

**CALIFORNIA BUILDING STANDARDS COMMISSION  
2016 INTERVENING CYCLE  
GREEN BUILDING FOCUS GROUP  
WORKSHOP #2  
November 18- Agenda Item 4d**

**DRAFT EXPRESS TERMS for the 2016  
CALIFORNIA GREEN BUILDING STANDARDS CODE,  
(CALGreen), PART 11,  
CALIFORNIA BUILDING STANDARDS CODE,  
TITLE 24, CALIFORNIA CODE OF REGULATIONS**

**Proposed code language for the 2016 Intervening Code Cycle**

**LEGEND FOR DRAFT EXPRESS TERMS**

1. New California amendments: All such language appears underlined.
2. Repealed text: All such language appears in ~~strikeout~~.  
*[Information for the reader is bracketed and in red italics]*

### **5.410.1 Commissioning**

**Statement of specific purpose, problem, rationale and benefits:**

- CBSC is proposing to amend the language for commissioning, as well as testing and adjusting by repealing the reference to energy related systems found in Sections 5.410.2.1, 5.410.2.2, and 5.410.4.2. This amendment is being proposed because the California Energy Code has commissioning requirements for energy systems already included in their regulations.
- A note is being added to Section 5.410.2 and 5.410.4 to direct the code user to the California Energy Code for commissioning of energy related systems, controls, and testing and adjusting. Sections 5.410.2 and 5.410.4 are being renamed to clarify the building sizes that trigger commissioning. Section 5.410.2.1 is being renamed from "energy efficiency goals" to "building sustainable goals". This proposal has been coordinated with the California Energy Commission.

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## **BUILDING MAINTENANCE AND OPERATION**

**5.410.2 Commissioning. [N] New buildings 10,000 sf and over.** For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. ~~All occupancies other than I-occupancies and L-occupancies shall comply with the California Energy Code as prescribed in California Energy Code Section 120.8. For I-occupancies which are not regulated by OSHPD or for I-occupancies and L-occupancies which are not regulated by the California Energy Code Section 100.0 Scope; all requirements in Sections 5.410.2 through 5.410.2.6 shall apply.~~

**Note:** For energy related systems under the scope (Section 100) of the *California Energy Code*, including, heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to *California Energy Code* Section 120.8 for commissioning requirements.

Commissioning requirements shall include:

1. Owner's or owner representative's project requirements.
2. Basis of design.
3. Commissioning measures shown in the construction documents.
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7. Commissioning report.

**Exceptions:**

1. ...
2. ...
3. ...
4. ...

**Note:** For the purposes ...

**5.410.2.1 Owner's or Owner representative's Project Requirements (OPR). [N]**

The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:

1. Environmental and sustainability goals.
2. ~~Energy efficiency goals.~~ Building sustainable goals.
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after-hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

**5.410.2.2 Basis of Design (BOD). [N]**

A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

- ~~1. Heating, ventilation, air conditioning (HVAC) systems and controls.~~
- ~~2. Indoor lighting system and controls~~
- ~~3. Water heating system~~
4. 1. Renewable energy systems.
5. 2. Landscape irrigation systems.
6. 3. Water reuse systems.

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**5.410.4 Testing and adjusting Commissioning: Buildings 10,000 sf and under.** Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

**5.410.4.1 (Reserved)**

**Note:** For energy related systems under the scope (Section 100) of the *California Energy Code*, including, heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to *California Energy Code* Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific systems.

**5.410.4.2 Systems.** Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project:

- ~~1. HVAC systems and controls.~~
- ~~2. Indoor and outdoor lighting and controls.~~
- ~~3. Water heating systems.~~
4. 1. Renewable energy systems.
5. 2. Landscape irrigation systems.
6. 3. Water reuse systems.