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California Energy Commission

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Re: Docket No. 14-BSTD-01

California Energy Commission

**DOCKETED**

**14-BSTD-01**

TN 74042

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Dear CEC Staff

CalCERTS has been working very closely with the Building Standards Office and the Standards Implementation Office on completing all the compliance, installation and verification forms required under the 2013 Standards. The 2013 Standards represented a major expansion of an already well-established basic process that registries were implementing for the 2008 Standards. The 2008 Standards required only HERS forms be registered, but the 2013 forms extended that requirement to include all non-HERS forms to be registered with the providers.

There are three major complaints about the 2013 documentation process as it now stands. First, the number of forms has expanded. However, many of the 2013 forms are actually forms that have existed since 2008 code or earlier, but now they have to be registered. We will discuss and provide solutions to this situation a little further on in these comments. Second, it is true that the 2008 forms that were already familiar to industry stakeholders from various trades contain more pages to accommodate finer parsing of the data. Again, there are solutions to this situation a little farther down. And the third major complaint is regarding the signature process that was changed from 2008 to 2013. While the 2008 signature process may not have been acceptable to the CEC, the solution put in place in the 2013 Standards is not acceptable to the industry, and can be streamlined with some thoughtful reworking.

CalCERTS would like to respond to, and propose solutions for, one of the issues raised during the November 3 workshop on the 2016 Standards. That issue, which is discussed in reference to section 10-103 (a) 3B of the Standards: "There is a perception that there are too many forms or perhaps too much information is being gathered into the residential HERS providers' data registries."

Through the development of the data registry for the 2013 Standards and by receiving feedback from the Raters, Contractors, and Energy Consultants who make frequent use of the CalCERTS site, we have found that the core issues are the number and complexity of the forms, and the steps required to enter the data into the Registry, rather than the amount of data being collected. In short, the problem is not with the acquisition of the information

needed to meet the stated goals and objectives. The problem is the process that was developed to acquire and organize the data into useful and actionable information and to assign liability and accountability to compliance.

Due to that experience, and stemming directly from it, there are some very straightforward ways CalCERTS, Inc proposes to address these issues:

**1. Create a ‘master’ CF2R and ‘master’ CF3R’ for submission to Building Departments.**

These forms (in simple checklist format) would indicate which other 2R or 3R forms were required for the project to pass Title 24, and a final could only be printed when those required forms had been completed and signed in the Registry. The forms would come directly from the HERS Provider and would not require any signature, simply a watermark or other indication from the Registry that the appropriate forms had been completed. Building Departments that want to receive paper versions of the forms indicated on the ‘master’ 2R or 3R could log in to the Registry, download the PDFs in question, and print them. Per the 2013 Standards, Building Departments are already able to login to a HERS Provider to view a Project Status Report for any project in their jurisdiction, so extending that ability to include ‘master’ forms and downloading of the other forms is relatively simple for the Providers to accomplish.

**2. Change the requirements for data entry.**

Currently the Providers are required to accept data entry in a format that closely matches the forms in question. The forms are designed for review by Building Departments rather than for ease of use by users in the field or data-entry personnel. Allowing the Providers to create ‘wizards’ to facilitate data entry and minimize repeat entries of the same information across multiple forms will greatly simplify the Registration process for Raters and Installers.

**3. Remove or revise the current restrictions on electronic signatures.**

Frequently when installers choose not to participate in sampling, the Rater will perform their own testing and then fill out the relevant 3R and 2R forms, the latter on behalf of the contractor. Before the completed 3R’s may be printed, however, the installer must login, individually review each form, and append their electronic signature. Then the Rater must be notified so they can login into the Registry and print their completed documents. There are multiple possibilities for improvement here. First and foremost, installers should not be required to login and individually review each form, though they should be given that option if desired. Instead they should be able to navigate to a ‘sign-off page’ where they can review summary details of the forms in question and sign off. Second, it should be entirely possible for installers to assign Raters the ability to sign-off on their behalf in such projects – in other words, if the Rater is entering the test data on the 2R, the installer should be able to give the Rater authority to sign-off on the test data, while still retaining liability for the project through signature agreements that establish this. Providers can retain the assignment of such authority and govern which projects in the Registry have that capability and which do not, meaning that there will always be a clear record of accountability and liability.

The above proposals not only speed up and simplify the overall process, but will help achieve the goals and objectives listed in the workshop. For clarity, each goal is quoted below, and then answered or referenced to other parts of this document for Staff to consider.

- A. Goal 1: “Complement the local enforcement agencies compliance efforts by ensuring that responsible persons document and certify that their work is in compliance”

- a. Our proposals above simplify the paperwork required by Building Departments in general; meanwhile Building Departments already have access to detailed project information in any Registry via the Project Status Report. If our proposals are implemented, Inspectors will be able to review one document to determine if all the Title 24 requirements have been met and certified, or login and quickly verify the same.
- B. Goal 2: “Through transparency establish liability and accountability, and provide a clear record that is consistently and systematically kept to support enforcement”
  - a. These goals are currently being met, but at the cost of increased aggravation, confusion, and delay for users, especially installers. Our proposals would maintain liability and accountability but would be faster, simpler, more convenient and transparent.
- C. Goal 3: “Provide information for future Standards development and evaluation needs based on actual building data, and in some cases without the need for resource intensive RD&D efforts”
  - a. This goal can ONLY be achieved by capturing relevant building data as entered by Raters and installers. We propose to maintain the amount of data collected – we can’t hope to inform future Standards development, or to evaluate our progress towards statewide goals such as Net Zero, without a robust and relevant data set. As outlined above, we believe there are ways to continue to gather the necessary data while reducing the time and confusion for data entry.
- D. Goal 4: “Support and augment future RD&D Programs - The registry data will augment or in some cases entirely replace the need for new RD&D projects”
  - a. As above we argue that Providers can continue to collect the data required by the 2013 Standards in a more convenient fashion.
  - b. Unless we collect that data, it will shut the door on the ability to use it to inform RD&D and other programs such as incentives and others.
- E. Goal 5: “Incentive and Outreach Programs - Assist the CPUC and the IOUs with developing and improving new incentive and outreach programs”
  - a. As above.
- F. Goal 6: “Simplification of the Standards - Help staff identify what provisions of Part 6 are rarely or never used and perhaps eliminate those provisions along with the related forms”
  - a. This information has been available to the CEC since the last code cycle. The additional data collected under the 2013 requirements should help us:
    - i. Fine-tune the Standards by determining which provisions are rarely or never used
    - ii. Help determine which measures fail Quality Assurance most often, and
    - iii. Help establish ‘typical’ ranges for test results and data entry.

With respect to the Next Steps listed, our comments and suggestions follow. Again we have restated each step for clarity.

1. “Is there value in having an Installation Certificate that the Installer has to sign to establish liability and accountability for compliance and to document compliance?”

- a. There is unequivocal value in requiring signed, registered Installation Certificates. For one thing, with respect to sampled addresses, a signed, registered 2R is the ONLY document certifying that the address meets Title 24 – without such a document how can there be liability or accountability, particularly when Quality Assurance has already demonstrated that the non-tested addresses sometimes fail to meet the Title 24 requirements?



Furthermore, Installers and Raters sometimes follow different testing protocols or have to meet different criteria under the Title 24 requirements – data regarding the Installers’ tests would certainly be lost if the 2016 Standards reverted to pre-2005 requirements for data entry regarding installer processes! This would be a major step backwards. The whole premise of sampling is that ALL projects have been tested by the installer, and the Rater is just checking randomly among a population that has been certified 100% compliant.

2. “Is there value in having the Installation Certificates registered to establish a consistent and systematic record?”
  - a. Absolutely, as above. Additionally, having Installation Certificates available in the Registry is necessary for Quality Assurance to determine when discrepancies originate with the Installer or with the Rater.
  - b. History tells us that prior to the initial requirement to register documents there were massive abuses of the system. The major abuse was that some stakeholders could see there was no real way to enforce the document process because it was too difficult to get the records, and then, only if the records were maintained at the building departments. Penciled copies were being sent to Building departments, but not the Provider, no data was kept, and it was a mess. Also, forms were commonly xeroxed and used over and over again, which actually avoided testing altogether. Not registering ALL the documents would put the program back to the same state it was in when there was no registration of any documents required, which led to a condition where abuses occurred, along with just ignoring Title 24 altogether. These were the exact reasons that registration was developed in the first place.
3. “Are there improvements that can be made to the signature process required for residential compliance documents through the HERS Provider Registry?”
  - a. Yes, as discussed above in our third proposal, there are improvements that can be made to simplify the signature process, which in turn can greatly reduce the delay between data entry and generation of a passing CF3R in the Registry. Our proposal would be implemented in such a way as to not lose the chain of liability and accountability.
4. “How can the registration process be designed to be of most value to Enforcement Agencies in carrying-out their plan check and inspection responsibilities?”
  - a. Substantial steps forward have already been taken to provide Enforcement Agencies with direct, simple access to data on projects in their jurisdiction via the Project Status Report. Implementing a ‘final’ document for 2Rs and 3Rs would streamline the process even further by both reducing paperwork and providing inspectors with a simple ‘yes/no’ answer to the question of whether a project met its Title-24 requirements.
  - b. For Plan Check, the registration process could be used to flag important information that the building departments should verify. This could remove the difficult process of getting copies of CF-1R forms overlaid on to the plans for permit application.
5. “How can usability of the current system be improved?”
  - a. The above proposals, if implemented, should go a long way towards increasing usability.



- b. Usability is a function of ease of access, process, relevance, accountability, accuracy, and confidence of completion. Our proposals address and improve all of these.
  - c. The building departments should be able to come up with some consensus on what features and aspects of the (improved) system would be useful to them.
6. "What is the best process for collecting the data needed for further program development, evaluation and enforcement purposes?"
- a. HERS Providers represent the best process for collecting this data, as they span the entire state of California, maintain a robust data set, and are subject to oversight by the Energy Commission.
  - b. There are technological advances in data acquisition that are being developed currently that will be useful in development, program evaluation and management, and enforcement.
  - c. Once the data has been conveniently collected and submitted to the registry, the opportunity for multiple uses is immediately available. For instance, the data could be parsed for Energy Efficiency studies; or for Building Departments to assess their own information; and of course, for incentive programs to assess best measures per climate zone, or per zip code or in whatever fashion desired.
7. "For nonresidential registries, same questions as above: How much information is needed for effective Standards enforcement and development, and further program development and evaluation efforts by the CPUC and IOUs; how can we take advantage of electronic media to efficiently collect and retain information; what forms should be uploaded (Perf-1, etc.), performance input/output files." (See nonresidential comments below.)

## NONRESIDENTIAL REGISTRIES

While it is not always accurate or helpful to just "copy and paste" processes from one segment of the industry to another, there are enough similarities in broad concept to make this a relevant question for nonresidential data registries. The HERS process and the nonresidential processes are similar. While Acceptance Testing is not exactly the same, as Field Verification & Diagnostic Testing (FV/DT), it is in fact done by specially trained and credentialed technicians (similar to a HERS Rater), and provides evidence, data, liability and accountability attesting to proper performance of equipment, systems and processes. The compliance documents required to be submitted with the permit application are tantamount to the CF-1R of the HERS process. The acceptance testing done by approved technicians is similar, at least conceptually to FV/DT for residential.

This will be a significant impact on the nonresidential installers and acceptance testing stakeholders, but the 2013 Standards are already being implemented, and the industry is beginning to adapt to these new requirements, by the time the 2016 Standards are implemented, it would most likely represent a step backwards. The real danger in cutting back (or never enforcing the registration of documents for nonresidential) is that it will almost assuredly follow the same path that early residential documentation followed, i.e., there was very little, to no, compliance with data registration, so there was almost no information available for the CEC, CPUC and building owners.



## FINAL COMMENTS

While there are many improvements that we suggest be made to the 2016 Standards, it should be remembered that the 2013 process is essentially complete and in place. In the ensuing two or so years until implementation of the 2016 Standards, private industry will have worked out many of the current difficulties. It would be a terrible loss of progress, good work, and much greater capability to simply consider discarding the bulk of the data process in the 2016 Standards.

There are many, many "ease of use" features that providers will be programming into their current registries, once all the forms are done. If the changes suggested above as proposed improvements were implemented, registry use would be even easier and more palatable.

But the MOST important argument in support of maintaining the 2013 Standards requirements into 2016 (with some proposed improvements as above) is that of increasing the number of permits being pulled. There are currently 4 programs that are being piloted to explore how to achieve a greater number of permits being pulled in the residential market. ALL 4 of these programs have asked for and received data and information acquired through document registration in the 2008 and 2013 codes. Without this vital data, these programs would be very difficult, if not impossible, to implement. In fact, arguably, one of the reasons that it has taken as long as it has to get programs going is that prior to registration of documents, there really was no economical and efficient way to get the data needed to support programs that will lead to more permits.

Furthermore, it would be a mistake to think of this as only a residential problem. It is pretty much accepted that large commercial projects always have permits. After all, it would be pretty hard to build a 250-room hotel without having the civic administration, health and safety and building departments involved. But there is feasibly some number of smaller nonresidential jobs that go unpermitted. The nonresidential HERS requirement for testing ducts on systems that service 5,000 sf or less represents somewhere between 5%-10% of the registrations done under the 2008 Standards. In any case, it will take the diligent acquisition of data to get a better understanding of this.

Respectfully Submitted,



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