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Comment Received From: Phillip Carranco

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UL9540A Test Results Submitted are Non-Compliant

Dear CEC Staff:

This letter addresses the UL 9540A Test Results package docketed as TN 272154 (submitted August 24, 2026 by Sequoia Energy Storage 1, LLC / Dudek) for the Seahawk Battery Energy Storage System Project under the Opt-In Certification Program.

The submitted materials consist primarily of a TÜV Rheinland Certificate of Approval (CU 72302693 01, issued November 21, 2023) for a Contemporary Amperex Technology Co., Limited (CATL) Rechargeable Lithium-ion Battery System tested to ANSI/CAN/UL 9540:2020 (Second Edition), together with associated UL Follow-Up Service documentation for component lithium-ion cells evaluated under UL 1973. Despite the document title, the package does not contain complete UL 9540A (Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems) reports at the cell, module, unit, and installation levels required under current standards.

Non-Compliance with Latest NFPA 855

Under the Opt-In Certification Program, CEC staff evaluate projects against current BESS safety standards and require the project owner to follow the latest version of NFPA 855 for construction, commissioning, and operation of the BESS. The 2026 edition of NFPA 855 is the current edition. It requires:

• Energy storage systems to be listed and labeled in accordance with UL 9540; and
• Fire and explosion testing (including large-scale fire testing) on representative ESS in accordance with UL 9540A, with specific guidance on large-scale fire testing in Annex G.11.

The submitted UL 9540:2020 certificate does not satisfy these requirements.

Deficiencies Relative to Current UL 9540 and UL 9540A Editions

• **UL 9540**The Second Edition (2020) has been superseded by the Third Edition (June 28, 2023, with revisions through March 7, 2025). The Third Edition includes critical updates such as formal AC/DC ESS distinctions, clarified energy capacity and separation limits tied to UL 9540A performance criteria, explosion-control alignment, and standardized residential installation-instruction templates (Annex H). New listings to the 2020 edition are no longer issued by NRTLs after the September 2024 effective date of the Third Edition.

• **UL 9540A**: The package lacks evidence of testing to the Fifth Edition (March 2025) or Sixth Edition (March 13, 2026). The Sixth Edition is the current published edition and

incorporates a formalized Installation-Level / large-scale fire test (Section 10) aligned with NFPA 855-2026 Annex G.11, along with other refinements to gas measurement, residential vs. non-residential criteria, and deflagration testing (Annex C). The Fifth Edition also contains significant methodological updates relative to earlier versions. Older data cannot demonstrate the non-propagation, gas-composition, and post-deflagration performance criteria now expected.

Implications for Local Fire Authority Fire Management Plan (FMP) and Emergency Response Plan (ERP)

Local fire authorities must develop mandatory Fire Management Plans and Emergency Response Plans based on reliable, current thermal-runaway and large-scale fire propagation data. Without UL 9540A testing under the Fifth or (preferably) Sixth Edition, the following critical information is unavailable or inadequate:

- Quantified gas composition, volume, and flammability under thermal runaway;
- Demonstration that fire involving one unit will not propagate to adjacent units under the intentional-ignition / large-scale fire-test conditions required by NFPA 855-2026;
- Validated separation distances, suppression effectiveness, and post-deflagration enclosure behavior;
- Data needed to size explosion-control systems (NFPA 69) and to define first-responder tactics, exclusion zones, and water-application strategies.

These gaps prevent the local Fire Marshal from preparing complete, defensible FMP and ERP documents that meet the consultation and mitigation expectations of the Opt-In process (Public Resources Code Â§ 25545.19 and related CEC guidance).

Recommendation

We recommend that the Applicant be required to obtain and submit complete UL 9540A testing performed in accordance with the Sixth Edition (ANSI/CAN/UL 9540A:2026) of the Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems, including the Installation-Level large-scale fire test. The resulting data should support a current NRTL listing to UL 9540 Third Edition (with 2025 revisions). Only with this documentation can the project demonstrate compliance with the latest NFPA 855 and enable the local fire authority to develop the required Fire Management Plan and Emergency Response Plan.

We request that CEC staff note this deficiency in the completeness review or subsequent assessment and require the Applicant to address it prior to further processing of the Opt-In application.

Please contact me if additional information or clarification is needed.

Sincerely,
Mr. Phillip Carranco
Regulatory Compliance Expert