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October 8, 2025

Via Electronic Mail and Overnight Delivery
Melanie Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **PETITION NO. 1607A** - Hanwha Q CELLS America, Inc. petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 4.0-megawatt AC battery energy storage facility located at Parcel No. 95-F10-247-5 and 95-F10-247-5A, 163 State Pier Road, New London, Connecticut, and associated electrical interconnection. Reopening of this Petition based on changed conditions pursuant to Connecticut General Statutes §4-181a(b). **Addendum Exhibit 4 – Hanwha Q CELLS America Inc. - Fire & Risk Alliance New London BESS Emergency Response Plan**

Dear Attorney Bachman:

I am writing on behalf of my client Hanwha Q CELLS America Inc. ("HQCA"). HQCA respectfully submits herewith its *HQCA – Fire & Risk Alliance New London BESS Emergency Response Plan* labeled as Petition No. 1607A, Addendum Exhibit 4.

Please also note that HQCA expects the updates to its Petition No. 1607A Exhibit B – Revised Site Plans to be ready for submission to the Connecticut Siting Council shortly. Those updates will reflect the changes to the point of interconnection and the proposed path of interconnection as described by HQCA in its September 23, 2025 responses to Council Interrogatory Nos. 9.b-14.

Please do not hesitate to contact me with any questions or concerns regarding this submission.

I certify that copies of this submission have been sent to all parties on the Service List as of this date.

Sincerely,

Mark J. Cook, Esq.

Enclosures
cc: Service List

Petition No. 1607A – Addendum Exhibit 4

Hanwha Q CELLS America Inc. – Fire & Risk Alliance

New London BESS Emergency Response Plan

Hanwha Q CELLS America Inc. ("HQCA") respectfully submits this *HQCA – Fire & Risk Alliance New London BESS Emergency Response Plan* ("HQCA-FRA ERP") as Petition No. 1607A – Addendum Exhibit 4 – *HQCA – Fire & Risk Alliance New London BESS Emergency Response Plan*.

HQCA has developed this HQCA-FRA ERP with Fire & Risk Alliance ("FRA"), a fire response organization. HQCA and FRA have included in this HQCA-FRA ERP information from the manufacturer as well as information regarding "guidance on procedures to address a fire or other abnormal emergency conditions at the facility."[1]

HQCA has also requested comments on the HQCA-FRA ERP from the New London Fire Department. FRA will also be providing training to New London Fire Department personnel. Any additional information learned through those trainings will be added into the HQCA-FRA ERP.

FRA recommends a 100-foot exclusion zone for fire department personnel which can be adjusted based on real-time events.

[1] In approving Petition No. 1637, the Petition No. 1637 Opinion finds that a "preliminary Emergency Operations Plan has been developed for the BESF that provides guidance on procedures to address a fire or other abnormal emergency conditions at the facility."[1] The petitioner in Petition No. 1637 consulted with the same fire response organization as HQCA is consulting with, Fire & Risk Alliance. According to testimony in Petition No. 1637, one of FRA's responsibilities under the Petition No. 1637 project was for FRA to develop an emergency operations plan specific to the Petition No. 1637 BESF site, taking into account fire response guidance from the manufacturer and information from the local fire department and developing it into a larger, holistic emergency operations plan. The Petitioner in Petition No. 1651 also produced an emergency response plan in collaboration with Fire & Risk Alliance. In conjunction with FRA, HQCA is following the same procedure in developing a larger, holistic emergency operations plan.

FIRE & RISK ALLIANCE

New London BESS

Emergency Response Plan

Prepared for: Hanwha Q Cells America, Inc.

10-03-2025

Rev B

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1 GENERAL INFORMATION

1.1 Scope

This document is an emergency response plan (ERP) for the New London battery energy storage system (BESS) facility. The ERP provides a facility overview including site design, type of equipment, safety features, suppression, and detection information along with response recommendations for potential BESS facility failure scenarios.

1.2 Purpose

The purpose of this ERP is to provide information to BESS subject matter experts (SMEs) and fire department personnel about site hazards and emergencies that can potentially occur at a BESS facility. The guidance herein outlines the hazards and response tactics necessary to mitigate risk and ensure the safety of fire service members operating at the scene of a BESS emergency.

1.3 Site Owner

Site Owner: Hanwha Q Cells America, Inc.

300 Spectrum Center Drive, Suite 500 Irvine, CA

HQ Telephone: 949.748.5996

1.4 Location

Parcel ID: 95-F10-247-5A and Parcel ID: 95-F10-247-5

New London BESS 163 State Pier Road, New London, Connecticut 06320

1.5 Emergency Contact

The Tesla Local Operations Center (LOC) can be reached 24/7 for any emergency that may occur at the New London BESS. The LOC can be contacted at 650-681-6060.

Table 1 Emergency Services Contact Information

Emergency Services Agency	Address
All Emergencies	*Call 911*
New London Fire Department	289 Bank Street, New London, CT 06320
New London Police Department	5 Gov Winthrop Blvd, New London, CT 06320
Lawrence + Memorial Hospital	365 Montauk Avenue, New London, CT 06320

2 SITE OVERVIEW

2.1 General Site Overview

The New London battery energy storage system (BESS) facility is located between State Pier Road and Water Street abutting Crystal Avenue approximately 900 feet south of US Highway 95. The BESS facility is approximately 1.70 acres and is located in a Commercial-General zone consisting of residential, commercial, institutional & industrial properties. The Thames River is approximately 500 feet to the southeast of the site. The facility is normally unstaffed and is monitored by a remote monitoring station.

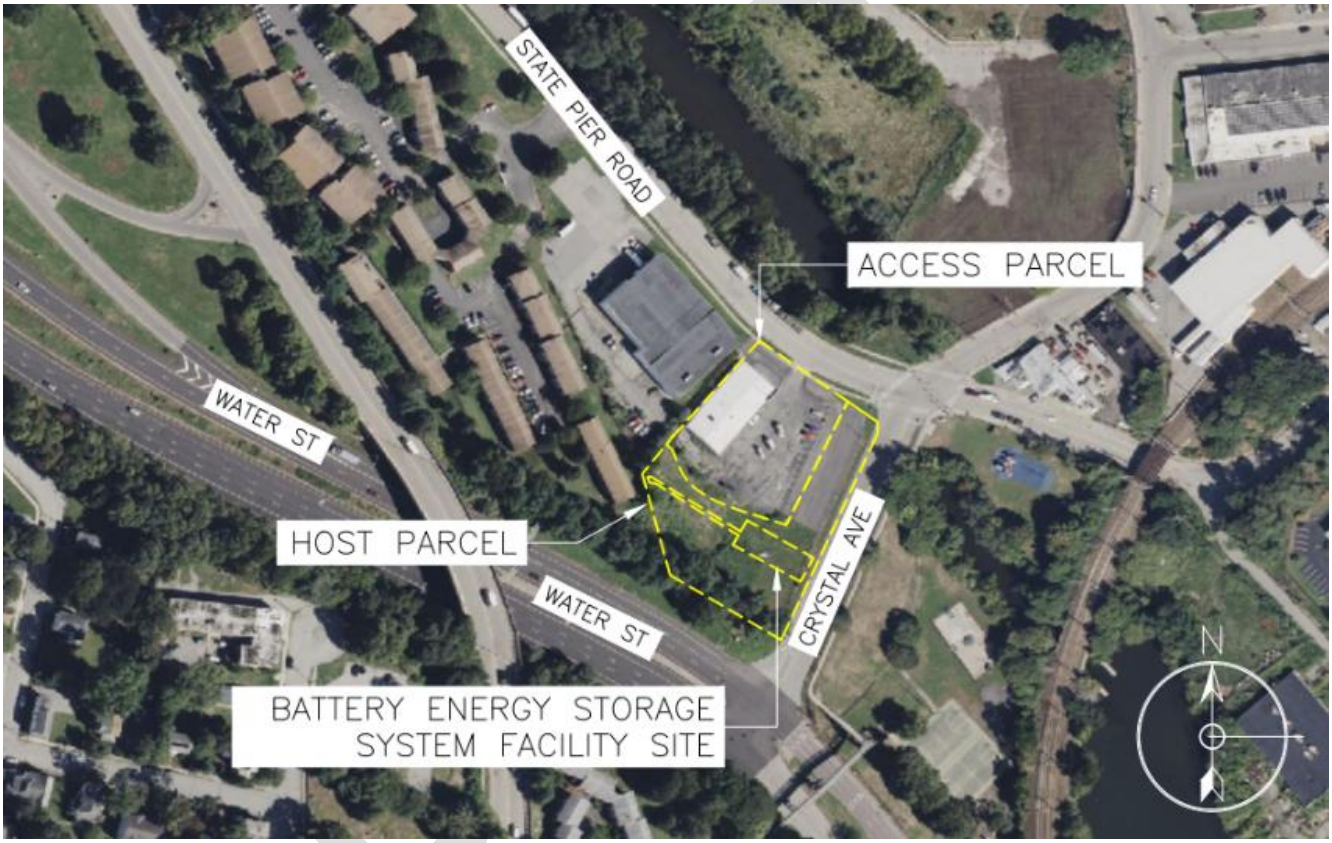

Figure 1 Site Overview

There are commercial/industrial properties located to the northeast and southeast of the site. There are a mix of low-rise multifamily dwellings to the northwest of the site. There are a mix of State roadway infrastructure, low-rise multifamily dwellings, and institutional uses to the southwest of the site. The closest multifamily dwelling to the BESS fence is over 150-feet away.

2.2 Energy Storage System Site Overview

The facility will be utilizing the Tesla Megapack 2XL ground mounted battery cabinets. The facility contains 5 MP2XL BESS cabinets divided into 2 transformer blocks. One BESS block consists of three MP2XL cabinets and one medium voltage (MV) transformer. The other BESS block consists of two MP2XL cabinets and one medium voltage (MV) transformer. The highest listed (AC) voltage for the BESS equipment at the facility is 480 from the MP2XL cabinets. The highest (AC) voltage inside the BESS facility is 15 kV at the medium voltage transformers.

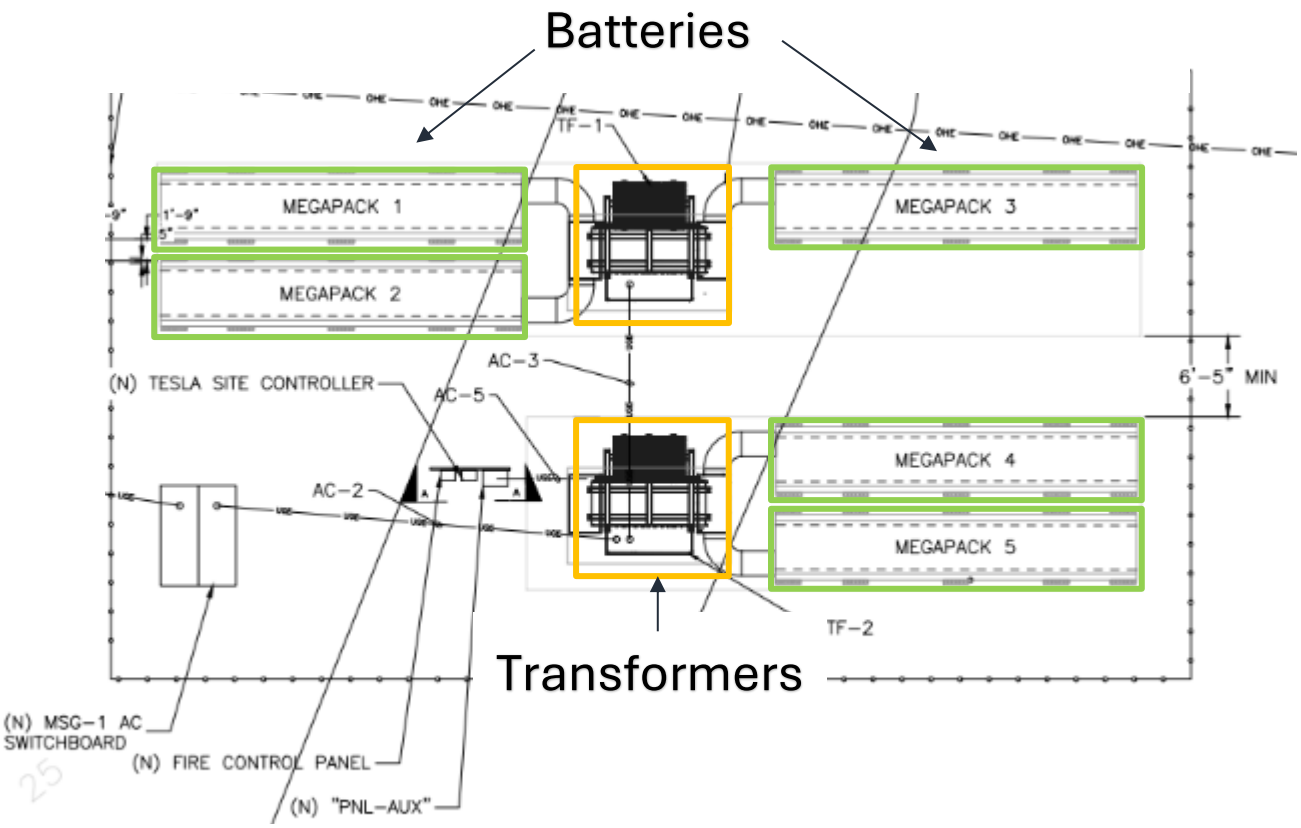

Figure 2 General Equipment Arrangement

3 MITIGATION

3.1 Battery Cabinet Equipment Overview

The smallest anatomy of a BESS is a cell. Cells are combined into modules which are combined into racks. Cabinets contain multiple racks and additional protection, monitoring, and isolation features powered by on-site auxiliary power.

Each MP2XL battery cabinet is IP66 rated and contains eight battery racks each containing three modules. Batteries are lithium iron phosphate (LFP) chemistry.

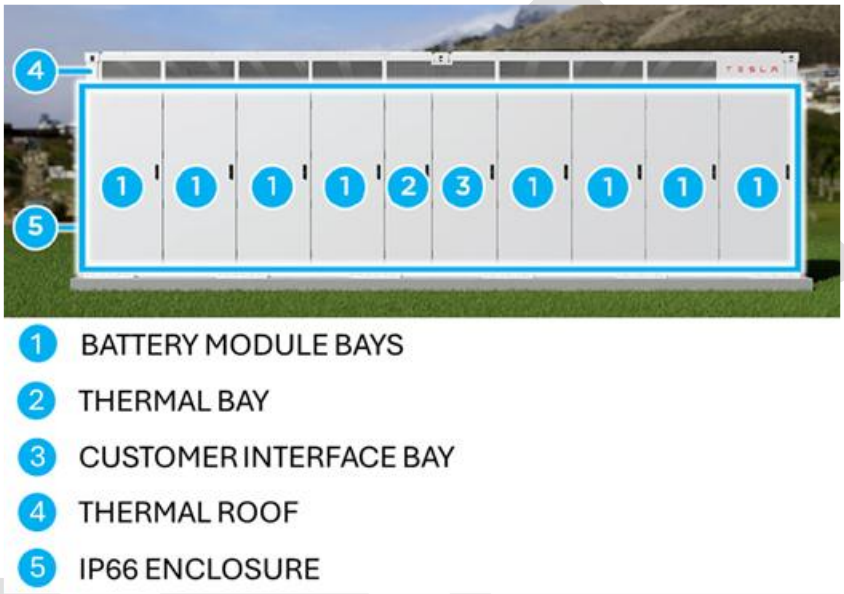

Figure 3 MP2XL Battery Cabinet Components

3.2 Fire Protection Overview

3.2.1 Site Access

Access to the site is provided via the main entrance located off State Pier Rd. The entry road has been designed to permit the apparatus turnaround consistent with NFPA 1.

3.2.2 Fire Alarm and Detection System

For the purpose of fire detection, an external flame detection system will be provided for the State Pier Rd BESS facility. The system will consist of pole mounted flame detectors with overlapping coverage areas to provide detection for the entire facility. The flame detection cameras will report to a fire alarm control unit (FACU) on site, as well as a remote fire alarm annunciator (FAA) located at the front gate for first responders. Alarm and trouble conditions will report locally to the FACU, as well as the remote monitoring station. A horn strobe for local notification of alarms is provided at the FACU.

3.2.3 Fire Protection Water Supply

There are two municipal fire hydrants located < 500 feet from the site. Water shall be used for defensive purposes to support exposure protection only, no offensive firefighting is reccomnded.

Figure 4. Hydrant Locations

3.3 Explosion Control System

The MP2XL includes a deflagration control system to mitigate the risk of an overpressure contour occurring from a cell failure. The system includes pressure-sensitive vents (overpressure vents) and sparkers installed throughout the battery module bay. The sparkers are designed to ignite flammable gases released early in a thermal runaway event, near their lower flammability limit (LFL) before they accumulate within the cabinet in greater volumes. They are installed at a variety of locations and heights throughout the battery module bays to ensure the flammable gases released during thermal runaway quickly meet an ignition source regardless of the initial release location. Sparkers are operated from an independent power system and are designed to operate even if power is lost from the grid. Sparkers operate automatically at regular intervals over the life of the MP2XL.

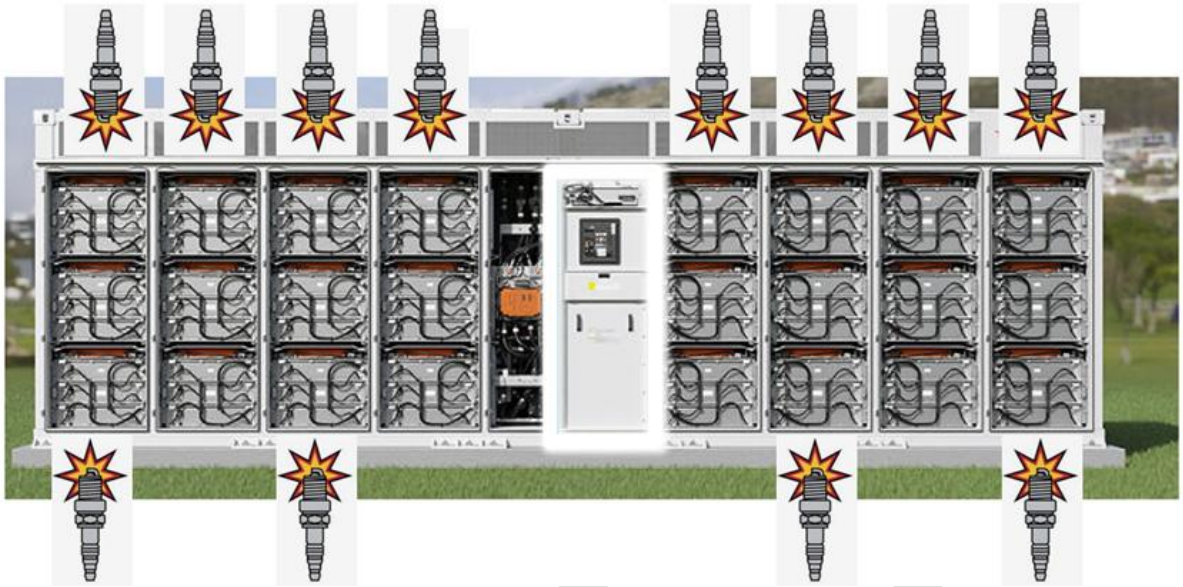

Figure 5 Explosion Control System

3.4 Battery Management System

The battery management system (BMS) monitors, protects, and manages the BESS, ensuring battery health parameters are maintained for efficient and continual operation.

Table 2 MP2XL BMS Functions

Monitoring	The BMS continuously monitors key parameters such as voltage, current, temperature, and state of charge (SOC).
Protection	The BMS protects the battery from over-charging, over-discharging, over-current, over-temperature, and short circuits by isolating batteries that exceed predetermined operating parameters.
Balancing	The BMS helps to equalize the SOC across all cells.
Thermal Management	The BMS regulates the battery temperature by controlling heating or cooling systems, keeping the battery within the predetermined temperature range.
Power Control	The BMS regulates the power in and out of the batteries.
Communication	The BMS remotely communicates the status of monitored parameters and autonomously performed functions.

4 PREPAREDNESS

4.1 Chemical Hazards

4.1.1 Combustion Gas

During a failure event, battery cells can produce toxic gases that have the potential to be harmful to site personnel and first responders. If the failure spreads to other BESS components, it can produce additional toxic gases similar to those released during the combustion of ordinary manufactured products. Although outdoor BESS cabinets are not occupiable, site personnel and first responders can still be exposed to these toxic gases while operating near a BESS during a failure or fire event. In the event of a gas release, these toxic gases are expected to be diluted by the entrainment of outside air. Fire department personnel should wear the appropriate personal protective equipment (PPE), as outlined in Section 4.5.

4.1.2 Hydrogen

When the temperature of a cell reaches the venting stage, the primary hazard is the production of hydrogen gas (H2). The gas is odorless, colorless, and requires internal sensors or external meters for detection. H2 is flammable and lighter than air.

Table 3 Hydrogen Characteristics

Appearance	Colorless Gas
Odor	Odorless
LFL	4%
UFL	76%
Auto Ignition	500°C/932°F
25% LFL	1% or 10,000 ppm
Vapor Density	0.69 (Air = 1)

4.1.3 Carbon Monoxide

Carbon Monoxide (CO) is an odorless, colorless gas, and requires internal sensors or external meters for detection. CO is produced during incomplete combustion and/or cell failure.

Table 4 Carbon Monoxide Characteristics

Appearance	Colorless Gas
Odor	Odorless
LFL	12.5 %
UFL	74.2%
Auto Ignition	607°C (1125°F)
25% LFL	3.125% or 31,250 ppm
Vapor Density	0.97 (Air = 1)

4.1.4 Transformer Dielectric Fluid

Dielectric fluid is used to insulate and cool site transformers such as MV transformers and auxiliary power transformers. During a transformer failure, arcing and sustained fire can lead to heat retention in the windings and metal cabinet of the transformer, making this a persistent fire.

4.1.5 Refrigerant

Refrigerant is commonly used within the BESS thermal management system. Refrigerants are nonflammable under normal operating conditions. However, refrigerants are pressurized and can become combustible when mixed with air at elevated temperatures and pressures. Refrigerants can also release toxic by-products as a result of heating and decomposition. In high concentrations, refrigerants can also become an asphyxiation hazard.

Table 5 Refrigerant Characteristics

Thermal Decomposition	HF > 250˚C

4.2 Electrical Hazards

Shielded electrical hazards at the BESS facility include battery cabinets, inverters, and transformers. Outer covers around the equipment eliminate casual contact and locks prevent access to energized areas.

Unshielded electrical hazards at the facility include exposed bus within a substation or overhead electrical connections to the surrounding grid. OSHA regulations require a minimum standoff distance of 10 feet from equipment and power lines. The minimum clearance should be increased by 4 inches for every 10kV over 50kV.

BESS products contain batteries that are ALWAYS energized and present an electrical hazard even when disconnected from an electrical source. The operation of breakers or E-Stops will serve to isolate trouble equipment. However, the operation of these devices will not remove stranded energy. Class C electrical hazards constantly exist at BESS facilities.

NFPA 1970 structural firefighting ensemble is not rated for arc flash hazards. Maintain a 10-foot standoff distance from any open doors on BESS cabinets.

E-field detectors are commonly used to identify potential AC hazards. These devices do not have the ability to detect DC voltage from battery cabinets. Do not use E-field detectors within a BESS facility.

4.3 Thermal Runaway and Fire Hazards

Thermal runaway occurs when an electrochemical battery cell's temperature increases at an accelerating rate in an uncontrollable fashion sufficient to result in damage to the cell. The thermal runaway progresses when the cell's generation of heat is at a higher rate than the heat it can dissipate. During thermal runaway, flammable gas is ejected by the battery cells and is ignited by the sparker system in a timely manner to prevent a deflagration event from occurring.

4.4 Explosion Hazard

The failure of a cell will begin with the venting stage; this is the pre-cursor to thermal runaway. Accumulation of flammable gases within a confined space, such as a BESS cabinet, can lead to an explosive atmosphere where the gas concentration falls within its upper and lower flammability limits. An explosion can occur when cell vent gases accumulate and contact a competent ignition source. While safety features are present to decrease the risk of an explosion, always assume that they are non-operational. Maintain an exclusion zone from the trouble equipment for the duration of the incident.

4.5 Recommended PPE

The recommended PPE is NFPA 1970 structural firefighting gear and the use of a self-contained breathing apparatus (SCBA) when exposed to respiratory hazards. All chemicals associated with the failure of BESS equipment and ancillary electrical components present dermal and respiratory hazards.

Note: The PPE recommendation is for emergency response operations and life safety. PPE recommendations for the post-fire removal of damaged modules will be defined by conditions found at the time of decommissioning. In addition, structural firefighting ensembles are not designed to provide protection from arc flash hazards.

4.6 BESS Subject Matter Expert

Typically, a BESS SME is a person or group familiar with the MP2XL BESS equipment, the site layout and equipment, installation guides and manuals, the BMS architecture, passive and active protection systems, notification sequencing, and this ERP.

The BESS SME, equipment owner, and site operator play a critical role guiding fire department personnel responding to a BESS emergency by coordinating the following:

- Ensuring security of the site and limiting access to only authorized personnel.
- Ensuring accountability of non-fire department personnel inside the facility.
- Ensuring authorized personnel have PPE that is appropriate to their assigned role/task.
- Reviewing and interpreting BMS data including SOC, state of health (SOH), temperature, and status of equipment.
- Locating and isolating trouble equipment.
- Ensuring an exclusion zone has been established around the trouble equipment.

- Expanding exclusion zone in the event additional battery cabinets sustain alarms or direct fire impingement.
- Evaluating the status of the explosion control and prevention systems.
- Identifying the need for exposure protection.
- Leading post-incident operations.
- Administering decommissioning plan.

5 RESPONSE

5.1 Tactics

DO NOT FORCE ENTRY

Fire department personnel should not encroach within 100 feet of the facility fence line until the trouble battery cabinet has been identified.

Upon arrival, fire department incident command should contact _____ at ___.___.____ to obtain preliminary information including the following:

- Accountability
  - ☐ Were any personnel present at the site?
  - ☐ If personnel are present, what is the status of their accountability?
- Equipment
  - ☐ What is the type and location of the trouble equipment in alarm?
- Alarm Type
  - ☐ What type of alarm has generated the initial response and have any other alarms been received that would suggest conditions are deteriorating?
- Equipment Status
  - ☐ Has trouble equipment been isolated autonomously or manually?
  - ☐ What is the SOC of the trouble equipment and facility?

5.1.1 Life Safety

BESS facilities are normally not staffed and are observed and controlled remotely. However, facility personnel may be on-site periodically for inspection, testing and maintenance of equipment. Accountability shall be confirmed with the LOC.

Obvious line of sight rescues is the priority for responding fire department personnel. Fire department personnel shall not enter the facility for recovery operations.

Unescorted Rescue Considerations:

- Is there a confirmed victim location?
  - No confirmed location – No entry advised
- Is the victim > 100 feet from doors on trouble battery cabinet
  - Rescue advised
- Is the victim breaking the plane on the battery cabinet doors or access point on electrical equipment ?
  - Possible shock /electrocution risk, rescue not advised.

5.1.2 Community Air Monitoring

Establish air monitoring 100 feet downwind from the facility fence line to evaluate gas dispersion from failed equipment. Visually observe smoke plume to ensure it is not encroaching on exposure structures. If metering equipment detects target thermal runaway gases (Carbon Monoxide – Hydrogen (Comb gas), consider evacuating affected areas.

5.1.3 Exclusion Zone

Once the trouble equipment is identified, establish a 100-foot exclusion zone. Expand the exclusion zone if failure conditions spread to adjacent equipment.

Figure 6 General 100' Exclusion Zone

5.1.4 Alarms Monitoring

Monitor input alarms from the BMS for the trouble equipment. Receipt of additional alarms can indicate deteriorating conditions within the trouble equipment. A review of the BMS can indicate the possible origin location and further impacted internal equipment.

5.1.5 Isolation of Trouble Equipment

Confirm trouble equipment has been autonomously isolated. If recommended by the BESS SME, remotely isolate adjacent equipment.

Fire Department personnel should never operate equipment or controls within the site. The BESS SME will coordinate all operational requests.

Never approach a trouble cabinet for manual activation of the E-Stop.

5.1.6 Condition Monitoring

From outside the exclusion zone, visually and audibly monitor the conditions of the trouble cabinet. Look for the presence of white gas, smoke, fire, and damage to the cabinet. Even if there are no visible or audible indications of failure, hazards to responding fire department personnel may still be present.

5.1.7 Exposure Assessment

Assess the adjacent equipment to determine if exposure protection is necessary. Evaluate the following:

- Are there any alarms in adjacent equipment?
  - Expand exclusion zone if adjacent equipment becomes involved.
- Based on thermal imaging camera readings, is there any increase in temperature on adjacent equipment?
  - If temperatures reach 50% of the average cell vent temperature as determined by UL9540A testing (approximately 173°F), see Section 5.1.8.
- Is there any direct flame impingement on adjacent equipment?

5.1.8 Exposure Protection

Exposure protection should be considered if conditions warrant or if recommended by the BESS SME. While maintaining the exclusion zone, establish a continuous water supply. From outside the exclusion zone, using a rain down method, apply water in a fog pattern to cool the exposure equipment. Do not use a solid or straight stream to ensure fire department personnel safety and limit water intrusion into uninvolved equipment.

5.2 Incident Stabilization

5.2.1 Under Control

The incident may be considered under control when:

- Fire is contained to the equipment involved with no exposure concerns
- No new alarms have been generated
- The volume of fire or gas has decreased

Once the incident has been placed under control, establish continuous fire-watch for the facility through decommissioning.

6 RECOVERY

Recovery focuses on equipment assessments for determining repair, replacement, or restoration as part of the facility owner/operator's recovery plan. Implementation of the recovery plan is the responsibility of the facility owner/operator and should be overseen by the BESS SME. Fire department involvement in the recovery plan is at the discretion of the BESS SME and the facility owner/operator.

Typical facility recovery plans can include:

- Facility fire watch
- Post-incident equipment assessment including:
  - Grid connectivity
  - BMS status
  - Fire alarm status
  - Fire suppression status
  - Explosion control status
- Lock out/Tag out
- Decommissioning
- Installation of new equipment
- Recommissioning

7 REVISION SHEET

Rev. No.	Date	Written By	Reviewed By	Approved By	Notes
0	September 5, 2025				Draft