

# Energy storage lithium battery fire



## Overview

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When fire broke out at the world's largest battery energy storage facility in January 2025, its thick smoke blanketed surrounding wetlands, farms and nearby communities on the central California coast. Battery Energy Storage Systems, or BESS, help stabilize electrical grids by providing steady power flow despite fluctuations from inconsistent generation of renewable energy sources and other disruptions. While BESS technology is designed to bolster grid reliability, lithium battery fires at some . A battery energy storage facility that was built inside an old power plant burned from Jan. (AP Photo/Ted Shaffrey) By MICHAEL HILL Associated Pres More and . The International Association of Fire Fighters (IAFF) in partnership with UL Solutions (ULS) and the Fire Safety Research Institute (FSRI), part of UL Research Institutes, released the technical report Considerations for Fire Service Response to Residential Battery Energy Storage System Incidents. In New York City alone, lithium-ion battery fires surged nearly ninefold - from 30 in 2019 to 268 in 2023 - illustrating how quickly these incidents can escalate (New York Post). One Moss Landing-scale event can stall a funding round or force a product recall. NFPA 855-the "Standard for the .

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### [Responding to Fires that Include Energy Storage Systems Using Lithium](#)

PDF The report, based on 4 large-scale tests sponsored by the U.S. Department of Energy, includes considerations for response to fires that include energy storage systems (ESS)

### **Emerging Fire Hazard: Residential Energy Storage Systems**

This research project is the first project to evaluate the result of failure in a residential lithium-ion battery energy storage system, and to develop tactical considerations for the fire service to these incidents.



### **Battery Energy Storage Systems: Main Considerations for Safe**

This webpage includes information from first responder and industry guidance as well as background information on battery energy storage systems (challenges & fires), BESS installation

### [Fears of Massive Battery Fires Spark Opposition to Energy Storage](#)

A battery storage system in Moss Landing, California caught fire in January, sending plumes of toxic smoke into the atmosphere and forcing the evacuation of about 1,500 people..



### [Fire Protection of Lithium-ion Battery Energy](#)



### [Storage Systems](#)

The scope of this document covers the fire safety aspects of lithium-ion (Li-ion) batteries and Energy Storage Systems (ESS) in industrial and commercial applications with the primary focus on active fire

### [Advances and perspectives in fire safety of lithium-ion battery energy](#)

In this review, we comprehensively summarize recent advances in lithium iron phosphate (LFP) battery fire behavior and safety protection to solve the critical issues and develop safer LFP



### [Considerations for Fire Service Response to Residential Energy Storage](#)

The report is a culmination of a two-year research project examining the characteristics of fires resulting from the overheating of lithium-ion battery energy storage systems (ESS) within

### [Fire Suppression for Lithium-Ion Battery Storage Systems \(BESS\):](#)

A layered approach to lithium-ion fire protection is preferred. Having proper detection methods in place can trigger the appropriate audio and visual warnings, and the suppression system



### **NFPA 855 Guide: Complying with Fire Code for Batteries**

Learn how to comply with NFPA 855 battery fire code requirements for energy storage systems. Key rules, spacing, UL 9540A testing, and documentation steps.

[When the world's largest battery power plant caught fire, toxic metals](#)

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