



**NYSERDA**

# **Solar Plus Energy Storage**

**A NY-Sun Incentive Adder**

**November 1, 2018**

# Intro

# Roadmap to 1.5GW by 2025

The New York Energy Storage Roadmap Recommendations will jumpstart the market towards the Governor's storage target of 1,500 megawatts by 2025.

- Recommend \$350 million in statewide market acceleration incentives
- Regulatory changes to utility rates, VDER, non-wire alternative solicitations, and differentiating carbon intensity value (E) to reflect the system benefits and values of storage
- Address soft costs
- Recommend modifications to wholesale market rules

# Benefits of Pairing Solar with Storage

# The Power of Synergy: Solar Plus Energy Storage

Pairing Solar with energy storage holds significant benefits

- Leverage the NY-Sun momentum
- For the 1<sup>st</sup> time in New York storage is compensated through the value stack for grid benefits where it is the most valuable
- Capturing the federal Investment Tax Credit for Solar before it sunsets
- Use the NY-Sun approach to providing local government support with zoning and permitting
- Capture cost savings associated with combined siting/permitting and tax equity financing of paired systems
- NY Green Bank financing to demonstrate viability and drive scale
  - NY Green Bank seeks to invest at least \$200 million in storage-related projects and recently modified it's RFP 10 to include storage in CDG projects

# NY-Sun Solar Plus Energy Storage Incentive Program Rules

# Program is available in the NY-Sun Incentive Program

## Energy Storage System - Additional Incentive

Does your project include an energy storage system?

Storage System Vendor / Integrator

Other Additional Storage System Integrator

Storage Technology / Chemistry Type

Battery Cell Manufacturer or Other Storage OEM

Installed Storage Capacity, kWh (AC)

Duration of Discharge (hours)

Solar / Storage Configuration

Separate Energy Storage Inverter?

# Storage Incentive

- A Nonresidential or Commercial & Industrial project may qualify for the NY-Sun solar incentive and the Energy Storage incentive adder
- Eligible energy storage projects will receive **\$350 per kWh** of installed energy storage capacity (AC)
- All projects seeking energy storage incentives must be submitted by a NY-Sun approved contractor
- Project must meet all NY-Sun Program rules and requirements as well as Solar Plus Energy Storage requirements, as detailed in the NY-Sun Program Manuals available at [nyserdera.ny.gov/solar-contractor-resources](https://nyserdera.ny.gov/solar-contractor-resources)



# Solar Plus Energy Storage Eligibility

## Projects Eligible

- Nonresidential and Commercial & Industrial solar projects that qualify for NY-Sun incentives
- New NY-Sun project applications
- Existing NY-Sun project applications in Approved status
- Community and Remote solar under VDER
- On-site solar, with customer load for peak demand reduction and retail bill savings

# Solar Plus Energy Storage Eligibility

## Projects NOT Eligible

- Residential projects
- NY-Sun projects that have already been marked “Completed” in the NY-Sun portal
- PSEG and NYPA customers
- Any solar projects outside of NY-Sun - Off-grid and bulk generation (i.e. Large-Scale Renewables)

# Solar Plus Energy Storage Equipment Requirements

## Equipment Eligibility Must:

- Be permanently installed
- Be new and commercially available equipment
- Be certified to UL 1973 and 9540 by the time of installation
- Meet all AHJ requirements
- Warranted for at least 10 years
- Maintain a minimum 70% round-trip efficiency during the system life

# Solar Plus Energy Storage System Sizing

- The minimum eligible capacity of an energy storage system is 100 kWh AC
- To avoid inappropriate over-sizing of energy storage capacity, the capacity (kWh AC) eligible for incentive is limited to four times the rating (kW AC) of the associated inverter.
  - Example: If an inverter of 400 kW is needed for the function of the storage, incentives will be limited to 1,600 kWh (AC) of storage capacity
- Projects requiring a storage capacity greater than four times the inverter capacity may submit justification that the larger storage capacity is appropriate and the incentive on the additional capacity may be granted at NYSERDA's discretion

# Solar Plus Energy Storage Project Maturity

## Nonresidential

|         | Final CESIR / Proof of 25% Payment or executed interconnection agreement from the utility | Meeting minutes documenting energy storage has been presented or approved by zoning board | Planning & zoning board approvals |
|---------|---|---|-----------------------------------|
| Solar   | x   |   | x – if adding storage             |
| Storage | x   | x   |                                   |

## C&I

|         | Final CESIR / Proof of 25% Payment or executed interconnection agreement from the utility | Meeting minutes documenting energy storage has been presented or approved by zoning board | planning & zoning board approvals |
|---------|---|---|-----------------------------------|
| Solar   | x   |   | x                                 |
| Storage | x   | x   |                                   |

# Solar Plus Energy Storage Project Maturity

Adding energy storage to approved project applications will need to submit a “[Storage Project Modification Form](#)”, available at [nyserda.ny.gov/solar-contractor-resources](http://nyserda.ny.gov/solar-contractor-resources), in lieu of the standard project modification process.

## STORAGE PROJECT MODIFICATION

Nonresidential and Commercial/Industrial Projects



| Current Project Application                           |   |
|---|---|
| Project Application Number:                           |   |
| Current Approved Incentive Amount (including adders): |   |
| Was a CESIR required to add storage to this project?  | Select <input type="button" value="v"/>                         |
| Provide final CESIR and CESIR ID#:                    | Were upgrades required? Select <input type="button" value="v"/> |
| Date 25% interconnection upgrades payment made:       |   |

| Storage System Roles + Agreement Type       |   |
|---|---|
| Storage System Vendor/Integrator:           |   |
| Other Additional Storage System Integrator: |   |
| Energy Storage subcontractor:               |   |
| Agreement Type:                             | Select <input type="button" value="v"/> |

# Solar Plus Energy Storage Incentive Payments

- Nonresidential projects will receive 100% of the standard base "solar" incentive plus any NY-Sun incentive adders (i.e. Energy Storage) upon approval of project invoice
- Commercial & Industrial projects will receive 50% of the standard base "solar" incentive plus 100% of the Solar Plus Energy Storage incentive adder upon approval of the commercial operation payment invoice
- A passing field inspection is required for all projects utilizing the Solar Plus Energy Storage incentive, prior to payment being released

|                | Solar Incentive | Storage Incentive |
|----------------|-----------------|-------------------|
| Nonresidential | 100% @ PTO      | 100% @ PTO        |
| C&I            | 50% @PTO 25/25  | 100% @PTO         |

# Solar Plus Energy Storage Monitoring Requirements

- NYSERDA requires paired solar plus storage projects collect hourly kWh charge and discharge quantities
- NYSERDA will request this data in order to display the total monthly kWh storage system discharge for display with the renewable project on the DER Integrated Data System at [der.nyserda.ny.gov](http://der.nyserda.ny.gov).
- NYSERDA may request this data and additional data, with permission from the host site and the NY-Sun contractor, for analysis and 3rd party case studies
- The DER Integrated Data System will NOT display hourly data, obscuring actual operational techniques



# Technical Conference

## The Power of Synergy: PV + Energy Storage

[Register Now](#)

November 13, 2018

10:00 a.m. – 4:00 p.m. ET

Check-in and coffee: 9:30 a.m. – 10:00 a.m. ET

Marriot NYC

New York Marriott East Side

525 Lexington Ave, New York, NY10017

Cost: \$100 per attendee

# Q&A

Please submit questions in the chat window

Additional information can be found  
at [nyserderda.ny.gov/solar-plus-storage](https://nyserderda.ny.gov/solar-plus-storage)