DOCKETED	
Docket Number:	17-BSTD-02
Project Title:	2019 Title 24, Part 6, Building Energy Efficiency Standards Rulemaking
TN #:	222760
Document Title:	CalCERTS, Inc. Comments On 45-Day BEES Language
Description:	N/A
Filer:	System
Organization:	CalCERTS, Inc.
Submitter Role:	Public
Submission Date:	2/27/2018 2:21:39 PM
Docketed Date:	2/27/2018

Comment Received From: CalCERTS, Inc.

Submitted On: 2/27/2018 Docket Number: 17-BSTD-02

On 45-Day BEES Language

Additional submitted attachment is included below.

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February 27, 2018

To: California Energy Resources Conservation and Development Commission

Docket # 17-BSTD-02

RE: CalCERTS Comments on 45-Day BEES Language

CalCERTS' goal in providing these comments is to improve the overall compliance with the energy code by making it easier to understand, enforce, and follow. These are mostly clarifications and suggestions for rewording of the language. With the exception of the comment regarding PV Verification, detailed in a previously docketed comment, they are not substantive.

Section 10-103(b)1A – CalCERTS recommends adding language that allows documents to be shared via e-mail, electronic transfer, or providing a link.

Section 100.0(A)3 – CalCERTS recommends clarifying this language. This section seems unnecessary. What kind of building is not unconditioned, indirectly conditioned, directly conditioned or a process space?

Section 100.1(b) Definitions – CalCERTS recommends that the definition of ACCESSIBLE be amended as follows: ACCESSIBLE is having access thereto, but which first may require removal or opening of access panels, doors, or similar obstructions. For the purposes of duct sealing, accessible does not include ducts that can only be accessed by the removal of drywall or other permanently installed building material, ducts in an attic that are not visible from a catwalk or other form of standing platform, ducts in a crawlspace that has less than 18" of horizontal or vertical clearance, ducts suspended more than 16 feet' above a floor, or ducts on a roof more than 16 feetabove grade that do not have a permanently installed access ladder, stairs or access door.

Section 100.1(b) Definitions – CalCERTS recommends that a definition be added for <u>Zonally Controlled Central Forced Air Systems</u>, as used in Section 150.0(m)13C and elsewhere. Suggested definition: Ducted space conditioning systems with a single air handler that is able to

automatically control airflow through different ducts by means of motorized or actuated dampers. These may or may not meet the requirement for the Zonal Control Compliance Credit.

Section 100.1(b) Definitions – CalCERTS recommends that a definition be added for <u>Zonal Control Compliance Credit</u>, as used in the RCM, ACM, Residential Appendices and elsewhere. The definition should include that the credit applies to properly designed Zonally Controlled Central Forced Air System or by multiple systems that service separate zones.

Section 100.1(b) Definitions – CalCERTS recommends that a definition for <u>multi-family</u> be added and that the definitions of single family, multifamily, townhouse, low-rise residential, and high-rise residential be carefully reviewed to resolve any ambiguities or conflicts between them.

Section 100.1(b) Definitions – CalCERTS recommends that a definition for <u>Entirely New or Complete Replacement Space-Conditioning System</u> be added and that the following language be removed from section 150.2(b)1C:

installed as part of an alteration, shall include all the system heating or cooling equipment, including but not limited to condensing unit and cooling or heating coil for split systems; or complete replacement of a package unit; plus entirely new or replacement duct system (Section 150.2(b)1Diia); plus a new or replacement air handler.

This section is intended to define what falls into this category, but as written, the word "shall" implies that altered systems must include all the system heating and cooling equipment, etc. It caused confusion among contractors who take it to mean that you must replace all of the equipment and not just parts of it.

Suggested definition: Entirely New or Complete Replacement Space-Conditioning System: A system installed as part of an alteration, addition, or new construction that includes all new or replaced heating or cooling equipment, including but not limited to airhandler, condensing unit and cooling or heating coil for split systems; or package unit; plus an entirely new or replacement duct system (Section 150.2(b)1Diia).

Section 100.1(b) Definitions – (similar to previous comment) CalCERTS recommends that a definition for Entirely New or Complete Replacement Duct System be added and that the following language be removed from section 150.2(b)1Diia:

Entirely new or complete replacement duct systems installed as part of an alteration shall be constructed of at least 75 percent new duct material, and up to 25 percent may consist of reused parts from the dwelling unit's existing duct system, including but not limited to registers, grilles, boots, air handler, coil, plenums, duct material; if the reused parts are accessible and can be sealed to prevent leakage.



This section is intended to define what falls into this category, but as written, the word "shall" implies that they must be constructed of at least 75 percent new duct material, etc.

Suggested definition: Entirely new or complete replacement duct systems: An altered space conditioning system that includes 75 percent or more new or replaced duct material, by length, and all new, replaced, and remaining existing ducts are accessible and can be sealed to prevent leakage.

Note: This definition is repeated in the nonresidential section 141.0(b)2Di

Section150.1(c)14 – CalCERTS strongly recommends that language be included in this section that requires third party verification of the performance of the PV systems and that JA11 be moved to the Residential Appendices and all responsibilities assigned to the enforcement agency be re-assigned to HERS raters.

Section 150.2(b)1H Water-Heating Systems – CalCERTS recommends a careful review of this section. The current language causes a great deal of confusion. We would be happy to provide specific edits that do not change the current intent upon your request. For example:

- The first sentence ends with the word shall, but the following list of individual requirements each contain the word "shall".
- Section 150.2(b)1Hii –As written the word "shall" implies that you must install a demand recirculation system with manual on/off control. Suggested language: <u>When a</u> recirculation distribution system serving individual dwelling units <u>is installed</u> . . .
- Section 150.2(b)1Hiii reads: "Altered or replacement water heating systems shall meet
 one of the following requirements:" but then goes on to lists types of water heaters, not
 requirements.

Thank you for this opportunity to comment on the 2019 code. We look forward to the Commission's response to these comments. Please let us know if we can help.

Sincerely,

Russell King, M.E.

Senior Director of Technical Services,

CalCERTS, Inc.

