




BATTERY ENERGY STORAGE SYSTEMS (BESS) EMERGENCIES

QUICK REFERENCE GUIDE

Initial Response Actions:

Conduct an Initial Scene Assessment as well as:

1. **IDENTIFY** the location and type of system
2. **SHUTDOWN** the BESS if necessary
3. **WATCHOUT** for high voltage & other hazard

IDENTIFY	SHUTDOWN	WATCH OUT
<p>LABELS:</p> <p>Battery Disconnect Emergency Stop (ESTOP) Battery Room</p>  <p>COMPONENTS:</p> <p>Battery racks or cabinets Gas detection equipment SDS's</p>	<p>If system is on fire or other life safety/property hazard exists</p>  <p>Locate emergency stop, disconnect or circuit breaker</p> <p>Shutdown the BESS</p>	<p>Stay away from open bus bars (shock hazards)</p> <p>Monitor for re-ignition with thermal imaging camera (TIC)</p>  <p>Look for electrolyte spills</p> <p>Monitor air for toxic/flammable gases</p> <p>Ventilate as required</p>

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General Warning and Cautions

In the event of damage or fire involving battery energy storage systems (BESS):

- Always assume the batteries and associated components are energized and fully charged.
- Safety Data Sheets (SDS) can provide important information regarding battery chemistry
- Exposed electrical components, wires, and batteries present potential shock hazards.
- **During incidents involving a BESS, responders should follow the steps: IDENTIFY, SHUTDOWN, WATCH OUT**
- Wear all PPE and look away when operating disconnects to protect against arc flash injuries.
- Locate building personnel responsible for the system and/or locate emergency contact numbers.
- Be prepared to control HVAC systems to prevent spread of smoke and toxic/flammable gases

ALARM ACTIVATIONS		FIRES	
Overheated Batteries/Gas Sensor Activation	Electrolyte Spill	Small Fires	Large Fires
<ul style="list-style-type: none"> • Shutdown of system may not be required, especially if critical systems will be disabled • Monitor battery for potential ignition with thermal imaging camera (TIC) • Check for deformities or bulging of batteries • Check for electrolyte spills • Monitor for toxic/flammable gas release, ventilate the area as necessary • Turn over incident to a qualified, responsible party for additional monitoring 	<ul style="list-style-type: none"> • Spill may not be visible if batteries are mounted inside a cabinet • Ventilate battery room as necessary • Check safety data sheet for specific hazards and mitigation information • Wearing PPE with SCBA, contain the spill (ensure compatibility with spilled product) • Neutralize & absorb corrosive liquids (only by qualified personnel) • Decontaminate PPE • Turn over incident to a qualified, responsible party for additional monitoring 	<ul style="list-style-type: none"> • SHUTDOWN\ESTOP entire system • Control ventilation of smoke and toxic gases • If applicable, use a dry chemical extinguisher to extinguish the fire • Do not overhaul electrical components • Check for electrolyte spills • Monitor battery for re-ignition • Turn over incident to a qualified, responsible party for additional monitoring 	<ul style="list-style-type: none"> • SHUTDOWN\ESTOP entire system • Control ventilation of smoke and toxic gases • Secure an adequate water supply • Extinguish the fire using a fog pattern from a sufficiently sized hose line (Except Sodium Sulfur BESS) • Do not overhaul electrical components • Check for electrolyte spills • Monitor battery for re-ignition • Turn over incident to a qualified, responsible party for additional monitoring