

DOCKETED

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On 2019 Building Energy Efficiency Standards

Additional submitted attachment is included below.

February 12, 2018

California Energy Commission
Attention: Docket No. 17-BSTD-02
Dockets Office
1516 Ninth Street, MS-4
Sacramento, CA 95814

RE: 2019 Building Energy Efficiency Standards - Docket No. 17-BSTD-02

Dear California Energy Commission:

The following suggested revisions are submitted for review and inclusion:

1. SECTION 10-102 – DEFINITIONS

Proposed Revision –

Include the following definition:

CERTIFIED BUILDING COMMISSIONING PROFESSIONAL. An individual who is certified by an ANSI/ISO/IEC 17024:2012 accredited organization to lead, plan, coordinate, manage, and implement the commissioning process. The individual's accredited certification required by the referenced standard provides a measured level of experience and competence with the various whole building commissioning processes and the ability to deliver quality service. Accredited organizations include, but are not limited to, AABC Commissioning Group (ACG), ASHRAE, Building Commissioning Certification Board (BCCB), and National Environmental Balancing Bureau (NEBB).

Rationale:

To be consistent with Section 10-103.1 – NONRESIDENTIAL LIGHTING CONTROLS ACCEPTANCE TRAINING AND CERTIFICATION and Section 10-103.2 – NONRESIDENTIAL MECHANICAL ACCEPTANCE TEST TRAINING AND CERTIFICATION requiring certification for acceptance test technicians conducting acceptance testing; this standard should also include certification requirements for Section 120.8 – NONRESIDENTIAL BUILDING COMMISSIONING.

This standard should also be consistent with 10-103 – PERMIT, CERTIFICATE, INFORMATIONAL, AND ENFORCEMENT REQUIREMENTS FOR DESIGNERS, INSTALLERS, BUILDERS, MANUFACTURERS, AND SUPPLIERS (a) Documentation, 1. Certificate of Compliance where the standard requires the *Design Review Kickoff Certificate(s) of Compliance and the Construction Document Design Review Checklist Certificate(s) of Compliance shall be reviewed and signed by a licensed professional engineer or licensed architect, or a licensed contractor representing services performed by or under the direct supervision of a licensed*

engineer or architect, as specified in the provisions of Division 3 of the Business and Professions Code, this standard should also include certification requirements for Section 120.8 – NONRESIDENTIAL BUILDING COMMISSIONING.

This proposed change to the standard would clarify who is qualified to lead, plan, coordinate, manage, and implement the commissioning process. Organizations that are ANSI/ISO/IEC 17024:2012 accredited are currently certifying individuals to manage the commissioning process.

Determining who is qualified to provide quality commissioning has been an industry problem for many years. Fortunately, the Department of Energy (DOE) has established a national certification for commissioning organizations. These organizations are required to perform according to ANSI standards and they must meet ISO/IEC 17024. Currently the following accredited organizations are accredited organizations include: AABC Commissioning Group (ACG), ASHRAE, Building Commissioning Certification Board (BCCB), and National Environmental Balancing Bureau (NEBB).

The 2015 Washington State Energy Code requires the commissioning to be led, planned, coordinated, managed, and implemented by a Certified Commissioning Professional certified by ANSI/ISO/IEC 17024:2012 accredited organization.

2. SECTION 120.8 NONRESIDENTIAL BUILDING COMMISSIONING

(b) Owner's or Owner Representative's Project Requirements (OPR).

Proposed Revision –

Recommend inserting the bolded and underlined text:

(b) Owner's or Owner Representative's Project Requirements (OPR). The energy-related expectations and requirements of the building shall be documented **and reviewed by a CERTIFIED BUILDING COMMISSIONING PROFESSIONAL** before the design phase of the project begins. This documentation shall include the following:

Rationale:

It is standard industry practice to have the OPR reviewed by the Commissioning Professional. The following resources support the fact this is standard industry practice: ASHRAE Guideline 0.2013 – The Commissioning Process, ASHRAE ANSI/IES Standard 202-2013 – Commissioning Process for Building and Systems, Building Commissioning Association (BCA) – New Construction Building Commissioning Best Practice, and LEED Reference Guide for Building Design and Construction – Energy & Atmosphere Fundamental Commissioning and Verification.

(c) Basis of Design (BOD)

Proposed Revision –

Recommend inserting the bolded and underlined text:

Basis of Design (BOD). A written explanation of how the design of the building systems and components meets the OPR shall **be reviewed by CERTIFIED BUILDING COMMISSIONING PROFESSIONAL to verify that it meets the requirements of the OPR and shall** be completed **at in** the design phase of the building project, and updated as necessary during the design and construction phases. The Basis of Design document shall cover the following systems and components:

Rationale:

It is standard industry practice to have the BOD reviewed by the Commissioning Professional to verify that it meets the requirements of the OPR. The following resources support the fact this is standard industry practice: ASHRAE Guideline 0.2013 – The Commissioning Process, ASHRAE ANSI/IES Standard 202-2013 – Commissioning Process for Building and Systems, Building Commissioning Association (BCA) – New Construction Building Commissioning Best Practice, and LEED Reference Guide for Building Design and Construction – Energy & Atmosphere Fundamental Commissioning and Verification.

(e) Commissioning measures shown in the construction documents

Proposed Revision –

Recommend inserting and the language bolded and underlined text:

(e) Commissioning measures shown in the construction documents. Complete descriptions of all measures or requirements necessary for commissioning shall be included in the construction documents (plans and specifications). Commissioning measures or requirements shall be clear, detailed and complete to clarify the commissioning process **and reviewed by a CERTIFIED BUILDING COMMISSIONING PROFESSIONAL.**

Rationale:

It is standard industry practice to have the plans and specifications reviewed by the Commissioning Professional to verify that commissioning measures are included. The following resources support the fact this is standard industry practice: ASHRAE Guideline 0.2013 – The Commissioning Process, ASHRAE ANSI/IES Standard 202-2013 – Commissioning Process for Building and Systems, Building Commissioning Association (BCA) – New Construction Building Commissioning Best Practice, and LEED Reference Guide for Building Design and Construction – Energy & Atmosphere Fundamental Commissioning and Verification.

(f) Commissioning Plan

Proposed Revision –

Recommend inserting and the language bolded and underlined text:

(f) Commissioning Plan. Prior to permit issuance a commissioning plan shall be completed **by a CERTIFIED BUILDING COMMISSIONING PROFESSIONAL.** to document how the project will be commissioned and shall be started during the design phase of the building project. The Commissioning Plan shall include the following:

Rationale:

It is standard industry practice to have the commissioning plan completed by the Commissioning Professional. The following resources support the fact this is standard industry practice: ASHRAE Guideline 0.2013 – The Commissioning Process, ASHRAE ANSI/IES Standard 202-2013 – Commissioning Process for Building and Systems, Building Commissioning Association (BCA) – New Construction Building Commissioning Best Practice, LEED Reference Guide for Building Design and Construction – Energy & Atmosphere Fundamental Commissioning and Verification, ACG Commissioning Guideline, and the Procedural Standard for Whole Building Systems Technical Commissioning for New Construction, 2014 – Fourth Edition.

(g) Functional performance testing

Proposed Revision –

Recommend inserting and the language bolded and underlined text:

(g) Functional performance testing. Functional performance ~~tests~~ **testing witnessed by a by a CERTIFIED BUILDING COMMISSIONING PROFESSIONAL** shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the acceptance test requirements in Sections 120.5, 130.4 and 140.9. Functional performance testing reports **developed by a CERTIFIED BUILDING COMMISSIONING PROFESSIONAL** shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

Rationale:

It is standard industry practice to have the functional performance testing witnessed by the Commissioning Professional and that the reporting of the testing results is by the Commissioning Professional. The following resources support the fact this is standard industry practice: ASHRAE Guideline 0.2013 – The Commissioning Process, ASHRAE ANSI/IES Standard 202-2013 – Commissioning Process for Building and Systems, Building Commissioning Association (BCA) – New Construction Building Commissioning Best Practice, LEED Reference Guide for Building Design and Construction – Energy & Atmosphere Fundamental Commissioning and Verification, ACG Commissioning Guideline, and the Procedural Standard for Whole Building Systems Technical Commissioning for New Construction, 2014 – Fourth Edition.

(h) Documentation and training

Proposed Revision –

Recommend inserting and the language bolded and underlined text:

Documentation and training. A Systems Manual and Systems Operations Training shall be completed **and reviewed and verified by a CERTIFIED BUILDING COMMISSIONING PROFESSIONAL.**

Rationale:

It is standard industry practice to have the Commissioning Professional verify that the training has been conducted as specified and that Systems Manual is completed. The following resources support the fact this is standard industry practice: ASHRAE Guideline 0.2013 – The Commissioning Process, ASHRAE ANSI/IES Standard 202-2013 – Commissioning Process for Building and Systems, Building Commissioning Association (BCA) – New Construction Building Commissioning Best Practice, and LEED Reference Guide for Building Design and Construction – Energy & Atmosphere Fundamental Commissioning and Verification.

(i) Commissioning report

Proposed Revision –

Recommend inserting and the language bolded and underlined text:

Commissioning report. A complete report of commissioning process activities undertaken through the design, construction and reporting recommendations for post-construction phases of the building project shall be completed **by a CERTIFIED BUILDING COMMISSIONING PROFESSIONAL** and provided to the owner or owner’s representative.

Rationale:

It is standard industry practice to have the commissioning report completed by the Commissioning Professional. The following resources support the fact this is standard industry practice: ASHRAE Guideline 0.2013 – The Commissioning Process, ASHRAE ANSI/IES Standard 202-2013 – Commissioning Process for Building and Systems, Building Commissioning Association (BCA) – New Construction Building Commissioning Best Practice, LEED Reference Guide for Building Design and Construction – Energy & Atmosphere Fundamental Commissioning and Verification, ACG Commissioning Guideline, and the Procedural Standard for Whole Building Systems Technical Commissioning for New Construction, 2014 – Fourth Edition.

We are open to another form of language in this standard that ensures that a Certified Building Commissioning Professional meets industry standard practices in leading, planning, coordinating, managing, and implementing the commissioning process.

Sincerely,



Bradley Brooks, Principal
Ed.D., CCP, CPMP, LEED AP BD+C