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CalCERTS Comments on Quality Assurance Pass Fail Criteria

On October 4, 2023, CalCERTS, Inc. (CalCERTS) met with the California Energy Commission Standards Compliance Branch to discuss some of the proposed changes to the upcoming Staff Report. We are grateful for the opportunity to comment and provide recommendations.

A subject that we have a great deal of experience in is administering an effective Quality Assurance program. We recommend the following from the experience of having conducted thousands of blind Field Quality Assurance reviews, as well as a significant understanding of the costs associated with HERS Ratings and how Raters operate during FVDT inspections.

Criteria for Passing Diagnostic Test Field QA

- Because of the number of variables that can influence diagnostic test results, we recommend that the determining factor of whether a QA has passed is that QA results meet the certificate of verification requirements.
- We recommend that an arbitrary percentage requirement between Rater and QA test results not be used as a determinant for whether a QA has passed. Every diagnostic test is different and influenced by a variety of reasons.
- Rater diagnostic testing and the costs associated can be directly related with the expediency of conducting tests. The common operating procedure with many Raters is to stop testing once the tested measure has met the requirements on the certificate of verification. Further accuracy requires additional time and effort. This directly translates to a higher cost of diagnostic testing that is unnecessary since the requirements on the certificate of verification have been met.

Indeterminate Field QA

Indeterminate QA results can occur. There are various reasons a QA Review cannot assess whether Rater test result was conducted truthfully and accurately. The following are some examples:

- Humidity controlled thermostats for variable speed space conditioning systems may reduce overall airflow in order to reduce relative humidity. Often, these systems are Rater tested in the presence of the installer, or with specific instructions from the installer on how to bypass airflow speed restrictions. Because of the multitude of such systems available, the complexity of these systems, and lack of access to installers, the QA Reviewer may not know how to circumvent speed restrictions in a specific manufacturer or system type. In this event, often the best that can be done is an airflow measurement at the slower speed, along with a fan watt draw measurement to directly compare ratios with Rater results. This ratio can only provide an idea of whether the system *may* have been compliant during Rater FVDT testing, but is not definitive.
- In the event a significant amount of time passes between Rater FVDT inspection and QA review, it is possible that duct systems have degraded for a variety of reasons. In these situations, a QA review of duct leakage may not be definitive. A QA review at this point generally conducts a visual inspection to determine if system could have passed on the date of Rater FVDT inspection. Many variables may not allow an accurate assessment of whether the Rater was truthful and accurate in their testing.
- Different trades are not always careful with each other's work product. If it can be determined that a trade has inadvertently affected something that would change the results or performance of an installation, the QA reviewer may not be able to get an accurate assessment of what occurred during Rater inspection.

In the event that the QA Reviewer can't assess the overall truthfulness and accuracy of a Rater's FVDT inspection, it has been our practice to attempt another QA Review to determine if a Rater is operating within regulations.

Sincerely,



David Choo
CalCERTS, Inc.
Director of Quality Assurance