

# PPE, Tools & Equipment for BESS

## Safety Procedures Guide

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### Essential Safety Procedures for All BESS Work

Follow these procedures when working on any Battery Energy Storage System, regardless of cooling method.

#### 1. Pre-Work Inspection

- Verify all required PPE is available and in good condition
- Confirm all necessary tools are present and properly calibrated
- Review system status and any recent maintenance history
- Identify hazards specific to the work area
- Communicate work plan with team members and site management

#### 2. Lockout/Tagout

- Always isolate all energy sources before beginning work
- Apply personal lockout/tagout devices to all isolation points
- Verify zero energy state using appropriate test equipment
- Follow site-specific LOTO procedures and documentation requirements
- Never remove another technician's lockout device

#### 3. Thermal Monitoring

- Use thermal cameras or sensors to assess heat levels before and during work
- Monitor for hot spots that may indicate developing issues
- Compare readings to manufacturer specifications and baseline temperatures
- Stop work immediately if abnormal thermal conditions are detected
- Document thermal readings as part of maintenance records

#### 4. Coolant Handling

- Follow Safety Data Sheet (SDS) guidelines for coolant storage, handling, and disposal
- Wear chemical-resistant gloves and splash goggles when handling coolant
- Store coolant in properly labeled, approved containers
- Have spill containment materials readily available
- Dispose of used coolant according to environmental regulations

#### Note:

Applies primarily to liquid-cooled systems. See Module 3 for specific tools.

## 5. Emergency Protocols

Know fire suppression systems and evacuation routes.

### Fire Suppression

- Know location of fire suppression systems
- Understand system-specific fire suppression methods (e.g., clean agent, water mist)
- Never use water on energized electrical equipment
- Activate fire suppression system per manufacturer guidelines
- Call emergency services immediately

### Evacuation Routes

- Identify primary and secondary evacuation routes before beginning work
- Know location of assembly points
- Account for all personnel during evacuation
- Follow site-specific emergency action plan

### Electrical Shock Response

- Do not touch victim if still in contact with power source
- Disconnect power using LOTO procedures if safe to do so
- Call for medical assistance immediately
- Administer first aid only if trained and qualified

### Chemical Exposure (Liquid-Cooled Systems)

- Remove contaminated PPE and clothing
- Flush affected area with water for minimum 15 minutes
- Refer to coolant SDS for specific exposure treatment
- Seek medical attention for any exposure

### Thermal Event/Thermal Runaway

- Evacuate area immediately
- Do not attempt to fight battery fires unless trained
- Activate fire suppression system if available
- Alert emergency services and site management
- Follow manufacturer thermal runaway protocols