

ADVANCING ENERGY STORAGE SAFETY STANDARDS



Energy Storage is a Critical Part of America's Energy Future

Energy storage is an increasingly important component of America's electric grid infrastructure, serving as a leading technology for enhancing grid reliability and keeping electricity costs low. Energy storage can mitigate the impact of power outages by providing backup power during emergencies, support an efficient and cost-effective energy system, and ensure broader electric grid reliability and stability.

AS ENERGY STORAGE DEPLOYMENT GROWS, SAFETY IS A TOP PRIORITY

Energy storage safety incidents are very rare — there have been less than 20 incidents at operating energy storage facilities in the United States. However, as part of an effort for continuous improvement, the industry is prioritizing the incorporation of the latest best practices and strategies to maintain safety. State and local governments can support the responsible deployment and operation of energy storage by pursuing clear, uniform, and rigorous standards.

The clean energy industry, represented by the American Clean Power Association (ACP), encourages state and local jurisdictions to incorporate or adopt **National Fire Protection Association (NFPA) 855, Standard for the Installation of Stationary Energy Storage Systems**, to guide energy storage safety.



ESTABLISHED SAFETY STANDARDS MAKE ENERGY STORAGE SAFE

Fire Professionals, fire protection experts, and safety leaders have developed a suite of standards that keep energy storage projects safe. These standards play an important role in guiding consistent safety strategies and practices across the United States.

Adopting the most up-to-date edition of the National Fire Protection Association standard for energy storage systems ensures evidence-based, expert-driven rules govern the safety of energy storage projects. Uniformity in adopting and implementing this standard across states and jurisdictions will ensure that clear, evidence-based rules guide the future development and operation of energy storage facilities.

- **NFPA 855** provides mandatory requirements for the design, installation, commissioning, operation, maintenance, and decommissioning of energy storage facilities. The standard includes requirements for metrics such as maximum energy and spacing between units and lists several submittals that must be made to the regulating governmental entity, including 1) hazard mitigation analyses (HMA), 2) emergency Response plans, 3) details of all safety systems, and more.
- **UL 9540** is the safety standard for energy storage equipment, including batteries, that is required under NFPA 855. NFPA 855 requires that batteries included in energy storage projects are listed to the safety specifications included in UL 9540 and undergo rigorous fire testing. This standard ensures that equipment incorporated into battery energy storage facilities are tested, certified, and safe for operation on the electric grid.

COLLABORATION BETWEEN ENERGY STORAGE COMPANIES AND THE FIRE SERVICE IS ESSENTIAL

Energy storage companies and fire professionals engage in frequent collaboration throughout both the development and lifetime operation of the project. Regular and transparent communication, training, and site visits foster partnerships that enhance coordination and maintain safety during the life of an energy storage facility. The energy storage industry is committed to proactively engaging the fire service, and energy storage developers and operators engage in early, frequent, and ongoing communication with the fire service of jurisdiction for every project.

