

**DOCKETED**

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*Comment Received From: Russell King, M.E.  
Submitted On: 3/9/2021  
Docket Number: 19-BSTD-03*

**CaICERTS, Inc comments on 2022 Express Terms**

*Additional submitted attachment is included below.*



March 9, 2021

To: California Energy Resources Conservation and Development Commission  
From: CalCERTS, Inc., CA HERS Providers  
Re: Comments on CEC proposed Express Terms for the 2022 Energy Code, Docket # 19-BSTD-03

CalCERTS appreciates this opportunity to provide feedback to the California Energy Commission. For those who may not know, CalCERTS is an approved California HERS provider. We train, certify, and provide quality assurance on HERS Raters in the state. HERS Raters are the third-party special inspectors that provide field verification and diagnostic testing to assist building departments in the enforcement of the Title-24, part 6, Energy Codes. We would like to take this opportunity to address specific proposed changes for the 2022 code language that affect HERS raters, HERS providers and the HERS industry in general. Our comments stem from our mutual goals of:

1. Improved compliance with the energy code
2. Simplified and streamlined protocols and procedures
3. Reasonable alternatives to compliance options
4. Enforceability of the requirements

We request to be directly involved with the development of the details of any new verification protocols and any regulations that directly affect us. We appreciate the hard work and dedication by CEC staff and consultants and their roles in meeting the above goals.

**BEES Section 150.0(m)13C - Zonally Controlled Central Forced Air Systems, Exception 1**

It is not clear why single speed compressors should be exempt from this requirement. Please clarify.

**Incorrect Reference in BEES**

Section 110.8(i), 10-113(a), 10-113(b), 10-113(d), and 110.8(i)3 all reference 150.2(b)1H which is incorrect, they should reference 150.2(b)1I

**General statement regarding HERS verification of ventilation systems**

HERS raters frequently encounter systems that are designed to meet the ventilation requirements as far as airflow and controls, but are designed in such a way as to be virtually impossible to test, eg., the supply air outlet is hidden behind decorative structure and the inlet

is 30 feet off the ground. We frequently tell raters to tell installers that “if it can’t be tested, it can’t be passed”, but there is no code language to back that up. We request that a general statement be made in the code that ensures that testability be part of the requirements of compliance, such as:

“Systems shall be installed in a manner that facilitates testing by one of the approved methods in the Reference Appendices. Inlets and outlets shall be readily accessible to the testing personnel and equipment. If a system cannot be readily tested using one of the approved methods, it shall be deemed out of compliance.”

#### **BEES Section 150.0(o)1H**

It is not clear what the intent of this statement is: “Ventilation airflow of systems with multiple operating modes shall be tested in all modes designed to meet the required whole-dwelling unit ventilation airflow.” Why would some operating modes not be designed to meet the requirements and how would a rater know? Please clarify.

#### **General Comments regarding Joint Appendices Sections**

We have comments or concerns with each of the following JA sections. We did not have time to formulate specific language changes (strikeout and underline). We request to work with staff to work out the specific language changes for each one prior to the 45-day language. We do not feel that any of our suggested changes are substantive in practice.

#### **JA7.5.6.2 Revision Control**

The current requirement is that if any changes are made to a signed document CF1R, CF2R, or CF3R, the document must be resigned and resubmitted. This can be extremely burdensome for large projects. Often the changes are very minor, such as address or project name. Often the changes happen many months after the documents have been signed and the original signatory is unavailable or unwilling to resign the document. We request that this be modified to specify specifically what types of changes trigger this requirement.

#### **JA7.6.2.2.4 Digital Signatures**

The requirement of “The Registration Provider's digital signature shall be based on a digital certificate issued by a certificate authority approved by the California Secretary of State.” has limited us to one option. If the authority that we can use happens to go out of business, this would cause unacceptable disruption. We suggest that this section be modified to allow other options.

#### **JA7.6.3.2.1.3 Electronic Signature Capability**

The requirement for an “electronic image of their handwritten signature” is overly burdensome to providers, consumers, installers and builders. It is also becoming obsolete. Many other industries that require legal electronic signatures do not have this requirement. We suggest that this section be modified to allow other options.

#### **JA7.6.3.2.3.1 - JA7.6.3.2.3.3 Signer Review and Signature Actions**

The language in this section regarding the verification of completeness prior to applying one's signature is overly restrictive and complicated to enforce as written. We suggest modifying the language to be more practical to how the process actually works.

#### **JA7.6.3.2.7.1 Receive and Process Output from Compliance Software or External Digital Data Sources**

This section requires approval of all means of importing input data, such as project information and test results. We feel that this requirement is obsolete and unnecessary. How the data is imported into the registry, whether typed in by hand or send directly from a digital test device should not need approval as long as the data that is entered is verified and accurate. Hand entered data is more likely to be incorrect than digitally transferred data. We suggest removing this section or greatly simplifying it. Furthermore, the approval process puts additional burden on CEC staff.

#### **JA7.7.1.2.1 EDDS Data Exchange Requirements**

The requirements in the section regarding initiating data transfer while user is logged in, unattended data, and opportunity to review are obsolete and unnecessary. We suggest modifying the language to be more practical to how the process actually works.

#### **RA3.7.4.1.2 Balanced Ventilation Systems**

Balanced ventilation systems are being installed where the ventilation air supply outlet is attached directly to the return side of the HVAC system. Presumably, they are expecting the HVAC system to distribute the fresh air evenly throughout the house when it turns on. Not only does this make it difficult to measure ventilation airflow and duct leakage, but the interaction between the ventilation system and HVAC system is unpredictable. Typically, the ventilation system is an ERV/HRV unit that runs continuously. When the HVAC system is not running, the small amount of ventilation air being blown into the HVAC duct system will take the path of least resistance. It is not possible to predict where it will go. When the HVAC system turns on it will impart a negative pressure on the ventilation system supply side, which will increase the ventilation air flow rate by an unknown amount. This essentially is the same as increasing duct leakage. If the ventilation system is turned off due to bad air quality (e.g., wildfire smoke) and the HVAC system turns on, it will draw in outside air despite the ventilation system being turned off. A better design approach would be to put the ventilation supply outlet in the ceiling or wall near the return grill. We suggest adding language to this section that prevents attaching the ventilation air supply outlet to any side of the HVAC system ducts. This suggested change is referenced in the next item.

#### **RA3.1.4.3.1 Diagnostic Duct Leakage From Fan Pressurization of Ducts**

The Residential Compliance Manual (section 4.6.2.3) has the following language:

The outside air ducts for CFI ventilation systems are not allowed to be sealed/taped off during duct leakage testing. However, CFI outdoor air ductwork that uses controlled motorized dampers that open only when outdoor air ventilation is required and close when outdoor air ventilation is not required may be closed during duct leakage testing.

This language is not found in the Reference Appendices and is therefore often missed by installers. We recommend similar language being added to RA3.1.4.3.1.(a) We suggest the following language:

“Any outside air ducts, whether for CFI or balanced ventilation systems, that are attached to the HVAC ducts shall not be sealed off for the test. Motorized dampers that open only when outdoor air ventilation is required and close when outdoor air ventilation is not required may be closed during duct leakage testing. Fan powered ventilation systems shall not be attached to the HVAC system per section RA3.7.4.1.2”

See suggested change to RA3.7.4.1.2 above.

#### **RA3.8.4 Determination of Test Results**

This section references RESNET 380 Section 3.4.1, 3.5.1, 3.5.2.

3.4.1 – should be 4.4.1

3.5.1 – should be 4.5.1

3.5.2 – should be 4.5.2

#### **RA4.4.17 HERS-Verified Demand Recirculation: Manual Control (RDRmc-H)**

This section references section RA4.4.7.3, which does not exist. We think it should be referencing section RA4.4.7.1

#### **RA4.4.1 Proper Installation of Pipe Insulation**

Item (d) specifies that these insulation requirements only apply “gas” water heaters. We do not believe it is intended to apply only to gas water heaters. We suggest removing the word “gas”. Also the numbering of this sections is incorrect: d, e, f, d, e.

<End of comments.>

Thank you for the opportunity to comment.

Signed,

A handwritten signature in black ink, appearing to be a stylized name, possibly 'R. Smith' or similar, with a long horizontal stroke extending to the right.

Senior Director of Technical Services  
CalCERTS, Inc.