

WELCOME

LIPA Community Advisory Board

March 18, 2025



Agenda

I. Opening Remarks

Tracey Edwards, LIPA Board Chair
John Rhodes, LIPA Acting Chief Executive Officer
Dave Lyons, Interim President and Chief Operating Officer

II. Battery Storage Presentation

Camille Warner, Project Manager, Clean Energy Siting, NYSERDA
Paul Rogers, Co-Founding Principal of Energy Safety Response Group & NY-BEST Member

II. Roundtable Discussion

Next CAB Meeting: June 17, 2025

Opening Remarks



Tracey Edwards
Board Chair
LIPA



John Rhodes
Acting CEO
LIPA



Dave Lyons
Interim President & COO
PSEG Long Island

Battery Storage Presentation



Battery Energy Storage Systems

Camille Warner

Project Manager, Clean Energy Siting Team, NYSERDA

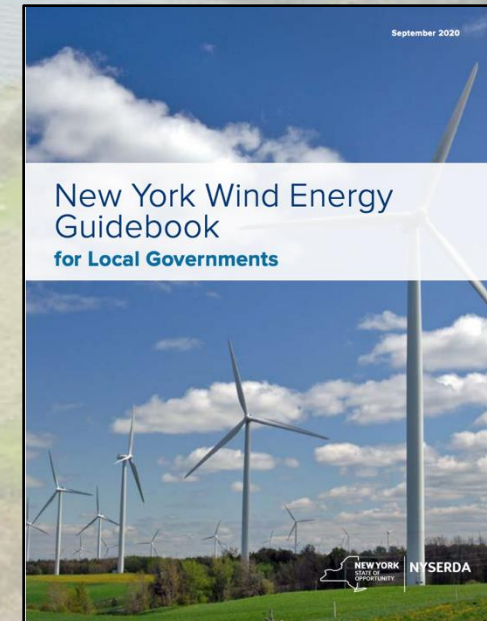
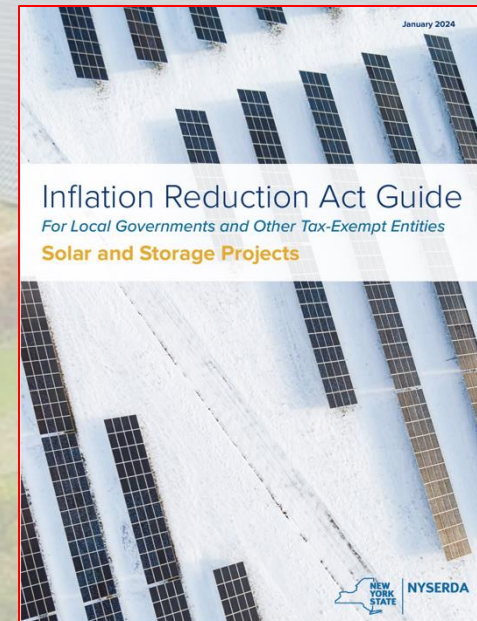
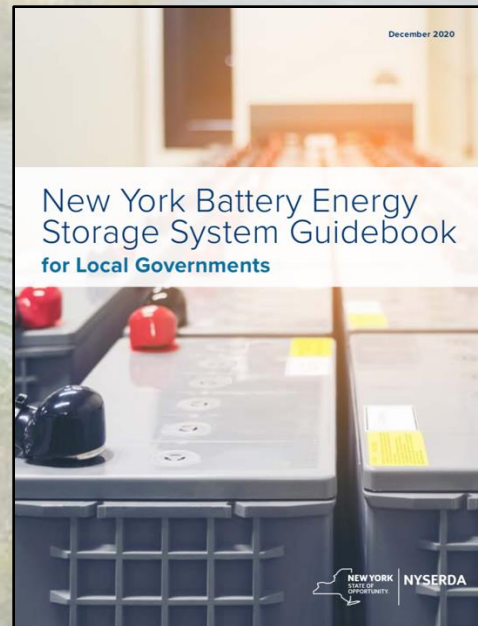
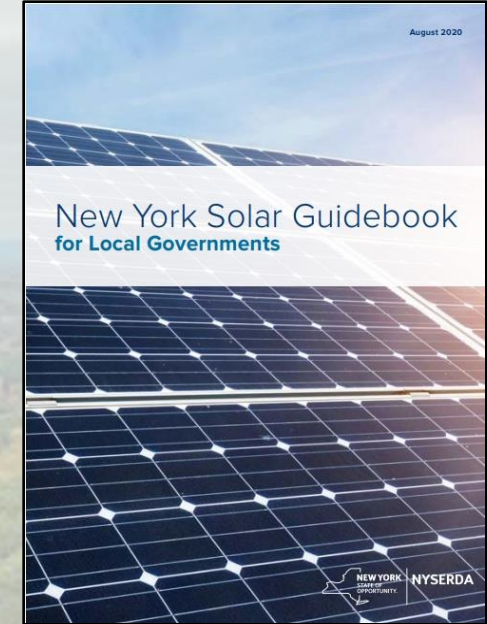
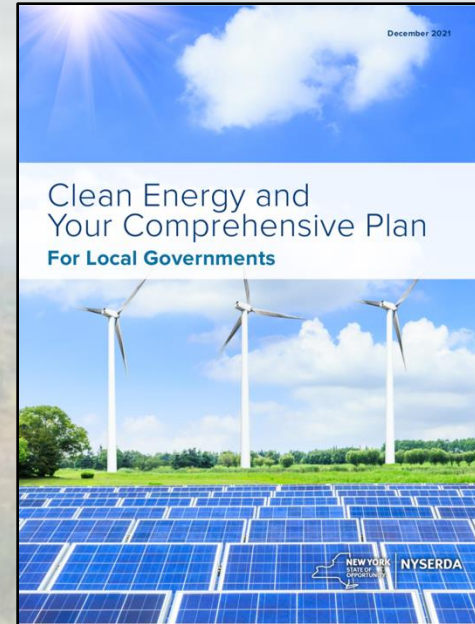
cleanenergyhelp@nyserda.ny.gov

Introduction

Clean Energy Siting Team

cleanenergyhelp@nyserra.ny.gov

www.nyserra.ny.gov/Siting



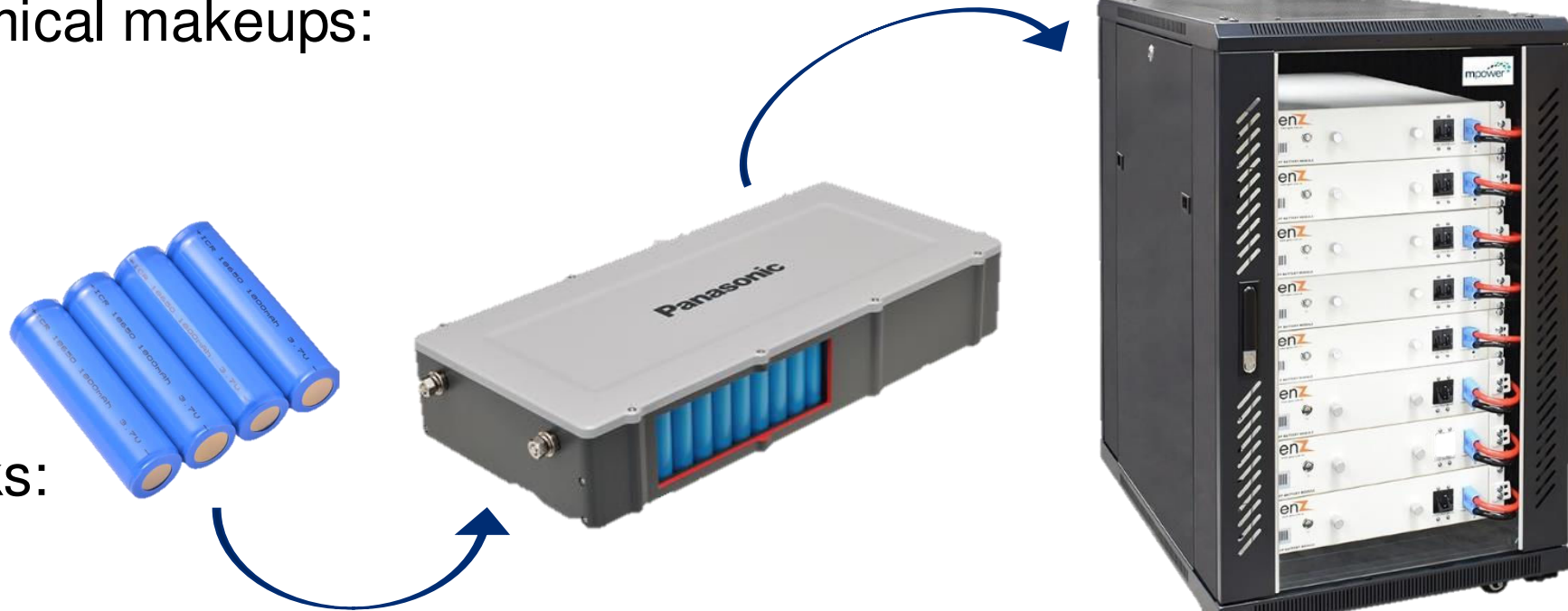
Battery Energy Storage Systems

- Battery energy storage can comprise a variety of different electrochemical makeups:

- Lithium ion
- Lead acid
- Nickel-based
- Flow batteries

- BESS building blocks:

- Cells
- Modules
- Racks



Battery Energy Storage Systems

	Lead Acid	Sodium-Sulfur	Flow Batteries	Lithium-Ion
Round-trip efficiency	70-85%	70-80%	60-80%	85-95%
Typical duration	2-6 hours	6-8 hours	4-12 hours	0.25-4 hours
Time to build	6-12 months	6-18 months	6-12 months	6-12 months
Operating cost	High	Moderate	Moderate	Low
Space required	Large	Moderate	Moderate	Small
Cycle life	500-2,000	3,000-5,000	5,000-8,000+	2,000-6,000+
Technology maturity	Mature	Commercial	Early-moderate	Commercial

Battery Energy Storage Systems (BESS)

Residential



Commercial



Utility

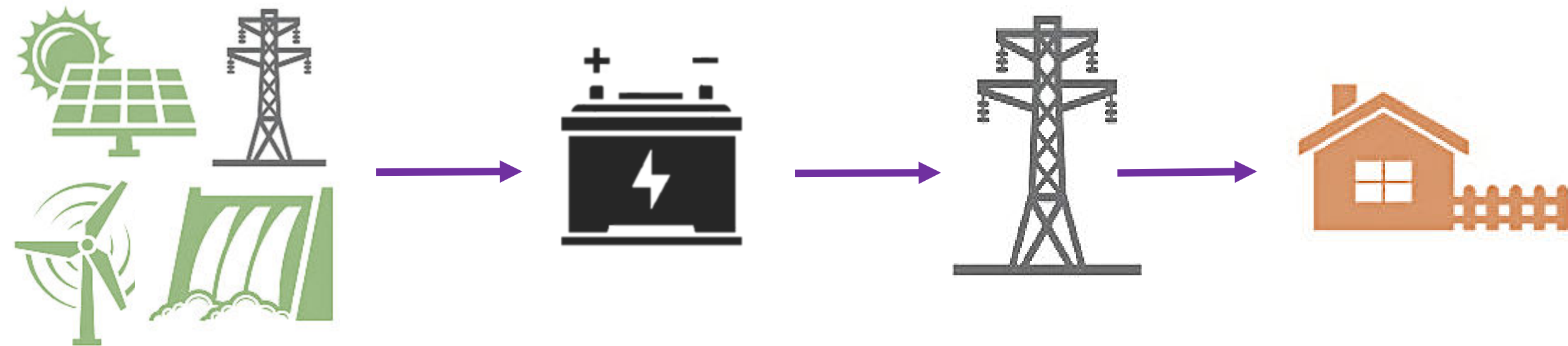


Behind-the-meter
“Customer-side”

Front-of-the-meter
“Utility-side”

Why are we talking about batteries?

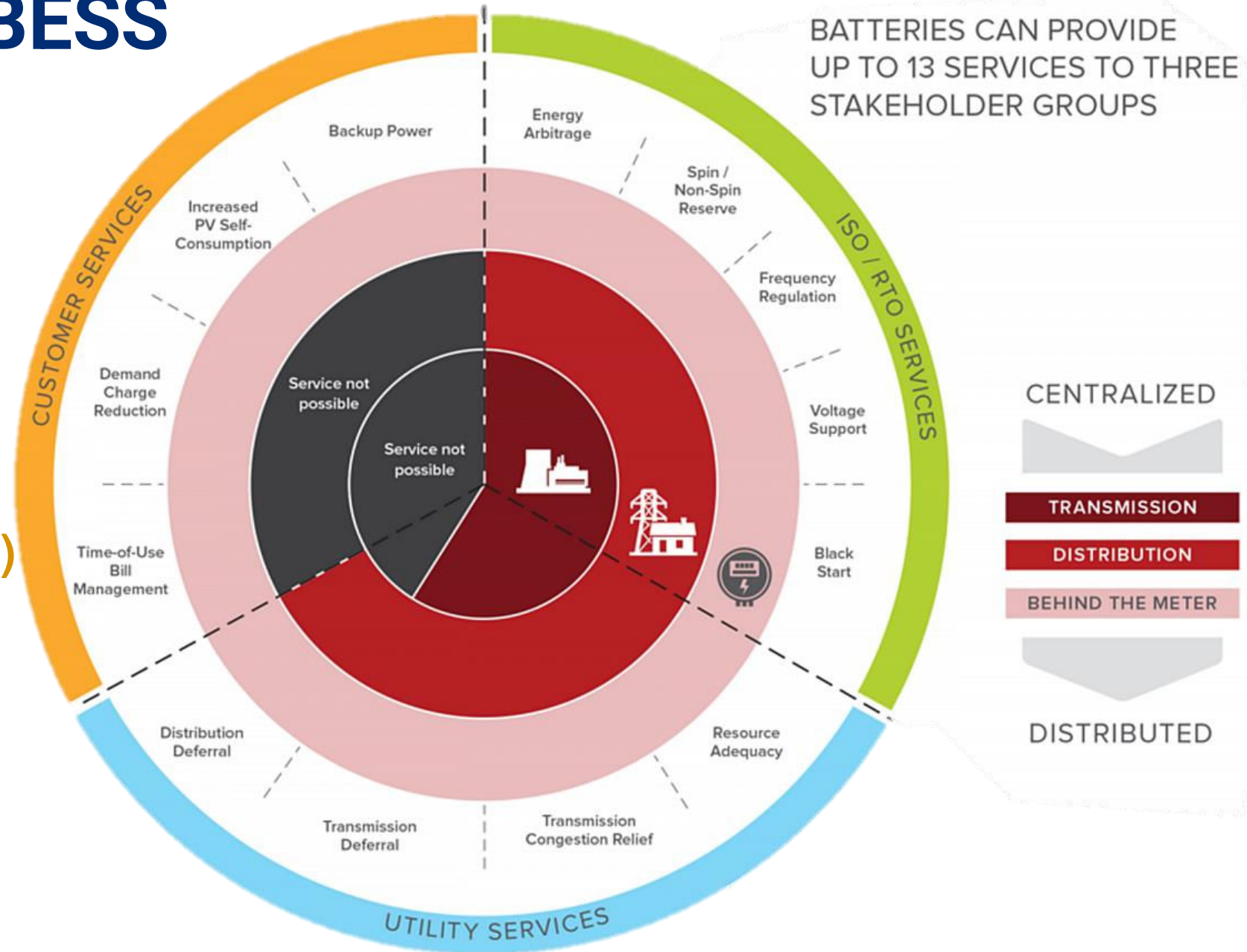
As New York State transitions to renewable energy technologies like wind and solar, energy storage will play a critical role by providing power when the wind isn't blowing, or the sun isn't shining.



Applications for BESS

Services by Group:

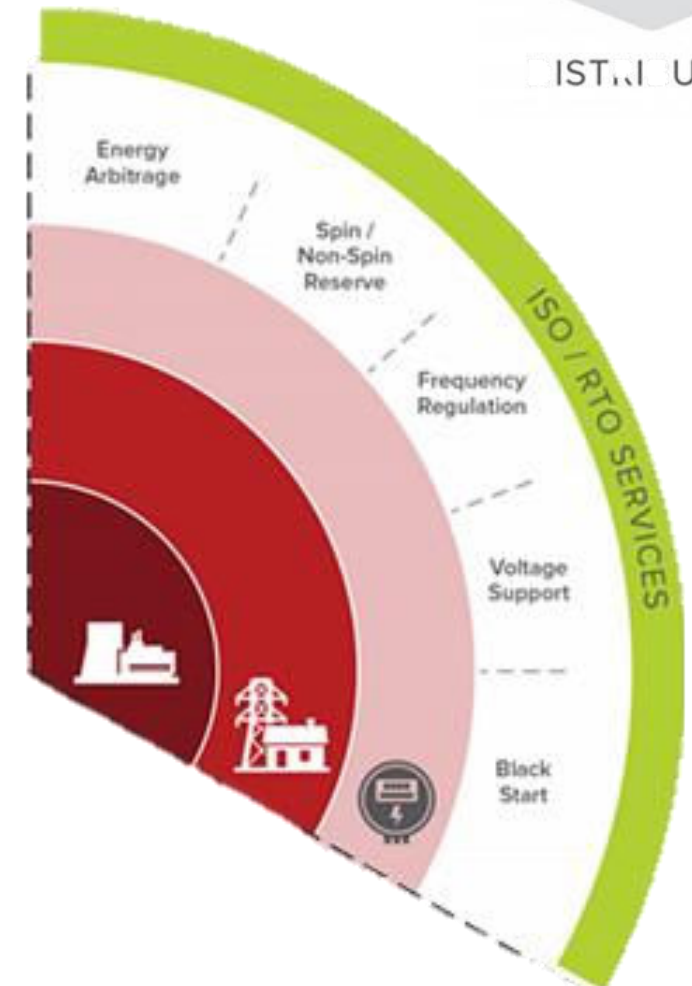
1. **Grid Services (ISOs / RTOs)**
2. **Utility Services**
3. **Customer Services (Residential/Commercial)**



Grid Services (ISOs, RTOs)

- **Energy Arbitrage** → Charging when electricity costs/demand are low, discharging when high; can also reduce curtailment of renewables
- **Spin/Non-Spin Reserve** → Dispatch energy as needed to ensure that grid supply = demand
- **Frequency Regulation** → Quickly ensure generators are synchronized for grid stability
- **Voltage Support** → Provide/absorb voltage as needed for grid stability
- **Black Start** → Help large generators come online following system failure

“Ancillary Services”



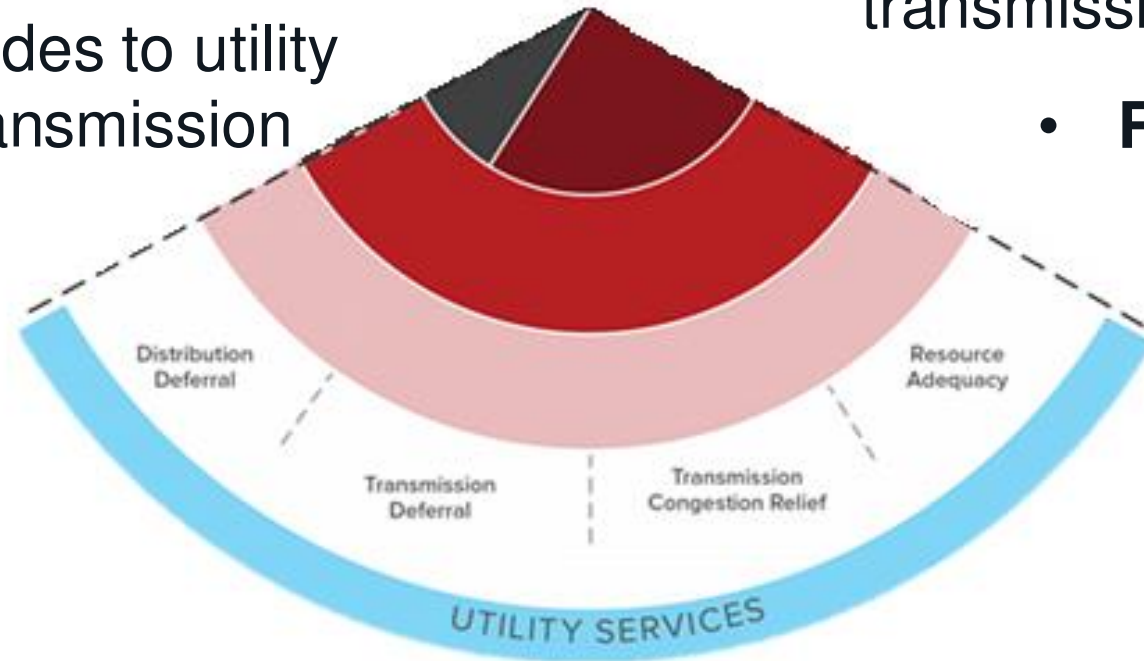
Utility Services

- **Distribution Deferral**
- **Transmission Deferral**

Defer costly upgrades to utility distribution and transmission infrastructure

- **Transmission Congestion Relief:**
Mitigate congestion in areas with lots of generation or inadequate transmission capacity

- **Resource Adequacy:**
Have enough capacity to keep the lights on!



CENTRALIZED



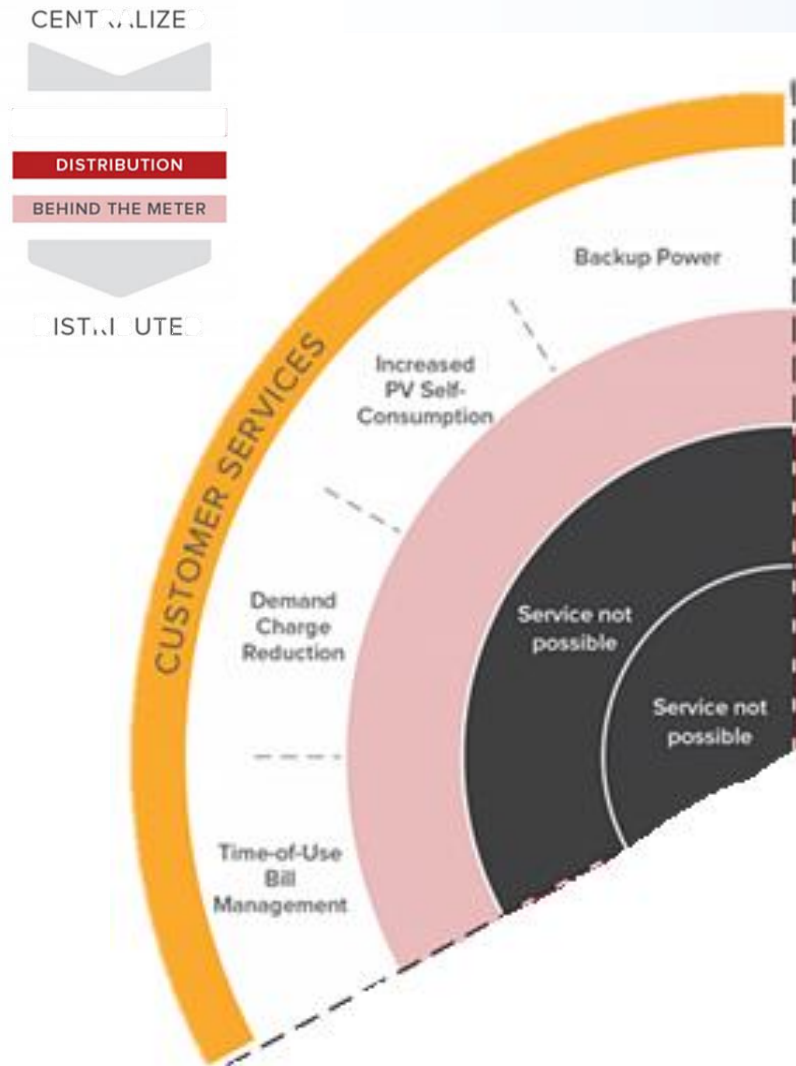
DISTRIBUTION

BEHIND THE METER

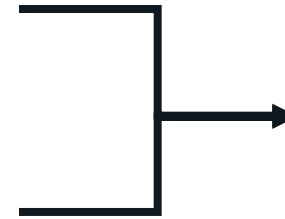


DISTRIBUTED

Customer Services (Residential/Commercial)



- **Backup Power** → Power availability during outages
- **Increased PV Self-Consumption** → If paired with solar PV, ability to better utilize your own generation
- **Demand Charge Reduction**
- **Time-of-Use Bill Management**



Shift your consumption to save money during periods of high demand

Also known as demand or peak shaving or load shifting

Clean Energy Siting Homepage

[Comprehensive Plan Guide](#)

[Solar and Storage Projects – IRA Funding](#)

[Energy Storage Guidebook](#)

[Energy Storage Trainings for Local Governments](#)

[EV Charging Station Permitting Resources](#)

[Siting for Large-Scale Renewables](#)

[Solar Guidebook](#)

[Technical Assistance and Workshops](#)

[Transitioning Underused Spaces](#)

[Wind Energy Guidebook](#)

[Clean Energy Siting Email List](#)

NYSERDA offers several resources to empower local governments with knowledge, training, and best practices to manage responsible clean energy development in their communities. These resources include step-by-step instructions and tools to guide the implementation of clean energy, including permitting processes, property taxes, siting, zoning, and more. Through NYSERDA's [Build-Ready Program](#), local governments can partner with NYSERDA to turn underutilized land into a renewable energy project.

- [Clean Energy and Your Comprehensive Plan Guide](#): Step-by-step instructions for local governments looking to incorporate clean energy goals and objectives into their communities' comprehensive plans.
- [Energy Storage Guidebook](#): Information, tools, and step-by-step instructions to support local governments managing battery energy storage system development in their communities.
- [Energy Storage Trainings](#): Prerecorded webinars and upcoming sessions related to responsible energy storage system development for local government officials, including municipal board members, first responders, and code enforcement officers.
- [EV Charging Station Permitting Resources](#): Materials to help municipalities, developers, planners, and planning board members learn the basics of charging stations and to navigate the process for permitting and promoting EV charging station installations.
- [Siting for Large-Scale Renewables](#): Information on State-level review processes for renewable generating facilities totaling 25 megawatts (MW) or greater.
- [Solar Guidebook](#): Information, tools, and step-by-step instructions for local governments managing solar energy development in their communities.
- [Solar and Storage Projects – Inflation Reduction Act Funding](#): Resources and information on expanded funding opportunities for tax-exempt entities through the IRA to develop solar and energy storage projects.
- [Technical Assistance and Workshops](#): List of free technical assistance on clean energy zoning and permitting available to local governments, including workshops for Continuing Education Credits.
- [Transitioning Underused Spaces](#): Information for municipalities and private landowners on repurposing underutilized land such as brownfields, landfills, former industrial sites, and farms for renewable energy development.
- [Wind Energy Guidebook](#): Information to support local governments managing wind energy development and project siting in their communities.

If you have a question on clean energy siting in your community, or need help with one of our resources, email cleanenergyhelp@nyserderda.ny.gov.

Stay up-to-date with the latest about Clean Energy Siting by [joining our email list](#) for local government officials.

Ask the team any question by sending an email to cleanenergyhelp@nyserderda.ny.gov

www.nyserderda.ny.gov/Siting



NYSERDA

Battery Storage Presentation

Paul Rogers, Co-Founding Principal of Energy Safety Response Group & NY-BEST Member



BESS Containers



PRIMARY ESS CODES & STANDARDS

Primary Codes / Standards for ESS Installations:

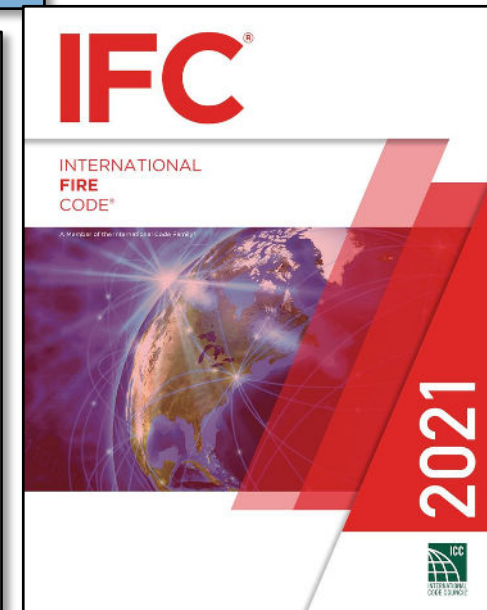
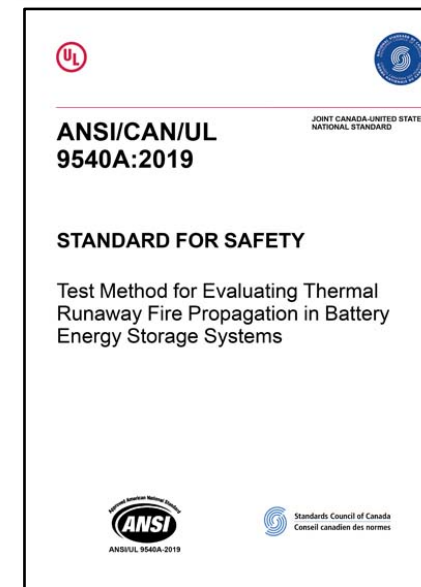
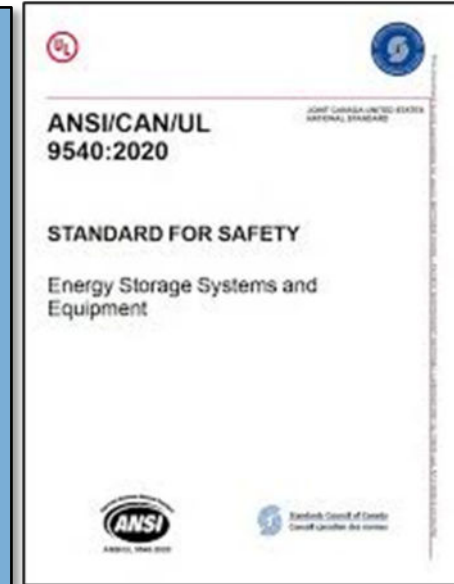
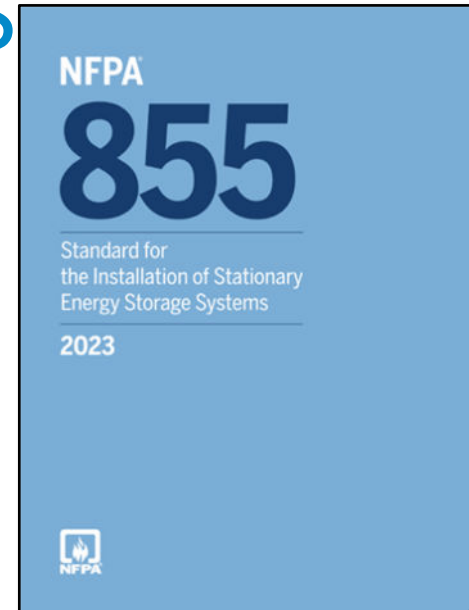
- **2021 International Fire Code (IFC)**
 - 2020 NYS Uniform Fire Prevention Code Chapter 12
 - NYS Code Allows for Peer Review and Subject Matter Expert (Fire Remediation) (Optional)
- **NFPA 855 (2023 Edition): Standard for the Installation of Stationary Energy Storage Systems**
 - Fire Protection Systems including:
 - Explosion Protection to NFPA 69 - Exhaust Ventilation or NFPA 68 - Deflagration Venting
 - Automatic Fire Alarm and Detection – NFPA 72

Listings / Certifications for ESS and Associated Equipment:

- **UL 9540**: Standard for Energy Storage Systems and Equipment
 - Includes:
 - UL 1973 for cell, battery, rack
 - UL 1741 for inverters

Large-Scale Fire Testing:

- **UL 9540A**: Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems



NYS Recommendations for Safety and Help

- Fire Notifications
- Constant Monitoring of BMS (ROC)
- Firefighter reach back (15 Minutes)
- Firefighter emergency handoff
- CCTV
- Fire Alarm Central Station
- Annual Firefighting training
- Peer Review
- Inspections during life of system
 - Safety Functionality checks

New York State Interagency
Fire Safety Working Group

Fire Code Recommendations

July 2024

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

Site Specific ERP

- Dedicated Site Specific
- Firefighter Familiarization
- Updated as needed (Annually)
- Fire Department input
- Equipment/training assessment



SETAUKET ENERGY STORAGE PROJECT

EMERGENCY RESPONSE PLAN (ERP)

Rev. 0 | August 2024

Summary

This document serves as the Preliminary Emergency Response Plan (ERP) for the Setauket energy storage facility to be located in Setauket, New York.

Only an ERP with input from the local first responders can provide true guidance and pertinent information regarding the roles, responsibilities, and chain of communication and command of the System Owner / Operator, Property Owner, and other required Subject Matter Experts (SMEs) for preparing for, and safely responding to, a fire, overpressure event, or other battery-related incident requiring a public safety response at the energy storage facility.

LIFE SAFETY SHALL BE THE HIGHEST PRIORITY DURING ANY TYPE OF EVENT.

Prepared For:

Setauket Energy Storage LLC

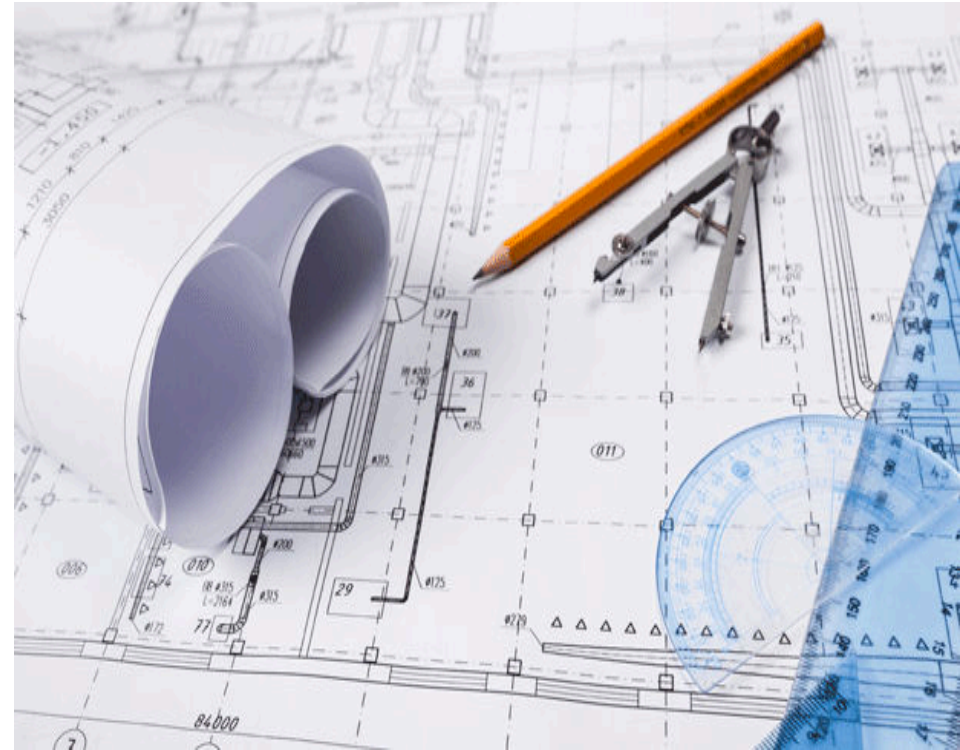
422 Admiral Blvd

**Energy Safety Response
Group**
8350 US HWY 23 N
Delaware, OH 43015



Peer Review

- Third Party review of project
- Paid for by developer
- Compliant before construction
- Approved plans Validation
 - Fire Alarm devices and Matrix
 - BESS location
 - Battery Listings
 - Separation distances
 - Commissioning Plans
 - Decommissioning Plans



Safety Validation

- After Construction
 - Constructed according to approved plans
 - Validate fire safety functionality
 - Validate BMS (ROC)
 - Validate Emergency Shutdown
 - Report all repairs and replacement to AHJ
 - Report the FA annual testing
 - Validate response protocol for SME and fire service
 - Proper Signage with Emergency Number for the fire service



Roundtable Discussion

