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Gabel Energy Comments to Docket 17-BSTD-01

Additional submitted attachment is included below.



October 20, 2017

CEC

Docket: 17-BSTD-01

2019 Building Energy Efficiency Standards Rulemaking

Re: Pre-Rulemaking Draft Language Comments

Dear Commissioner McAllister and Energy Commission Staff:

I would like to submit a few comments to the current 2019 draft language for consideration as an energy consultant who works closely with my design clients and building departments to help make sense of the code in a way that can be enforceable:

10-106: Locally Adopted Energy Standards: There seems to be a typo, in which the language as written would go against the intent of the code. *(a)2 The Energy Commission finds that the standards will not permit buildings to be designed to consume **MORE** energy than permitted by Title 24 Part 6.*

§100.0(a)3B: Is it the intent to require spaces conditioned via evaporative cooling to now be covered under Title 24 Part 6? By removing the words “mechanical cooling” that is what is implied. If not, suggest adding language here (as it is in other sections of the code) that evaporative cooling is exempt and will not trigger the space as “conditioned” or “indirectly” conditioned.

Indirectly or directly conditioned (not including spaces using evaporative cooling), or process spaces.

§100.0(e)2Bi: It has been not clear that Section 120.8 does not apply to High Rise Residential and Hotel Motel Buildings due to this section applying sections 120.0 through 140.8 to all these buildings types. Suggest adding language that 120.8 only applies to nonresidential buildings.

Sections applicable: Section 120.2 through 120.7 and 120.9 through 140.8 apply to....Section 120.8 applies to newly constructed nonresidential...

§100.0(e)2Bii: See above for same issue regarding Section 120.8

§100.0 Table 100.0-A Should become the basis for a table of contents to the

standards at the beginning of the code (not just on page 48 of the code)

§100.1(b): The following definitions should be added:

Appliance: As it applies to those building features that Title 20 dictates. It is often confusing to not find the equipment efficiency in Section 110.2, and if there is a definition leading people to when the Appliance Standards is applicable, that may help clear up the confusion.

Dormitory: Occupancy type to be used as a compliance occupancy throughout the code (envelope, mechanical; lighting) as is stated in Table 1-2

Simple Mechanical Systems: To help support the Design Review requirements and be in tandem to the “Complex Mechanical System” definition.

The following definitions should be rewritten:

Fenestration Area: It is not clear why “windows” is called out for nonresidential buildings only, but for low-rise residential building it also includes windows, skylights and glazed doors. It seems that BOTH building types should list fenestration as the same including windows, skylights and glazed doors.

Lighting Controls: EMCS should be added under control definitions

§110.2(a): Can language be included to guide people to Title 20 for equipment efficiencies NOT listed in Title 24 Part 6?

§110.6(a)2-4: I agree with Ken Nittler that the NA6 COG 1,000 sq. ft. limitation is abused and should be removed. This will help streamline the enforcement process.

§110.3(c)3: Is changing the temperature from 110 to 120 supported by the plumbing and building code?

§110.6: Table 110.6-B Guidance on if Low-e film/coating could be considered “tint” or not would be great.

§110.10(a) Exception 2: seems to apply to all these building types in their entirety, of which option #4 does not seem to be a good fit for nonresidential nor hotel/motel building and I can SEE people trying to make this work because it is NOT clear that it only applies to High Rise Residential Buildings.

- §140.0(b): Make it clearer that Section 120.8 does not apply to High Rise Residential and Hotel/Motel Occupancies
- §140.3(a)5B Exception: Only windows are listed, should it not also include glazed doors? Fenestration was a better word.
- §140.3(d) Daylighting Devices will be VERY difficult to plan check and suggest this become a performance option to simplify the enforcement process.
- §140.7 Table 140.7-A: Being able to determine “Asphalt” versus “Concrete” at design and for verification by the AHJ at plan check will be very difficult. I suggest the worst-case values be used, and that the different classifications be removed to simplify the enforcement process.
- §141.0(b)2liii: The 5,000 sq. ft. limitation for this alteration approach will cause documentation to be provided to verify the area limitation which adds cost to a method that has been about wattage and is typically documented with audits, NOT floor plans. This new requirement will also cause complexity to the enforcement process.
- Table 141.0-D Since there is no third party verification process in place, can this table be changed to NOT include this language? It causes confuses in the enforcement process.
- §150.0(c) I agree with NAIMI that the minimum wall insulation requirements should be increased to R-15 and R-20
- §150.0(j)2 Exception 3 has historically caused confusion in which it is assumed that QII is required for the entire building to take this pipe insulation exception. Suggest adding clarification language that makes it clear that the QII process for the wall insulation installation being used instead of pipe insulation must meet QII procedures, not that QII is triggered for the entire home.
- §150.0(k)2C: The added language implies that all general lighting must now be dimmable, is that correct? Or, only that if the lighting IS dimmable (i.e. JA8) that the dimming control must be readily accessible?
- §150.0(k)3B: With the trigger being listed at 4 or more dwelling units, it makes me wonder why not 3 dwelling units which is the trigger for multi family (versus single family with is a duplex or less). Would not 3 dwelling units make more sense?
- §150.0(k)3C: See above

§150.0(m)13B I am concerned that the industry is not prepared for a drop of 0.58 W/CFM to 0.45 W/CFM even though I applaud the move. Suggest that there be training provided to HVAC contractors on how to successfully test a system to these new requirements.

§150.0 Table 150.0-A line item 7: Why has this also not been changed to “LED Light Source” like #6 above?

§150.2(a)1A: Due to the complexity involved with additions, I do not think QII should be application for additions less than 1,000 sq. ft., and that language needs to be provided to clarify additions greater than 1,000 sq. ft. (sf):

1. It should be clear that the addition is not broken out around the residential, but built all in one continuous floor area. Many times we will have 100 sf over here, 500 sf up there but they all add up to 1,000 sf or more. This would NOT be a good application of QII and I do not see how they could be successful.
2. The performance software will have to be programed to handle QII for only part of the building and not apply to the existing or altered features of the home.
3. When an addition is a “newly” conditioned space such as a garage, basement, or even an addition done without a permit getting up to speed with current code, I do not see how QII can be successful.

I am aware that they could take a performance penalty for NOT doing QII, but these building types already have difficulty in meeting current code do to their existing infrastructure and lot/set back limitation.

§150.2(b)1Hiii: A heat pump water heater option should be included as an DHW alteration type.

Thank you for the opportunity to provide these comments and suggestion.

Sincerely,



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Principal

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