



Battery Energy Storage System (BESS) Fire Service Response Guide



11/01/2023

FOR EMERGENCIES INVOLVING LITHIUM-ION BATTERIES IN LARGE SCALE ENERGY STORAGE OUTDOOR (NON-OCCUPIABLE) CABINETS

FIRE OR EXPLOSION

- Explosive mixtures of gases may form inside cabinets causing deflagration and potential for shock wave and projectiles
- Vapors are flammable and will ignite easily
- Energized electrical equipment will readily support and sustain a fire

HEALTH

- Gases are toxic and will irritate respiratory tract and skin
- Electrocutation hazard exists even after power has been shut down; do NOT enter areas unless site has been secured by utility and site operator

PUBLIC SAFETY

- Stay outside the fence line and deny entry; isolate 100 feet in all directions
- Stage upwind and avoid contact with smoke
- Wear full firefighter PPE with SCBA when conducting surveys near facility boundaries
- Evacuate downwind 300 feet or any areas impacted by visible smoke

EMERGENCY RESPONSE

- Contact site operator for assistance in accordance with the Emergency Response Plan (ERP). Confirm power isolation and shut-off.
- Use air monitoring outside fenced area looking for the presence of carbon monoxide (CO); if detected evacuate as necessary
- Use thermal imaging to determine if fire condition exists and check exposures
- **DO NOT USE WATER** on battery cabinets or energized electrical equipment; use water only for exposure protection
- Request local hazmat team
- Request UAS/drone for visual and thermal imaging support
- Battery fires may continue for several days; hazards exist even when smoke or flames are not visible

FOR IMMEDIATE ASSISTANCE, CONTACT OFPC AT 518-292-2200