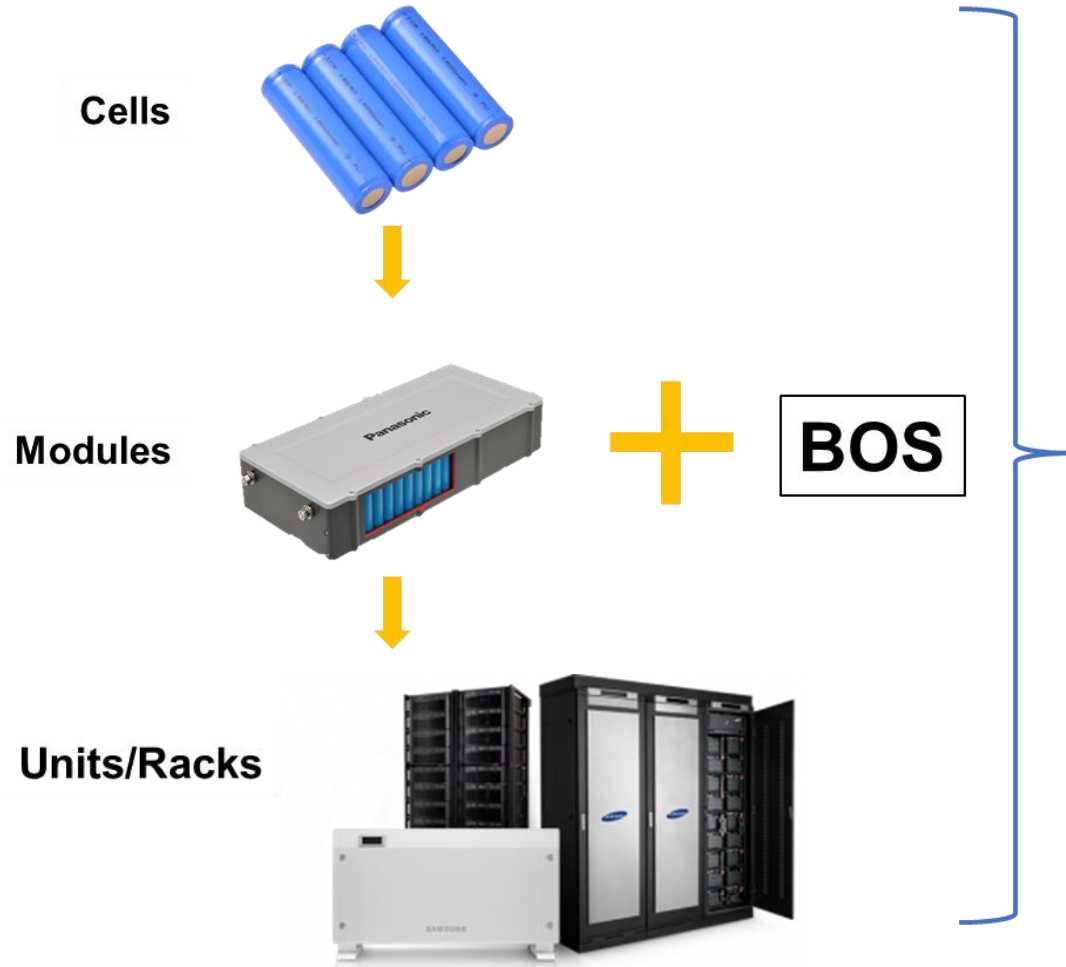


Battery Energy Storage Systems



BESS ARCHITECTURE



BESS Container/Cabinet



PRIMARY ESS CODES & STANDARDS

National Codes & Standards

Primary Codes / Standards for ESS Installations:

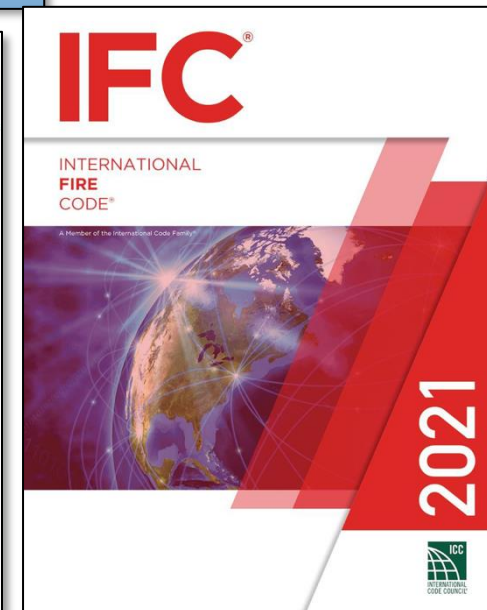
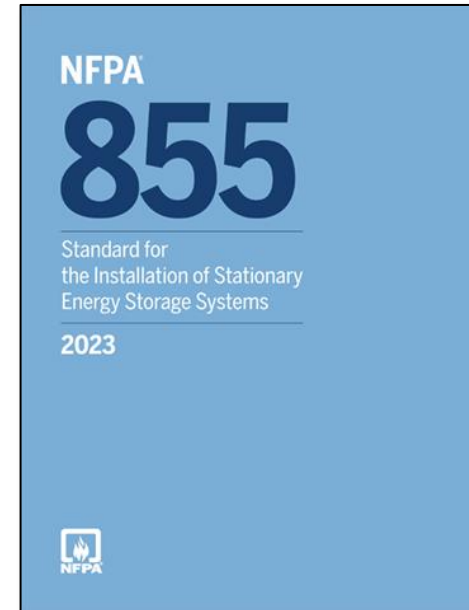
- **2024 International Fire Code (IFC)**
 - 2025 NYS Uniform Fire Prevention Code Chapter 12 (Section 1207)
 - NYS Code Allows for Peer Review and Subject Matter Expert (Fire Remediation) (Optional)
- **NFPA 855 (2023 Edition): Standard for the Installation of Stationary Energy Storage Systems**
 - Fire 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

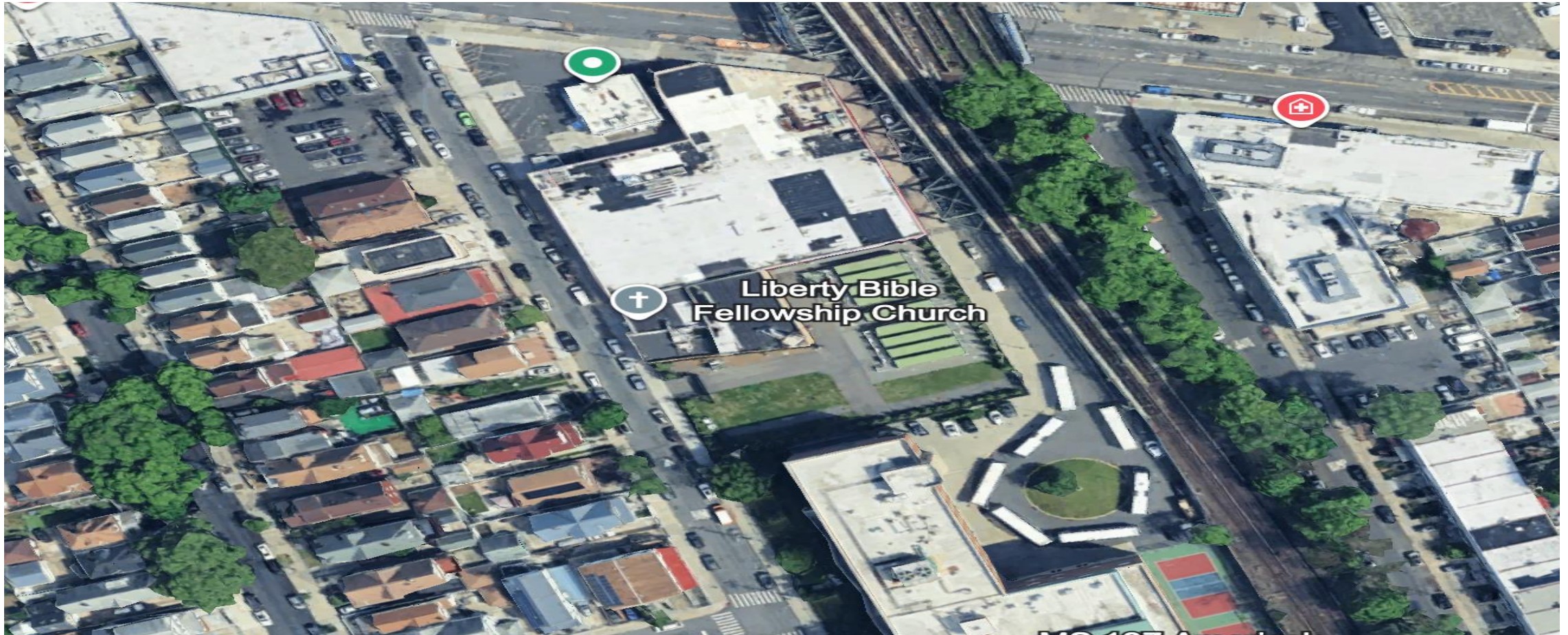


Safety Validation

- 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



BESS 2018 NYC Installation

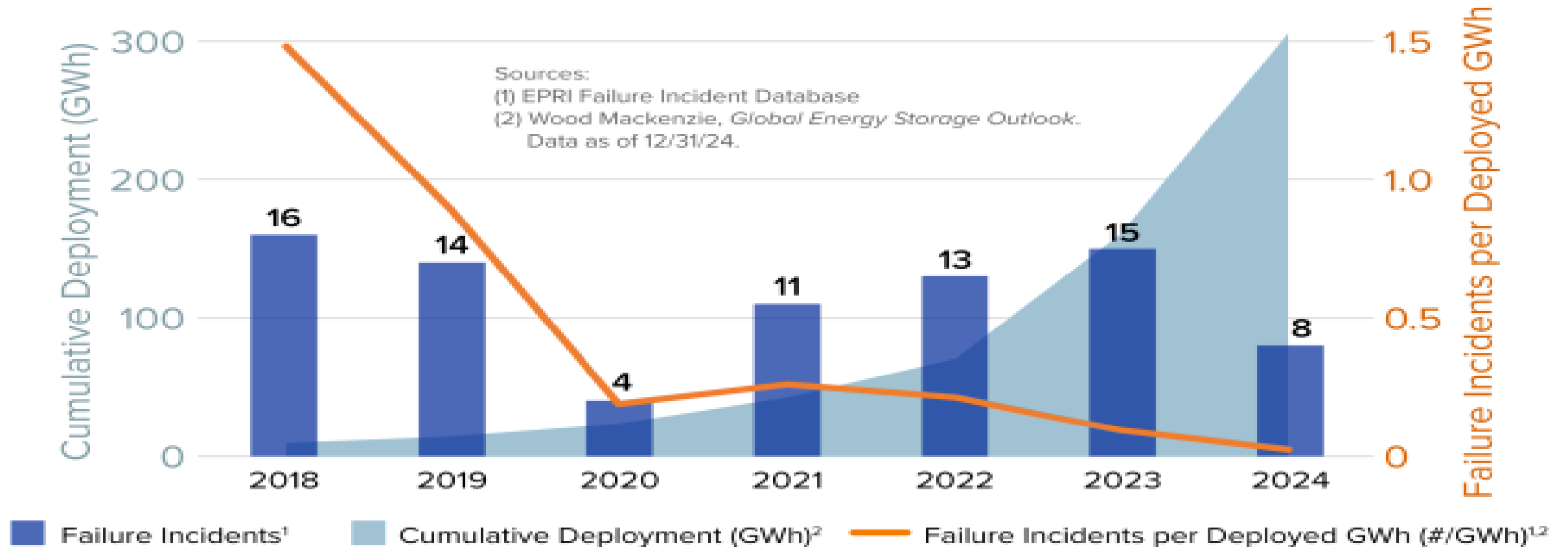


SMOKE AND EVACUATIONS



BESS FAILURES ARE ALMOST ZERO

Global Grid-Scale Storage Deployment and Failure Statistics



Thank you

QUESTIONS ???