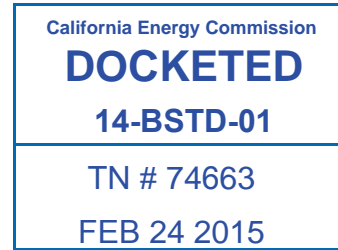


February 24, 2015

California Energy Commission
Dockets Unit
1516 Ninth Street, MS 4
Sacramento, CA 95814-5512



**Re: Docket # 2014-BSTD-01 Proposed Revisions to 2016 Title 24, Part 6
Suggestion to Harmonize Commissioning and Acceptance Testing.**

As a Professional Electrical Engineer with over 40 years in the building and construction industry focused on lighting and electrical efficiency, I am concerned about the apparent overlap/duplication between the Acceptance Testing requirements and the Commissioning requirements in the proposed 2016 Title 24. In order to ensure that energy efficiency and cost effectiveness are the focus of this version of Title 24, I strongly suggest that an effort at harmonizing these two related and currently overlapping requirements be undertaken. Below, I outline the areas of potential harmonization and would be most happy to join a group/committee charged with this effort. Again, my concerns are that energy efficiency and cost effectiveness be at the forefront of 2016 Title 24 requirements.

Purpose: To Harmonize the scope of Commissioning and the scope of Acceptance Testing.

Whereas, the Warren-Alquist Act requires that the Title 24 Building Energy Efficiency Standards be cost-effective.

Whereas, professional research studies by PECEI, LBNL and others have shown that commissioning results in energy savings and that commissioning can be cost effective.

Whereas, a search of 2005, 2008, 2013 and 2016 rulemaking records has not found any similar studies that show acceptance testing is cost effective or even saves energy.

Whereas, according to Section 120-8 commissioning is only required for new construction.

Whereas, according to Table 100.0-A commissioning is not required for outdoor lighting.

Whereas, the electrical work covered by Section 130.5(d) Circuit Controls for 120-Volt Receptacles is currently not required to be acceptance tested according to Table 100.0-A.

Whereas, commissioning requirements vary dependent on the project size (under 10,000SF, over 10,000SF and over 50,000SF) and project complexity (simple mechanical vs complex mechanical).

Whereas, the commissioning process and the acceptance testing process have an overlap in responsibilities and hence a partial duplication of responsibilities.

Propose:

1. Commissioning and Acceptance Testing be required for all nonresidential buildings, high-rise residential buildings, and hotels and motel.
2. Commissioning and Acceptance Testing be required for new construction, alterations and additions.
3. Commissioning: For buildings less than 10,000 square feet, the licensed professional engineer may be the engineer of record. For buildings greater than 10,000 square feet but less than 50,000 square feet, the licensed professional engineer shall be a qualified in-house engineer with no other project involvement or a third party professional engineer. Contractors accepting the responsibilities of the engineer under the provision of the Business and Professions Code may also complete and sign these certificates. For buildings greater than 50,000 square feet and all buildings with complex mechanical systems serving more than 10,000 square feet, the licensed professional engineer shall be a third party. (No change to current language.)
4. Acceptance Testing: For buildings less than 10,000 square feet, the installing technician may be the acceptance testing technician if certified as such. For buildings greater than 10,000 square feet but less than 50,000 square feet, the acceptance testing technician may be an in-house certified acceptance testing technician with no other project involvement or a third party certified acceptance testing technician. Contractors accepting the responsibilities of the acceptance testing technician under the provision of the Business and Professions Code may also complete and sign these certificates. For buildings greater than 50,000 square feet and all buildings with complex systems serving more than 10,000 square feet, the acceptance testing technician shall be a third party certified acceptance testing technician.
5. The scope of Commissioning is not to include the component testing performed by the Certified Acceptance Testing Technician.
6. The scope of Acceptance Testing is not to include the design review and system performance testing performed by the Commissioning Agent.
7. The scope of Commissioning should include outdoor lighting.
8. The scope of Acceptance Testing should include the testing of controlled receptacles covered by Sec 130.5(d).
9. The formal training of Certified Acceptance Testing Technicians should include explanation of the scope of the Commissioning Process covered by Sec 120.8.

Thank you for your consideration of these comments.

Respectfully submitted,



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