



**NYSERDA**

# **Retail Energy Storage Incentive Program**

**May 3, 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 and Requirements
- Required Deliverables and Milestones
- Quality Assurance and M&V
- How to Use the Application Portal
- Technical Assistance Resources
- 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

# Retail Energy Storage Incentive Design

- Retail storage incentives can be accessed *two ways*, incentive is the same regardless:
  1. [Retail Energy Storage Incentive Program](#)
    - New energy storage installed alone, or retrofit to a completed DER system
  2. [NY-Sun Incentive Program's Storage Adder](#)
    - New or approved, but not yet completed, solar PV installations in the NY-Sun Program that are paired with energy storage
- Funding is available for new, permanent, grid-connected energy storage systems up to 5 megawatts of alternating current, either BTM or FTM on the distribution system

# Retail Energy Storage Incentive Design

- Primary use case must be load management or shifting on-site electric generation to more beneficial time periods (resiliency may be secondary)
  - Compensated under a utility tariff
  - Projects may be eligible for utility and/or NYISO programs and markets
- For customer-sited systems, the customer must be enrolled and participate in one of the following for five years:
  - Distribution utility demand response
  - NWA contract
  - Granular delivery rate (currently Standby tariff or Con Edison's Rider Q)
  - VDER Value Stack tariff

# Incentive Structure

- A \$/kWh incentive in declining MWh blocks in three regions: i) NYC, ii) Rest of State excluding Long Island, and iii) anticipate Long Island released Q2/Q3
  - If in an IOU territory, customer must be SBC-paying and demand metered
  - Long Island incentives will include provisions for single family residential
- Approved projects are awarded at the incentive rate in effect at the time when the application was submitted
- Entire incentive payment made upon project entering commercial operation and NYSERDA's quality assurance (QA) inspection
- Incentive is paid directly to the participating contractor or assignee; Customer agreement must reflect the entire amount of the anticipated NYSERDA incentive, which directly reduces the purchase price or rate of the lease/PPA



# Incentive Structure

- Based on usable installed storage capacity in kWh measured in AC power upon entering Commercial Operation. Capped at 15 MWh.
- 100% of incentive up to first 4 hours duration, 50% for hours 5-6, 0% thereafter
  - 100 kW/600 kWh system (6 hours duration) under NYC Block 1:
    - $(400 \text{ kWh} * \$350/\text{kWh}) + (200 \text{ kWh} * \$175/\text{kWh}) = \$175,000$
- NYSERDA's dashboard shows available incentives [nyserdera.ny.gov/retailstorage](https://nyserdera.ny.gov/retailstorage)

Current Rates	Rest of State IOUs			New York City		
	Incentive	MWh	\$ Budget	Incentive	MWh	\$ Budget
<b>Block 1</b>	\$350/kWh	100 MWh	\$35M	\$350/kWh	Included in ROS budget	
<b>Block 2</b>	\$250/kWh	125 MWh	\$31M	\$300/kWh	60 MWh	\$18M
<b>Block 3</b>	\$200/kWh	150 MWh	\$30M	\$240/kWh	65 MWh	\$15.6M

# Contractor Eligibility

- For new solar plus energy storage projects:
  - Must be a NY-Sun participating contractor, no additional action needed
- For standalone storage or retrofitting an existing solar install:
  - Must submit contractor application which includes description of experience installing, modeling, engineering, siting, and operating storage; Requires three project references, QA plan, and resumes of key personnel
  - Contractors with no storage experience *may* be approved, however:
    - Not permitted to reserve payment for more than three projects at a time until three have been successfully completed under this program. May require contractor install pre-engineered systems.

# Project Application Requirements

- Site plan, electrical drawing, product description, customer load data if located with load, intended use of the storage system, estimate of total project cost
  - NYSERDA will review the business model and storage system sizing for compliance with program rules. Should be designed in compliance with the requirements in available at NYSERDA's [Battery Energy Storage Guidebook](#) available at [nyserderda.ny.gov/StorageGuidebook](https://nyserderda.ny.gov/StorageGuidebook)
- A copy of the final Coordinated Electric System Impact Review (CESIR) with email confirmation from the utility that a 25% interconnection upgrade payment has been made **or** a copy of the signed and executed interconnection agreement
- If required: Planning and zoning board meeting minutes and approvals, approved Special Use Permit from the local municipality, negative declaration under SEQRA evidenced by the local authority or lead agency

# Project Application Technical Requirements

- Equipment must consist of commercial products carrying at least a 10-year manufacturer warranty, required before payment; *Experimental, beta, or prototype equipment is not eligible*
- UL 9540 or CAN 9540 (Standard for Energy Storage Systems and Equipment) with subcomponents meeting each of the following as applicable:
  - UL 1973 (Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications)
  - UL 1642 (Standard for Lithium Batteries)
  - UL 1741 or UL 62109 (inverters and power converters)
  - UL 9540 can be completed with a field evaluation
  - Safety certifications required before payment
- Must be designed as indicated in the product description to maintain a minimum 70% round-trip efficiency

# Submitting Contractor Applications

To participate in the Retail Storage Incentive Program, you must become an approved participating contractor.

1. Program Family
2. Company Information
3. Contact Information
4. Document Upload
5. Certification / DocuSign
6. Submit Application

Legal Business Name \*

### Adopt Your Signature

Confirm your name, initials, and signature.

\* Required

**Full Name\***  **Initials\***

Your application has been submitted successfully. Your application number is 14944.

DocuSigned by:  
Angela Corelli  
D4779CD502334D9...

DS  
AC

By selecting Adopt and Sign, I agree that the signature and initials will be the electronic representation of my signature and initials for all purposes when I (or my agent) use them on documents, including legally binding contracts - just the same as a pen-and-paper signature or initial.

**ADOPT AND SIGN** CANCEL

# Submitting Project Applications

1. Submit a New Application > Retail Storage Incentive Program
2. Review Company Information
3. Contacts
4. Site Information
5. Project Information (Summary, Project Site, and Storage System Component)
6. Document Upload
7. Certification / DocuSign
8. Submit Application

The screenshot displays a web interface for document management. At the top, there is a dark blue header labeled "Required Documents". Below this, a checkbox is checked, with the text "I agree to the terms and conditions stated above".

The main content area features a table with the following structure:

Document Name	Add / Update Document	Recent Uploaded Document	Uploaded History
Signed Application - Applicant	<input type="button" value="Choose File"/> No file chosen	<a href="#">Signed Application</a>	<a href="#">Attachment History</a>

Below the table, there are navigation buttons: "PREVIOUS", "PRINT", and "SUBMIT". A red arrow points to the "SUBMIT" button.

Below the "Signed Application" section, there is another table:

Document Name	Add / Update Document
Signed Application - Applicant	<input type="button" value="Choose File"/> No file chosen

At the bottom of the interface, there is a section for "Approved Special Use Permit from the local municipality" with a "Choose File" button and "No file chosen" text. Below this is a button labeled "ADD ANOTHER DOCUMENT".

# Deliverables

## Milestone 1, Within 170 Calendar Days of Project Approval:

- Filed all local permits
- Written confirmation from utility that remaining 75% of interconnection upgrades have been paid

## Milestone 2 (Project Completion), Within 730 calendar days of Project Approval:

- All siting approvals, total project installed cost, decommissioning plan
- As-built 3-line PE stamped drawing designed compliance with the requirements in the [Battery Energy Storage Guidebook](#) published by NYSERDA
- Proof of 10-year warrantee and safety certifications if not already provided
- Permission to Operate from the local utility
- NYSERDA's QA inspection completed with resolution of any issues

# 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
- Post-commissioning field inspections will be conducted on each project funded under this program; A pre-commissioning inspection may also be conducted



# Quality Assurance

- 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)

- An automated data transfer must be established to provide the net energy charged/discharged in 15-minute intervals for customer sited installs or hourly intervals for VDER projects for five years
- All projects will undergo 90 days of M&V to verify the system is operating as intended
- A NYSERDA contractor may be provided this data for environmental analysis
- 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.nyserdera.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.

# NYSERDA Technical Assistance Resources



## Siting

- Help local AHJs with developing permitting processes and considering applications
- Statewide storage guide and best practices



## Customer Assistance

- Customer outreach and education
- Technical assistance: high-level assessment of fit for energy storage



## Vendor Assistance

- One on one outreach on market rules, opportunities, and project guidance
- Digital resources, and informational events also made available



## Quality Control

- Measurement and verification for energy storage installations
- Increase confidence in deployed systems
- Deployed systems listed on [DER Data System](#)

## Energy Storage Feasibility Studies (PON 1746 - FlexTech)

- Technical (sizing/potential) and economics examined
- NYSERDA will contribute up to 75% of study costs, up to \$100,000
- Commercially available technology
- Managing customer load, deferring distribution system upgrades, or pairing with other DERs
- For behind-the-meter projects, interval load data logging may be a first step
- Details available [here](#)

# 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@nyserda.ny.gov](mailto:cleanenergyhelp@nyserda.ny.gov) and we'll respond to you within 24 hours.

# NY Green Bank – Overview

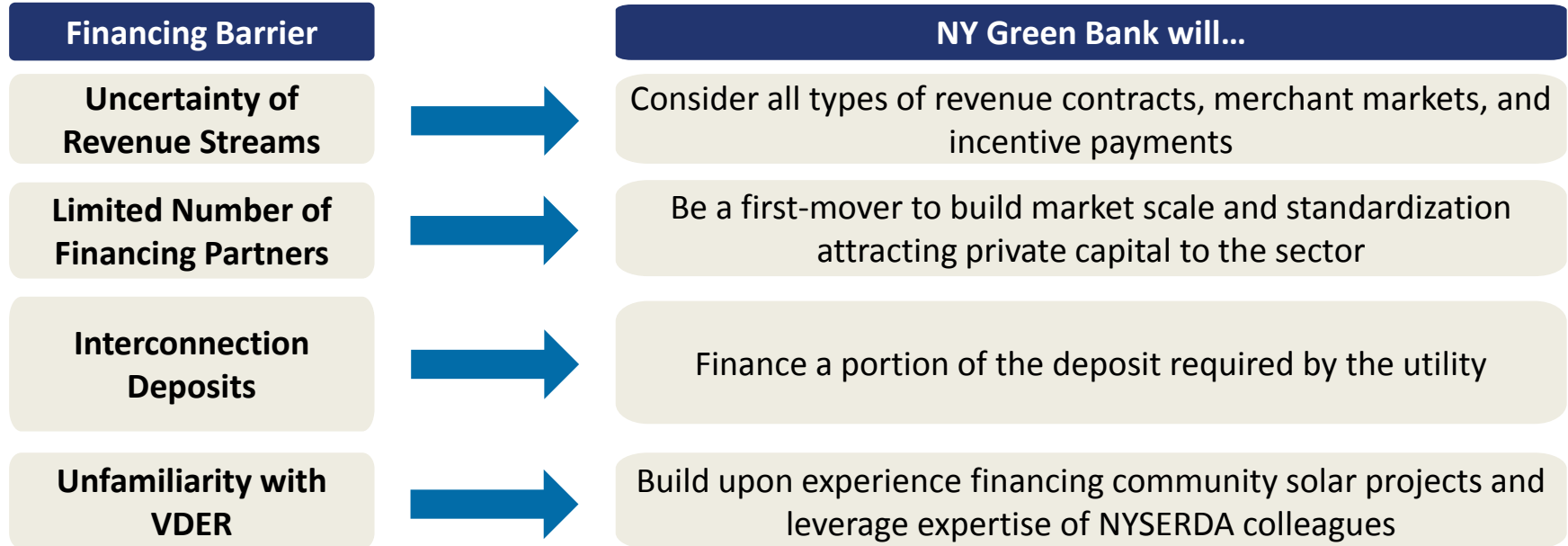
## Mission:

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](#)