system is operating as intended
- NYSERDA or a NYSERDA contractor may review this data to perform environmental analyses
- In addition, the project location, energy storage type, use case, MW, and MWh size will be displayed on NYSERDA's DER Integrated Data System at <https://der.nyserda.ny.gov>
  - Total aggregated MWh grid injections may also be displayed on the DER portal, but in no more granularity than total MWh's injected/discharged over a quarter.

# Payment Terms

- Four payments of 25% each will be made once required documentation is submitted and approved by NYSERDA including correcting any QA deficiencies
  - Payment 1 upon Commercial Operation when project has begun being dispatched by NYISO into wholesale day-ahead, real-time, or ancillary services markets
  - Payments 2, 3, and 4 after each of the next 12 months of Commercial Operation and following submission of required interval meter data
- If the system is moved to another location in NYS that is not eligible for incentives or relocated outside NYS, NYSERDA will seek a return of its incentive funding from the developer or asset owner of record, calculated based on a pro-rata share of a 20-year life that the storage system does not remain in an eligible location

# IOU Bulk Storage Dispatch Rights RFPs

- NYSERDA will work with IOU to provide incentive funding as required based on an economic evaluation of bids
- Will consider the applicable NYSERDA Standard Offer level and expected lower cost of capital resulting from a fixed utility contract (i.e., incentive is expected to be less than the Standard Offer)
- Any NYSERDA incentive is provided through IOU Dispatch Rights contract. No need to apply for Standard Offer incentive.
- The preceding slides describe NYSERDA's Standard Offer incentive, not utility dispatch rights RFP requirements.

# NY Green Bank – Overview

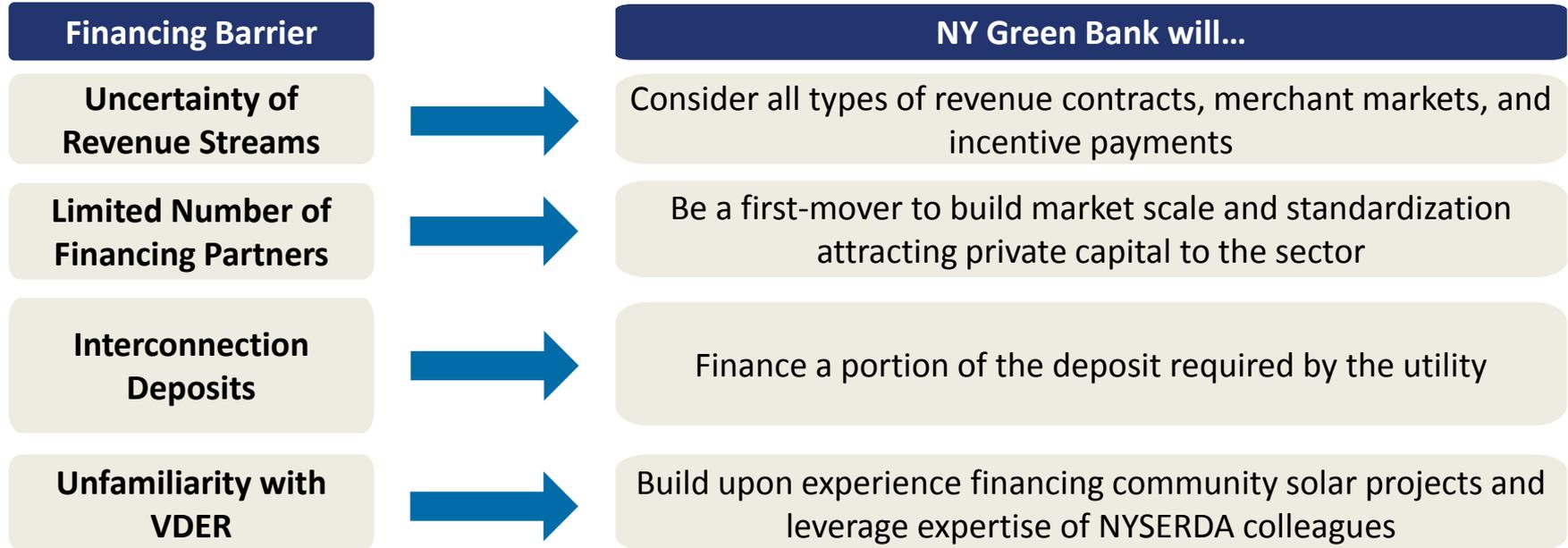
## Mission:

To accelerate clean energy deployment in New York by working in collaboration with the private sector to transform financing markets

- **What:** A \$1 billion State-sponsored investment fund that is a division of NYSERDA
- **Why:** To alleviate financing gaps in New York's clean energy markets and create a cleaner, more resilient and affordable energy system
- **How:** By mobilizing greater private sector activity to increase the availability of capital for clean energy projects

Supporting the expansion of energy storage in New York State  
is a strategic priority for NY Green Bank

# NY Green Bank – Overcoming Barriers to Financing Energy Storage



# NY Green Bank – Financing Options

- Interconnection financing
- Construction financing
- Term debt, including:
  - Senior project-level debt
  - Backleverage
  - Subordinated / mezzanine
- Revolving warehouse and aggregation facilities
- Credit enhancements
- Project-level equity / preferred equity

**Contact us at [info@greenbank.ny.gov](mailto:info@greenbank.ny.gov)  
to discuss potential investment  
opportunities**

# Further Resources For Reference

[NYSERDA Energy Storage Homepage](#)

[NY Green Bank Open Solicitations](#)

[NYS Battery Energy Storage System Guidebook](#)

[Energy Storage Proceeding at the Public Service Commission](#)

# Contact Information

Contact NYSERDA: [energystorage@nyserda.ny.gov](mailto:energystorage@nyserda.ny.gov)

Join NYSERDA's energy storage [email distribution list](#)