

DOCKETED	
Docket Number:	24-BSTD-01
Project Title:	2025 Energy Code Rulemaking
TN #:	255323-3
Document Title:	Staff Supplement to 2025 CASE Report - Laboratories
Description:	N/A
Filer:	Javier Perez
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	3/28/2024 4:31:48 PM
Docketed Date:	3/28/2024



***Staff Supplement to California Statewide Codes and Standards
Enhancement (CASE) Team Measure Proposal Laboratories***

Date: March 28, 2024

Pages: 2

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Description of Proposed Regulatory Changes

The measure change proposal submitted by California Statewide Codes and Standards Enhancement (CASE) Team and titled “Laboratories” proposes to make the following changes to the 2025 Standards:

- Include building occupancy group L in the list of occupancy groups covered by the Energy Code.
- Revise prescriptive requirements for laboratory and factory exhaust systems to include occupied and unoccupied exhaust airflow rates. Prescriptive occupied and unoccupied minimum exhaust airflow is based on 1.0 cfm/ft² or 0.67 cfm/ft², respectively, code compliance, accreditation, or health and safety, or pressurization needs.
- Add prescriptive heat recovery requirements for laboratory exhaust systems over 10,000 cfm, including energy recovery ratios of 45% at heating design condition and 25% at cooling design conditions, recovery from at least 75% of all lab exhaust air volume, and specifics for when heat recovery is not used.
- Add a prescriptive option to meet design fan power requirements as calculated in Section 140.4(c) of the Energy and add a simple turndown controls combination option. Additionally, minimize descriptions of wind speed based controls and contaminant based controls by referencing ANSI Z9.5 Appendix 3.
- Add prescriptive requirement to limit reheat in laboratory spaces.

Staff agrees with the proposed changes to Sections 100.0, 100.1, and 140.9(c), and have incorporated substantively similar changes into the proposed 2025 Express Terms.

Staff does not agree with proposed exceptions to section 140.4(c) and have proposed to limit the exceptions applicable to Section 140.4(c) in the Express Terms.

Staff propose this alternative because the Laboratory CASE Report does not include an analysis showing that the excepted process equipment will perform similarly to the required equipment in the section.

Staff Analysis and Conclusion

Staff analyzed the submitted proposal and reached the following conclusions for the measures included in the Express Terms:

- Based on the evidence presented in the proposal, the measures, as proposed, is cost effective and the author has appropriately followed the Energy Commission's Life Cycle Cost methodology.
- Measure costs premiums presented in the proposal are reasonable and appropriate for the measure proposed.
- Measure energy savings presented in the proposal have been appropriately modeled and are credible.
- Measure environmental impacts presented in the proposal are reasonable and appropriate for the measure proposed.

Staff additionally finds that the staff alternative for 140.4(c) falls within the analysis for the proposal, and is found to be feasible and cost effective based on the proposal's analysis for the following reasons:

- Removing the proposed exceptions will result in no changes to the Energy Code, including no changes to costs and energy usage.