

DOCKETED	
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Building Energy Standards & Demand Side Efficiency

**2018 IEPR Workshop:
Renewables Integration &
System Flexibility**

June 20, 2018



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Goals for Today

- DR Code in Title 24, Part 6
- Cost Effectiveness





California Code of Regulations, Title 24 (Building Standards) Part 6 (Energy Code)





2019 Energy Code DR

- **Nonresidential**
 1. Thermostats
 2. Lighting
 3. EMC
 4. General
- **Residential**
 5. Water Heaters
 6. HVAC



Nonresidential Building

NONRESIDENTIAL BUILDING is any building which is identified in the California Building Code Table; Description of Occupancy as Group A, B, E, F, H, I, M, or S; and is a U; as defined by Part 2 of ~~Title 24~~ Title 24 of the California Code of Regulation.

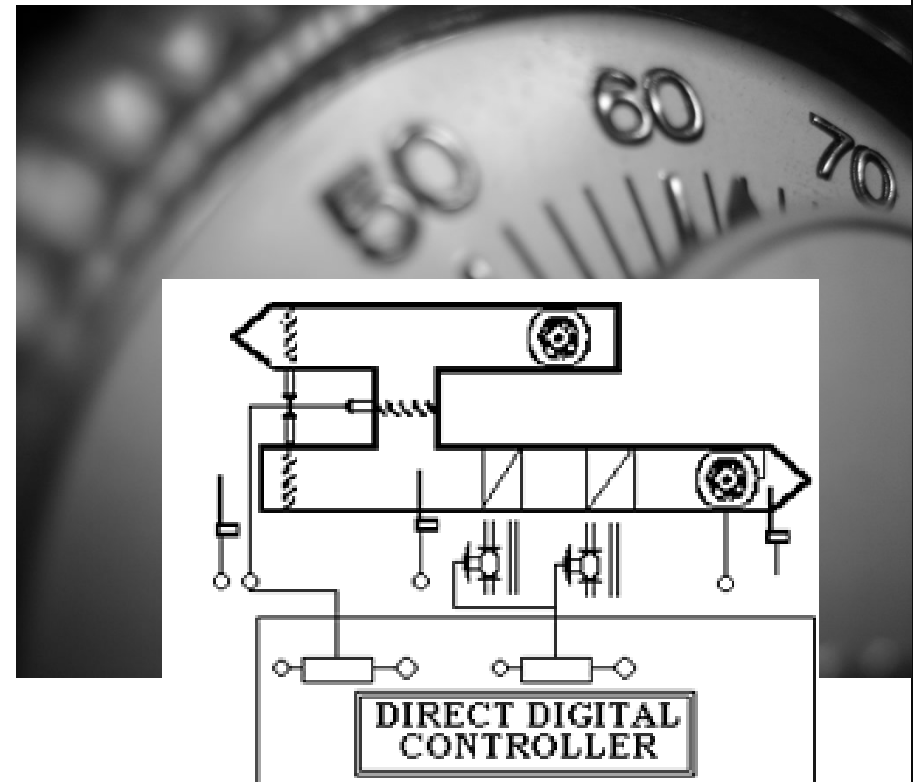
NOTE: Requirements for high-rise residential buildings and hotels/motels are included in the nonresidential sections of Part 6.

- “Nonresidential” includes:
 - High-rise residential
 - Hotels/motels



1. **Nonresidential:** Thermostats

- Single Zone
 - A/C & Heat Pumps
- Single Zone w/ DDC
 - Additional Shed Requirements
- Alterations
 - §120.2(b), 120.2(h) → 110.12(b), & 141(b)2E



REQUIRED



2. **Nonresidential: Lighting**

- Lighting Controls
- Buildings $>10,000 \text{ ft}^2$
- $\text{LPD} > 0.5 \text{ W/ft}^2$
- $\S 130.1(e) \rightarrow 110.12(c)$

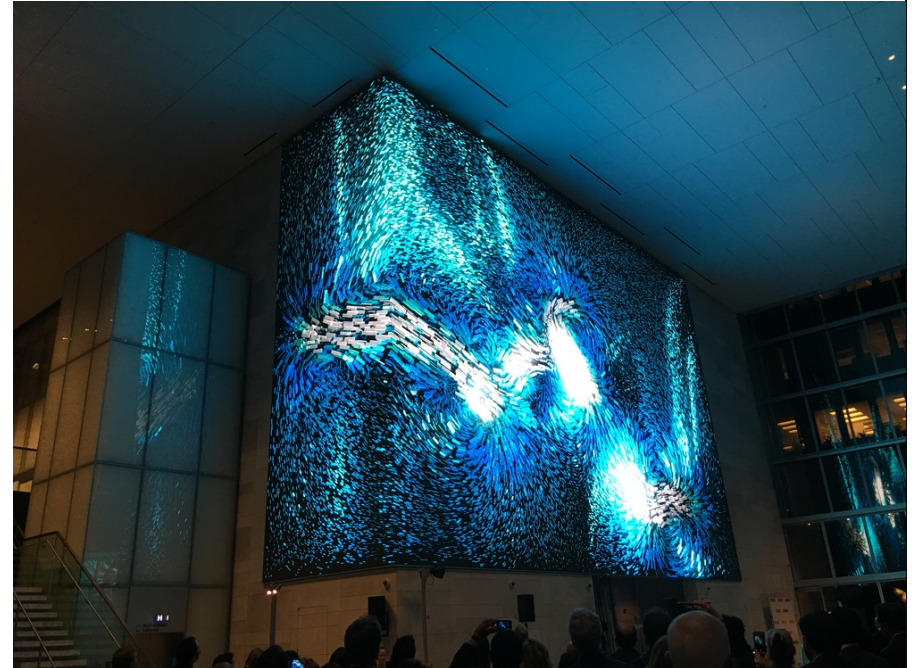


REQUIRED



3. **Nonresidential: EMC**

- Electronic Message Centers (EMC)
- > 15 kW
- >30% Reduction
- §130.3(a)3 → 110.12(d)

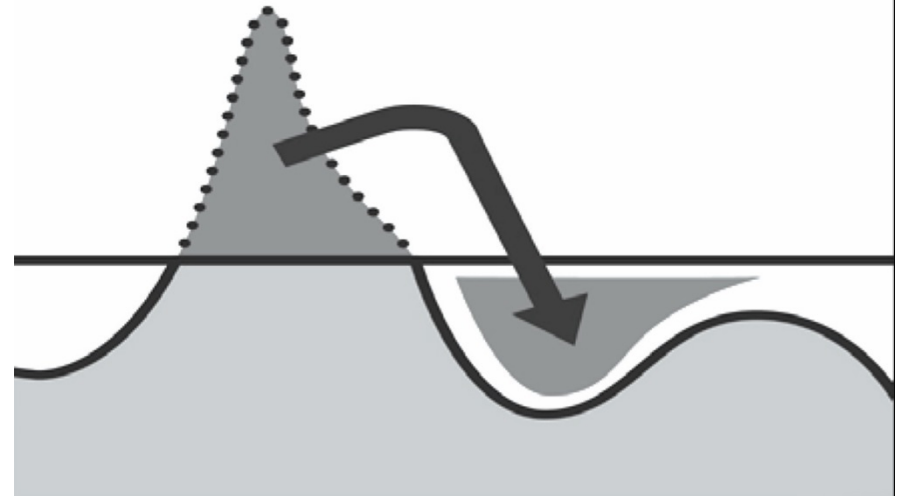


REQUIRED



4. **Nonresidential: General**

- Demand Responsive Controls
- For Compliance *or* Credit
- §130.5(e) → 110.12



REQUIRED



5. Residential: Water Heaters

- Heat Pump Only
- Alterations Only
- Optional:
 - §110.12, or
 - NEEA Tier 3
- §150.2(b)1Hiii b & c



OPTIONAL



6. Residential: Thermostats

- Alterations Only
- Optional Testing Allowance
- Rare Cases
 - EXCEPTION to §150.2(b)1Fiia
 - EXCEPTION to §150.2(b)1Fiib



OPTIONAL



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Cost Effectiveness

- Emergency Shed Focus
- Building, Appliance, & Load Management
- Example: TOU Rates

