2023 FIREFIGHTER SAFETY STAND DOWN

June 20, 2023

Firefighting Operations

General Hazards associated with all types of incidents • Off-gassing (white to gray) – indicates hazmat • Thermal runaway - uncontrollable self-heating state • Flaring - could be up to 3000 degrees F • Stranded energy - causes secondary fires and electrocution hazard.

Personal or Micro Mobility Fire

- Upon recognition that it is a Li-ion fire, a direct attack with water is preferred in full PPE with facepiece.
- If safe to do so, remove the battery from the occupancy. Use nonconductive tools, buckets, or shovels. Do not use interior stairs or elevators.
- After extinguishment, ensure a thorough search of the area is conducted for any battery cells that may have been dispersed prior to overhaul to limit secondary fires.
- Upon recognition of damaged batteries, upgrade the assignment based on jurisdictional resources.
- After extinguishment, temperature readings should be made with a TIC or a thermal temp gun. Look for trends to better predict a secondary fire from stranded energy.
- Overpack into a vented metal container rated for the watts of the battery and cover with a thermal regulating material.
- A charged hose line should remain in place anytime we are working around damaged batteries including overhaul and investigations.
- Depending on your jurisdiction, only certified/permitted disposal companies can transport damaged Li-ion batteries.

E-Bikes and the risks

Electric Vehicle Fire

- This could be a passenger compartment fire (no battery involvement) or caused by the batteries.
- Attack the fire with water at a 45-degree angle and from 40 feet away.
- Upon recognition of EV, upgrade the assignment based on jurisdictional resources.
- Look for flaring from battery vent points (running boards/rocker panels and wheel wells).
- Recognize off-gassing (white smoke even post extinguishment).
- Establish water supply, protect exposures, and evacuate the area.
- Initial evacuation zone should be 150 ft in all directions, if possible.
- Without a Life Hazard or Exposure, consider letting it burn.
- If the vehicle is extinguished, check temperatures of battery locations with TIC or temp gun. Look for trending temps for indications of thermal runaway. This will indicate secondary fire potential.
- If the batteries have suffered thermal or mechanical insult, the potential for electrocution is present. Limit contact to the vehicle.

EV Quick Guide

NFPA actively maintains a collection of Emergency Response Guides from 35+ alternative fuel vehicle manufacturers. The guides are free to download. To access these documents, visit:

Emergency Response Guides