



# 2016 Sections 130.0 thru 130.5

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45-day Hearing  
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March 3, 2015

California Energy Commission

**DOCKETED**

**15-BSTD-01**

TN 75261

MAR 05 2015



# Changes to Section 130.0 Lighting Systems and Equipment, and Electrical Power Distribution Systems

## Luminaire Classification - Clarifications

- (c) 6. Determination of luminaire wattage for luminaires with installed ballasts or drivers
  - The operating input wattage of the rated lamp/ballast combination; or
  - The maximum input wattage of the rated driver.
  - Recognize the use of LED light sources and drivers.
- Exception to (c) 9. Refer to Residential lighting section for LED luminaires and LED engine.



## Changes to Section 130.1 Indoor Lighting Controls

### Multi-Level Lighting Controls

- (b) Simplifies multi-level control requirements
- (b) 3. Requires a manual control when luminaires are dimmable.
- (b) 3. Eliminates A. through E. Already required by other subsection of Section 130.1.



## § 130.1 (continued)

### Shutoff Controls

- (c) 1. (A.) Removes “signal from another building system” from the list of occupant sensing controls.
- (c) 5. Either partial-on occupancy sensors or vacancy sensors shall be used for small offices, conference rooms, multipurpose rooms and classrooms.
- (c) 6. Corrects partial-on/off to partial-off occupant sensing controls
- (c)7. Corrects partial-on/off to partial-off occupant sensing controls.



## § 130.1 (continued)

### Shutoff Controls

–Table 130.1-A. Corrects one of the minimum required control steps for linear and U-bent fluorescent > 13 watts from 80-85% to 75-85%.

### Automatic Daylighting Controls

- (d) 2. (D.) 1. Allows photosensor control adjustment locations to be remote in a locked box or a box requiring a tool for access.



## Changes to Section 130.2 Outdoor Lighting Controls and Equipment

### Required Controls

- (c) 2. “Automatic scheduling control” is defined under Section 100.1 Definitions.
- (c) 3. (B) changes automatic control dimming range from 40-80% to 40-90% when areas are vacant.
- (c) 3. deletes outdoor sales lots and outdoor sales canopies from Exception 1.
- (c) 4. (B.) changes motion sensor control lighting power reduction from 40-80% to 40-90%.



## § 130.2 (continued)

### Uplighting and Glare Limits

- Table 130.2-A adds lighting zone zero (LZ0), adds column of values for LZ0, changes lighting zone names from OLZ to LZ.
- Table 130.2-B adds lighting zone zero (LZ0), adds column of values for LZ0, and changes lighting zone names from OLZ to LZ.
- LZ0 is for undeveloped spaces in wildlife preserves, parks, recreation areas and very low ambient illumination level is allowed.



## Changes to Section 130.4 Lighting Control Acceptance and Installation Certificate Requirements

### Lighting Control Acceptance Requirements

- clarifies that it applies to all nonresidential, high-rise residential and hotel/motel building projects.
- (a) 2. Removed NA7.7 and 7.9 from the list of requiring acceptance tests.
- Added institutional tuning for PAF to acceptance requirements.





# Changes to Section 130.5

## Electrical Power Distribution Systems

### Service Metering

- (a) Service metering – simplifies, clarifies.
  - (a) 1. adds specific metering requirements
  - (a) 2. adds tenant sub-meter requirements
  - (a) adds exception for when the utility provides metering
  - (a) Exception clarifies, eliminates extraneous language



## § 130.5 (continued)

### Disaggregation of Electrical Circuits / Electrical Energy Monitoring

- (b) clarifies disaggregation of electrical circuits can be accomplished by the listed methods.
  - (b) 1. disaggregates switchboards, motor control center, or panelboards loads for their load type; or
  - (b) 2. allows for additive and subtractive measures to determine energy use and allows 10% aggregation of load types; or
  - (b) 3. allows a whole building metering and measurement system.
- Moves alteration requirements to Section 141.0.



## § 130.5 (continued)

### Voltage Drop

- (c.) simplifies maximum voltage drop requirements for both feeders and branch circuits to not to exceed 5%.
- Exception for voltage drop permitted by California Electrical Code.

### Receptacle Controls

- (d) 1. Clarifies intent – lists methods of compliance, eliminates reference to lighting controls.



## § 130.5 (continued)

### Receptacle Controls

- (d) 4. Requires manual 2 hour override when using automatic time switch control
- (d) 5. Requires holiday off for when using automatic time switch control
- (d) 7. Prevents using countdown timers
- (d) 8. Requires providing controlled circuits and marking for open office furniture systems
- (d) 9. requires controls for at least 50% of hotel guest room outlets with 30 minute shutoff
- Exception 1 eliminates words “non-residential”.