Energy Storage Safety Collaborative Codes and Standards Report

The DOE Energy Storage Roadmap

The ES Safety Collaborative Codes and Standards Report is a critical component of the DOE OE Energy Storage System Safety Roadmap. The purpose of the roadmap is to promote confidence in the safety and reliability of the dynamic evolution of the unfolding energy storage systems environment. There are three major parts to the safety roadmap which includes [1] research and development to identify needed standards where gaps exist and then to [2] support efforts to make sure that developing standards are available. [3] The collaborative codes and standards report is designed to document these efforts as well as provide the status of safety standards developments within the industry. This is done with the seasonal release of the ES Safety Collaborative Codes and Standards Report.

The ES Collaborative Safety Codes and Standards Report

Hierarchy of Codes Categories

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CODES AND STANDARDS UPDATE FALL REPORT 2022

FALL 2022 Highlights

- The NFPA 855 2023 revision has been approved and is available for purchase at nfpa.org.
- UL, IEEE, NFPA and ASME are undergoing revisions via their STP committees.
- NFPA 855 and the IFC standards, UL 9540, ASME, and NFPA 5000 and IEC standards, should be followed closely.
- The 2024 ICC IFC has completed alignment of energy storage requirements with NFPA 855 standards. Work by the FCAC committees on the 2027 revisions will begin shortly.
- The International Electrotechnical Commission (IEC) has 12 Electrical Energy Storage standards projects under development. Known as ES standards under IEC TS 62933-x-y labels, these will play a more important role in global ES requirements in the decade ahead. Three of the important projects are highlighted in this report.

GOALS FOR 2023

- Build an on-line repository of all ESS Safety Codes and Standards
- Update standards in real-time on-line.
- Highlight a key safety standard and post/publish based on relevance and activity of the standard.
- Compare changes between new editions vs. current editions of key safety standards as they become enacted.
- Conduct interviews with key safety codes SME’s and post on-line.
- Reach out to additional laboratories and R&D facilities to engage with us on ESS Roadmap objectives.
- Deliver a current and relevant state of developments in safety codes and R&D via panels and presentations at the 2023 DOE Energy Storage Safety and Reliability Forum anticipated for April 2023.

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