

Fire protection requirements for energy storage battery factories





Overview

Newer codes and standards such as NFPA 855 address size and energy requirements that building operators using these BESS solutions must meet. Some of the most notable requirements limit the maximum energy capacity of ESS groups or arrays to 50 kWh, 250 kWh per listed array, and 600 kWh per fire area. What are the fire codes for battery energy storage systems?

The model fire codes outline essential safety requirements for both safeguarding Battery Energy Storage Systems (BESS) and ensuring the protection of individuals. It is strongly advised to include the items listed in the Battery Safety Requirements table (Fig 3) in your Hazardous Mitigation Plan (HMP) for the battery system.

Are You ensuring compliance with battery-related fire codes & standards?

Thus, ensuring compliance with battery-related fire codes and standards is a responsibility that nearly all businesses now shoulder. In recent years, companies have adopted lithium-ion battery energy storage systems (BESS) which provide an essential source of backup transitional power.

Are battery energy storage systems safe?

WASHINGTON, D.C., March 28, 2025 — Today, the American Clean Power Association (ACP) released a comprehensive framework to ensure the safety of battery energy storage systems (BESS) in every community across the United States, informed by a new assessment of previous fire incidents at BESS facilities.

What is battery energy storage fire prevention & mitigation?

In 2019, EPRI began the Battery Energy Storage Fire Prevention and Mitigation – Phase I research project, convened a group of experts, and conducted a series of energy storage site surveys and industry workshops to identify critical research and development (R&D) needs regarding battery safety.

Why is fire safety important for battery cell production plants?



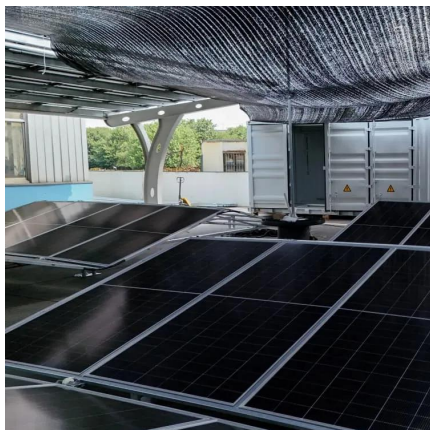
Hence, prioritizing fire safety is crucial to safeguard workers, protect assets, and prevent potentially catastrophic accidents. to present a thorough and generic solution with respect to the structural, technical and organizational fire protection of battery cell production plants.

Why is battery manufacturing a fire hazard?

The battery manufacturing process involves handling large quantities reactive materials, making the plants vulnerable to fire incidents. Real-life examples, such as the fire of a battery energy storage in Arizona or California in recent year, serve as a stark reminder of the devastating consequences.



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[Complying With Fire Codes Governing Lithium-ion Battery Use](#)

This Standard for the Installation of Stationary Energy Storage Systems outlines requirements for mitigating hazards based on the technology used, the installation environment, the size and ...

[Fire Protection for Lithium-Ion Battery Manufacturing Facilities](#)

Lithium-ion batteries are everywhere; from personal electronic devices (e.g., mobile phones and laptop computers) to electric vehicles (EVs) to battery energy storage systems (BESS). If it is ...



[Fire , Chemical Reactions, Heat Transfer & Safety , Britannica](#)

Fire, rapid burning of combustible material with the evolution of heat and usually accompanied by flame. It is one of the human race's essential tools, control of which helped ...

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