



March 5, 2012

Commissioner Karen Douglas  
California Energy Commission  
1516 Ninth Street, MS-31  
Sacramento, CA 95814

<b>DOCKET</b>	
<b>10-BSTD-01</b>	
DATE	MAR 05 2012
RECD.	MAR 06 2012

Re: Docket #10-BSTD-01

Subject: Proposals for Certification of Acceptance Testing Field Technicians for Mechanical Systems and Lighting Controls

Dear Commissioner Douglas,

The California Commissioning Collaborative (CCC) respectfully submits the following comments regarding proposals that only contractors who are trained and certified by specific certification programs should be allowed to perform the acceptance testing required by Title 24, Part 6.

The proposals for certification requirements reference the CCC's PIER-funded research on acceptance testing enforcement and effectiveness. This research evaluated Title 24, Part 6 acceptance requirements and enforcement procedures to characterize the challenges, limitations, and opportunities for achieving the intended minimum standards of energy efficiency. The researchers evaluated the effectiveness of the existing acceptance test procedures based on how well contractors understand the acceptance test requirements and the clarity of the test procedures and associated forms.

The research indicated that the success of the acceptance requirements depends on a chain of responsibility linking design engineers, contractors, subcontractors, owners and building officials. The recommendations included in the final report called for changes to the acceptance testing forms and for training and outreach. We did not recommend any specific certification for contractors, nor did we intend for that conclusion to be drawn from our findings.

Table 8 in the CCC's final report<sup>1</sup> identifies the number and type of contractors who participated in the field testing portion of this project. Only two were TAB technicians. This is an unacceptably small sample size to draw conclusions about who should be allowed to perform the tests. In fact, one of these two TAB technicians is unusually well-qualified to perform these tests, as indicated in Table 8 and Appendix C in the report. This particular technician has attended a large number of trainings related to the tests and has actively participated in Title 24 development. The small and biased sample does not present a solid basis for introducing a certification requirement.

TAB technicians are well-qualified to perform the mechanical acceptance tests that closely correspond to the typical scope of TAB services. However, some of the acceptance tests include procedures that are outside the typical scope of TAB services. For example, some mechanical system acceptance tests require override and manipulation of the HVAC controls, usually from the building automation system. For such tests, the expertise of controls installation & start-up contractors and commissioning providers may be required.

In response to the specific questions posed by the Energy Commission for the February 27<sup>th</sup> Lead Commissioner Workshop, we offer the following:

*3. How would training and certification requirements for acceptance testing Field Technicians help to address concerns related to any lack of enforcement by building departments of the acceptance requirements?*

Training and certification requirements will increase awareness of and competency to perform acceptance tests.

Through training, participants may recognize a business case for selling acceptance testing as a line of business. This

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<sup>1</sup> Evaluation of Title 24 Acceptance Testing Enforcement and Effectiveness available at [http://www.cacx.org/PIER/documents/T24\\_Acceptance\\_Testing\\_Final\\_Report.pdf](http://www.cacx.org/PIER/documents/T24_Acceptance_Testing_Final_Report.pdf).

could lead to more tests being conducted (achieving a greater level of compliance), regardless of building officials enforcement the acceptance requirements.

*11. Should building commissioning providers be allowed to serve as acceptance testing Field Technicians for HVAC equipment and controls and for lighting controls?*

Yes. Commissioning providers should be allowed to serve as acceptance testing Field Technicians as long as they have the knowledge, skills and abilities required to perform the tests. The following facts support commissioning providers qualifications to perform acceptance tests:

- The principal objective of the commissioning industry – to ensure that buildings and their systems perform as designed – is well-aligned with the objective of acceptance tests
- Commissioning providers are trained to understand the HVAC and lighting systems subject to acceptance testing. There are a number of commissioning provider certifications that vary in terms of experience, training and other eligibility requirements<sup>2</sup>.
- The commissioning community has actively participated in formulation of the Title 24, Part 6 acceptance testing requirements and has worked to support their implementation since the requirements were adopted in 2005.

*18. Should the Energy Commission adopt criteria for approval of industry certification programs? If so, what should the criteria be? What qualifications of current certification programs should be included?*

The Energy Commission seeks to ensure that the acceptance requirements are implemented by qualified practitioners. Before determining which categories of practitioners are qualified to perform the tests, or which certifications should potentially be required or approved, it is critical that stakeholders agree on the essential knowledge, skills, and abilities required to effectively perform acceptance tests.

The Energy Commission could accomplish this by sponsoring the development of a Job Task Analysis that would document the knowledge, skills, and abilities (KSAs) needed to specifically perform the acceptance tests required in Title 24, Part 6.

A Job Task Analysis is designed to quickly and systematically identify the major functions and key activities performed by a particular job category. It is commonly done to inform the development of curriculum or other training materials. The analysis involves steps to identify, vet and prioritize job functions which are then used to guide the selection of topics and concepts to be included in training. Data is gathered and validated by individuals from the field of expertise in question – in this case data would be gathered from practitioners who perform acceptance tests.

Using an iterative process and engaging a large group of stakeholders ensures the results are comprehensive and accurate. The CCC would be one of many stakeholders who could provide expertise to this effort.

The CCC was an early proponent of incorporating acceptance testing into California's Building Energy Efficiency Standards. The CCC participated in developing the initial requirements, code language, and supporting material for the Energy Commission for the 2005 Standards. Since then, the CCC has continued to participate in the further development of the acceptance requirements.

The CCC is invested in the success of California's energy efficiency goals and we look forward to continuing to work with the Energy Commission and industry stakeholders to support these goals.

Sincerely,



Amanda Potter  
CCC Executive Director

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<sup>2</sup> A complete description of Commissioning Provider certifications is provided at [http://www.cacx.org/resources/provider\\_cert.html](http://www.cacx.org/resources/provider_cert.html).