RHODE ISLAND GOVERNMENT REGISTER
ONLINE PUBLIC COMMENTS
Date: 06/02/2021

Regulation: 450-RICR-00-00-7
Title: RI Fire Code (450-RICR-00-00-7)

Total Number of Online Comments Received: 2

Comment from: Scott Lang On 05/18/2021
This comment is in regards to the Fire Code, NFPA 1: 2018 Section 52.3.2.10. Thermal runaway has been shown to be a serious problem in energy storage systems around the world. A recent incident in Surprise, AZ seriously injured several members of the fire service. Fortunately, lithium-ion batteries vent gases during abuse such as overcharge and overheating PRIOR to thermal runaway. This off-gas event, if detected, and proper steps taken, can prevent a full blown thermal runaway condition. These gases consist of trace levels of electrolyte solvent vapors that cannot be detected by standard flammable gas detectors designed for LEL detection. We suggest modifying section 52.3.2.10 to require sensors for detecting battery off-gas events which trigger the electrical isolation of the affected battery module.

Comment from: Scott Lang On 05/18/2021
This comment is in regards to the Fire Code, NFPA 1: 2018 Section 52.3.2.4 (Hazard Mitigation Analysis). There have been a number of thermal runaway incidents in Energy Storage Systems around the world, including a serious incident in Surprise, AZ that injured several members of the fire service. Recent editions and revisions to the Fire Code and NFPA 855 are adding situations that would trigger an HMA in addition to the three listed in 52.3.2.4. Specifically, an HMA shall be required when an ESS battery technology emits flammable gases during abnormal conditions. And, an HMA shall be required when existing ESS components do not meet the requirements of UL 9540 and UL 9540A. These provisions will require system designers to carefully consider the hazards specific to lithium-ion battery technology.