

Battery energy storage system (BESS) quarterly maintenance checklist

A quarterly battery energy storage system round is short on purpose: it catches the wear items that fail between annual services. This checklist is sized for a tech with a phone. Every item says what to look at and the photo that proves the round happened. Work is commonly verified against NFPA 855, manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The facilities or ESS service tech on the quarterly round, observing and documenting the state of the system rather than clearing any fire-safety function. When: Every quarter, walked with the BMS screen photographed so a slow-building cell imbalance is caught on the log before it trips the system.

Enclosure and thermal

- ☐ **Ventilation openings and clearances checked clear**
Intake and exhaust louvers unobstructed, nothing stored against the enclosure, code and manufacturer clearances around the unit kept. 2 photos required
- ☐ **Thermal-management operation observed**
Cooling or conditioning running as expected, cabinet temperature reading within the normal band shown on the display, no ice, condensate pooling or fan fault. 2 photos required

BMS status

- ☐ **Module and rack status and alarms read off the BMS**
State of charge, per-rack voltages and temperatures within range, any active or latched alarm photographed and recorded for the qualified party. 2 photos required
- ☐ **Cells and modules checked for swelling, leak or heat**
No visible swelling, venting, electrolyte residue or discoloration, no localized heat or smell at any module during the walk. 2 photos required

Life-safety interface (observe only)

- ☐ **Fire detection, suppression and gas-detection interface observed in normal state**
Detection, suppression and gas-detection panels showing normal and not in trouble, recorded as observed — functional testing stays with the qualified fire party. 1 photo required