

## Solar Energy South Africa

# Energy storage cabinets cause fire in logistics warehouse



## Overview

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Do fire departments need better training to deal with energy storage system hazards?

Fire departments need data, research, and better training to deal with energy storage system (ESS) hazards. These are the key findings shared by UL's Fire Safety Research Institute (FSRI) and presented by Sean DeCrane, International Association of Fire Fighters Director of Health and Safety Operational Services at SEAC's May 2023 General Meeting.

Are lithium-ion battery energy storage systems safe?

As renewable energy infrastructure gathers pace worldwide, new solutions are needed to handle the fire and explosion risks associated with lithium-ion battery energy storage systems (BESS) in a worst-case scenario. Industrial safety solutions provider Fike and Matt Deadman, Director of Kent Fire and Rescue Service, address this serious issue.

What are stationary energy storage failure incidents?

Note that the Stationary Energy Storage Failure Incidents table tracks both utility-scale and C&I system failures. It is instructive to compare the number of failure incidents over time against the deployment of BESS. The graph to the right looks at the failure rate per cumulative deployed capacity, up to 12/31/2023.

Where can I find information on energy storage safety?

For more information on energy storage safety, visit the [Storage Safety Wiki Page](#). The BESS Failure Incident Database was initiated in 2021 as part of a wider suite of BESS safety research after the concentration of lithium ion BESS fires in South Korea and the Surprise, AZ, incident in the US.

What are the NFPA guidelines for energy storage systems?

The guidelines provided in NFPA 855 (Standard for the Installation of Energy

Storage Systems) and Chapter 1207 (Electrical Energy Storage Systems) of the International Fire Code are the first steps. Thermal Runaway Prevention and mitigation measures should be directed at thermal runaway, which is by far the most severe BESS failure mode.

What are the different types of energy storage failure incidents?

Stationary Energy Storage Failure Incidents – this table tracks utility-scale and commercial and industrial (C&I) failures. Other Storage Failure Incidents – this table tracks incidents that do not fit the criteria for the first table. This could include failures involving the manufacturing, transportation, storage, and recycling of energy storage.

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### The new warehouse era , Fire Protection Association

Fire remains the largest cause of damage to such warehouse buildings. The number of industrial fires may have fallen but the extent and cost of those that continue to happen are increasing. However, they can be contained ...

### Federal officials to help investigate cause of huge cold ...

Fire officials still don't know what sparked the destructive blaze at Lineage Logistics' Kennewick cold storage warehouse, but Benton Fire District 1 has asked for help from the U.S. Bureau of



### guidanCE for investigating LOGISTICS incidents and IDENTIFYING Root Causes

including determination of causes and, when appropriate, making of safety recommendations. A root cause analysis (RCA) is a method that allows identification of the true causes of incidents, ...

### Fire Suppression for Warehousing Industry , FirePro(TM)

According to the NFPA, the leading causes of fire in storage facilities are arson followed by electrical equipment (such as wiring, transformers, circuit breakers, control panels), followed by forklifts and finally chemical reactions between ...



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