

SAFETY IS FUNDAMENTAL TO BATTERY ENERGY STORAGE DESIGN AND OPERATIONS

- As California moves toward its 2045 goal of achieving 100% greenhouse gas-free electricity, renewable energy sources will become increasingly important in meeting the state's energy needs. Battery energy storage is integral to achieving this goal, allowing renewable energy to be captured and stored when it is produced and dispatched later when it is needed.
- California is a global leader in energy storage, possessing the largest fleet of grid-connected batteries in the United States. Energy storage plays a crucial role in enhancing grid reliability and complementing the state's plentiful renewable energy resources.
- CESA's highest priority is safely developing and operating energy storage systems. CESA collaborates with state and local governments, firefighters, standards organizations, and battery safety experts to promote best practices and appropriate regulations.
- Numerous local, state, national, and internationally recognized standards and codes have been developed to inform safe manufacturing, construction, installation, and operation of battery energy storage systems. For example, equipment must be certified to Underwriters Laboratory standards, and the projects are designed to meet standards established by the National Fire Protection Association (NFPA) – the same source of standards used for the safe design of schools and hospitals.
 - The standard specifically developed for energy storage systems is NFPA 855, which is the model for Chapter 12 of the California Fire Code. These codes and standards are continually updated to reflect the latest safety technology and practices, ensuring they remain at the forefront of fire protection.
- As California's energy storage industry develops more facilities, it reduces risk and enhances safety through collaboration with state and local authorities. Regular and transparent communication, training, and site visits with firefighters foster partnerships that enhance cooperation and maintain safety during the life of an energy storage facility. All battery storage facilities have emergency response and action plans submitted to local governments.
- No deaths or injuries have occurred due to fires at energy storage facilities in California.

- Battery energy storage facilities have minimal environmental impact. They do not produce any emissions or discharge waste under normal operations and often require a much smaller footprint than other facilities like power plants. Battery systems are highly regulated and subject to stringent certification and testing requirements.
- While fires at energy storage facilities are extremely rare, data collected by government agencies, firefighters, and hazardous substance experts consistently show no harmful contaminants in runoff water and no emissions exceeding nationally recognized safety thresholds, even within 50 feet of active incidents.
- Utility-scale energy storage systems are situated in secure facilities, with site plans specifically designed to maximize the safety of both facility operators and neighboring communities. These facilities are rigorously regulated and employ proven safety designs, features, and practices to effectively mitigate risks to operators, firefighters, and the wider community.
- Utility-scale storage systems have several layers of safety built into their design, including multiple sensors in each enclosure, compartment, and rack, an automated monitoring and control system, and 24/7 monitoring from operators to identify and respond to events as soon as possible.

For more information on energy storage safety, please visit CESA's Safety Resources website:

<https://storagealliance.org/safety-resources>