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Staff Supplement to CASE Report #2019-RES-ENV2-F

Date: 2017-11-03

Pages: 2

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Subject: High Performance Attics, 2019-RES-ENV2-F

DESCRIPTION OF PROPOSED REGULATORY CHANGES

CASE report #2019-RES-ENV2-F, titled High Performance Attics, proposes to make the following changes to the Standards.

- The CASE proposal recommends the following changes to TABLE 150.1-A and TABLE 150.1-B:
  - TABLE 150.1-A
    - Above deck insulation (Option A): R-10 with no air space, and R-8 with air space in climate zones 4 & 8-16
    - Below deck insulation (Option B): R-25 with no air space, and R-19 with air space in climate zones 4 & 8-16
  - TABLE 150.1-B
    - Above deck insulation (Option A): R-10 with no air space, and R-7 with air space in climate zones 4, 8, 9 & 11-15
    - Below deck insulation (Option B): R-28 with no air space, and R-19 with air space in climate zones 4, 8, 9 & 11-15

Staff agrees with the recommended changes to TABLE 150.1-A and TABLE 150.1-B, below deck insulation, and has incorporated substantively similar changes into the proposed Express Terms.

Staff does not agree with the proposed changes to TABLE 150.1-A and TABLE 150.1-B, above deck insulation, and have instead proposed to make the following changes to Section 150.1(c)1A and TABLES 150.1-A and 150.1-B in the Express Terms.

- Remove the above deck insulation option from the Prescriptive Standards (§150.1(c)1Ai).
- Modify TABLE 150.1-A and TABLE 150.1-B to reflect deletion of the above deck insulation option and removal of 'no air space' values/option for below deck insulation.

Staff are proposing this alternative because the CASE report's analysis was based on a below deck insulation system, which also sets the standard design in the performance software. It was also determined that the higher R-value proposed would require thicker insulation and at the

thickness proposed it was deemed no longer feasible as it could lead to structural problems. For these reasons, above deck insulation as a prescriptive option will be removed from the 2019 Standards and instead users wanting to install insulation above the roof deck will be directed to use the performance approach.

Furthermore, staff propose the 'no air space' values/option for below deck insulation be removed to eliminate confusion over what is required. Removal of the 'no air space' options will help simplify the code, and in turn make it easier for users to comply. Also, as was the case with below deck insulation, the standard design assumes an air space and therefore projects containing assemblies with no air space should use the performance approach to evaluate compliance.

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 Section 150.1(c)1A falls within the analysis of the CASE report as we are not proposing anything new, and are instead advocating for the removal of above deck insulation and the 'no air space' values/option from the prescriptive requirements.