DOCKETED

Docket Number:	17-BSTD-02
Project Title:	2019 Title 24, Part 6, Building Energy Efficiency Standards Rulemaking
TN #:	222268
Document Title:	Staff Supplement High Performance Walls
Description:	Staff Supplement to CASE Report #2019-RES-ENV1-F by Michael Shewmaker.
Filer:	Adrian Ownby
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	1/19/2018 2:34:20 PM
Docketed Date:	1/19/2018

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

Staff Supplement to CASE Report #2019-RES-ENV1-F

Date: 2017-11-03

Pages: 2

Author: Michael Shewmaker

Subject: High Performance Walls, 2019-RES-ENV1-F

DESCRIPTION OF PROPOSED REGULATORY CHANGES

CASE report #2019-RES-ENV1-F, titled High Performance Walls, proposes to make the following changes to the Standards:

- The CASE proposal recommends changes to the language in Section 150.1(c)1B to clarify the requirements by separating framed, unframed and mass walls.

- The CASE proposal recommends changes to TABLE 150.1-A by changing the prescriptive U-factors required in climate zones 1 & 11-16 to U-0.043.

- The CASE proposal recommends changes to the language in Section 150.2(a)1Ai & 150.2(a)1Bii by changing the insulation requirement for extensions of existing wood-framed walls to R-21 in a 2x6 framing.

Staff agrees with the proposed changes to Section 150.1(c)1B, 150.2(a)1Ai and 150.2(a)1Bii, and have incorporated substantively similar changes into the proposed Express Terms.

Staff does not agree with the proposed changes to TABLE 150.1-A and have instead proposed to make the following changes in the Express Terms:

- Modify TABLE 150.1-A by changing the prescriptive U-factors required in climate zones 1-5 & 8-16 to 0.048.

Staff are proposing this alternative because of stakeholder opposition to the proposed U-factor of 0.043. Industry has indicated that builders are not yet familiar, nor comfortable with the concept of high performance walls, and that the cost associated with the 0.043 U-factor is overly burdensome.
In light of their concerns, the Energy Commission has decided to adopt a prescriptive U-factor requirement of 0.048, which is based on 2x6 framing at 16” o.c. with R-21 cavity insulation and R-5 continuous insulation. Staff are proposing this U-factor in order to continue pushing the thermal performance of the walls without introducing any major additional cost or significant changes to construction practices compared to the 2016 Standards.

STAFF ANALYSIS AND CONCLUSION

Staff has analyzed the submitted CASE report and reached the following conclusions for the measures included in the Express Terms:

- Based on the evidence presented in the CASE Report, the measures, as proposed, appear to be cost effective and the author appears to have appropriately followed the Energy Commission's Life Cycle Cost methodology.

- Measure costs premiums presented in the CASE Report appear reasonable and appropriate for the measure proposed.

- Measure energy savings presented in the CASE Report appear to have been appropriately modeled and appear credible.

Staff additionally find that the alternate proposal for TABLE 150.1-A falls within the analysis of the CASE report, and is found to be feasible and cost effective based on the report's analysis of the CASE proposal for TABLE 150.1-A, for the following reasons:

- A U-factor of 0.048 was evaluated for the 2019 CASE report and found to be cost-effective in all climate zones except 6 & 7. The Energy Commission is not proposing changes to the U-factor requirements in climate zones 6 & 7.