



California Energy Commission 2025 Building Energy Efficiency Standards What's New for Nonresidential Buildings

Renewables and Storage

- Adds building types in Table 140.10-A and Table 140.10-B: events and exhibits, religious worship, sports and recreation. § 140.10(a-b)
- Updates photovoltaic (PV) sizing using total solar access roof area (SARA), SARA multiplied by 18 for steep-sloped roofs and SARA multiplied by 14 for low-sloped roofs; increases PV capacity factors in Table 140.10-A for libraries in Climate Zones 2-16, hotel/motel, medical office building/clinics, restaurants, retail, grocery in all Climate Zones; updates exception for multitenant building tenant spaces no more than 2,000 ft² with separate utility meter and HVAC system to be excluded from the PV calculation. § 140.10(a)
- Updates Equations 140.10-B, -C, & -D; revises Table 140.10-B building energy storage system (BESS) capacity factors for all building types; Climate Zone 1 schools, offices, financial institutions, unleased tenant spaces, medical office buildings/clinics are not required to have BESS. § 140.10(b)

Heating, Ventilation, and Air Conditioning (HVAC)

- Considers additional parameters for determining maximum achievable cycles of concentrations in mandatory cooling tower requirements. § 110.2(e)
- Update minimum ventilation rates, minimum exhaust rates, and classes of air streams or sources. Tables 120.1-A, -B & -C
- Mandatory limit for supply hot water temperature for space heating to no greater than 130°F. § 120.2(l)
- Adds acceptance testing requirements for dedicated outside air systems (DOAS), heat recovery ventilation (HRV) or energy recovery ventilation (ERV) systems with exceptions; for conductivity controls and overflow alarms for open and closed-circuit cooling towers. § 120.5(a)
- Adds prescriptive requirements for multizone HVAC in offices and schools not greater than 150,000 ft² or 5 habitable stories. § 140.4(a)3
- Adds prescriptive requirements per ASHRAE Guideline 36: for variable air volume (VAV) systems control sequence of operation for static pressure setpoint reset, space conditioning zone controls with direct digital controls (DDC), air economizer with DDC system, and supply air temperature reset controls. § 140.4(c-f, r)
- Revises prescriptive requirements for axial fan open-circuit cooling tower efficiency. § 140.4(h)5
- Adds prescriptive requirements for mechanical heat recovery. § 140.4(s)
- Adds requirements in Table 141.0-E-1 for new or replacement single zone packaged rooftop air conditioner or heat pump less than 65,000 Btu/hr. § 141.0(b)2C

Lighting and Electrical

- Adds requirements for manual controls to be in same space as controlled lighting, or so that controlled lighting or status can be seen when operating controls. § 130.1(a)2
- Multilevel controls must provide and enable continuous dimming from 100 to 10% or lower; removes Table 130.1-A; exception for high intensity discharge (HID) and induction light sources to have at least one control step between 30 and 70% of full power. § 130.1(b)
- Updates occupant sensing controls must have no more than 20-minute time delay. § 130.1(c)1A
- Clarifies occupant sensing controls requirements for warehouse areas, library stack aisles, corridors and stairwells, offices greater than 250 square feet, parking and loading/unloading areas; all occupancy sensing control zones in offices greater than 250 square feet must be shown on plans. § 130.1(c)6
- Updates daylight responsive controls requirements for sidelit and skylit daylit zones with 75W or greater of general lighting in indoor spaces, 60W or greater for garages; luminaires longer than 8 feet must be controlled in segments up to 8 feet; secondary sidelit daylit zones with less than 85W of general lighting exempt, if primary sidelit daylit zones do not require daylight responsive controls. § 130.1(d)
- Clarifies requirements for occupancy sensing controls for space-conditioning systems. § 130.1(f)
- Updates motion sensing controls exception for building façade, ornamental hardscape, and outdoor dining areas. § 130.2(c)3

- Adds acceptance testing requirement for controlled environmental horticulture lighting. § 130.4(a)
- Removes Tailored Method of calculating lighting power allowances; moved some Tailored Method allowances in form of additional lighting power allowances to Area Category Method. § 140.6
- Removes several automatically compliant sign light sources. § 140.8(b)
- Controlled receptacles in hotel/motel guestrooms must shut off within 20 minutes of vacancy. § 130.5(d)4

Envelope

- Adds mandatory area-weighted U-factor 0.47 for exterior vertical fenestration assemblies. Exception for fenestration installed in Fire Hazard Severity Zones. § 120.7(d)
- Adds mandatory U-factor 0.58 for vertical fenestration replacements over 150 square feet and 0.047 for added vertical fenestration over 50 square feet. § 141.0(b)1E
- Adds mandatory vestibule requirement at public entrances that open into spaces 3,000 square feet or more in newly constructed buildings of occupancy types A, B, E, I, M. Multiple exceptions. § 120.7(e)
- Reduces prescriptive maximum U-factors in Table 140.3-B for insulation. § 140.3(a)

Water Heating

- Backup heat required for heat pump water heater (HPWH) with unconditioned inlet air, unless compressor cutoff temperature below local Heating Winter Median of Extremes; adds ventilation or minimum room volume requirements when installing consumer integrated HPWH. § 110.3(c)7
- Splits Table 120.3-A into Tables 120.3-A1 & -A2. § 120.3

Pools and Spas

- Updates requirements for permanent, readable, and weatherproof label with energy efficiency rating and instructions for efficient pool and spa heater operation. § 110.4(a)3
- Adds pool/spa heaters must be tested to new standards, by fuel type. § 110.4(b)
- Adds requirement for primary pool/spa heaters to be heat pump and/or solar, or use at least 60% renewable/recovered energy, sized appropriately. Several exceptions apply. § 110.4(c)
- Updates controls for heat pump pool heaters must prevent supplementary heating when load can be met by heat pump alone. § 110.4(d)

Covered Processes

- Adds mandatory insulation requirements for pipes that carry heated or chilled fluids used in processes unrelated to space conditioning or water heating. Updates pipe insulation requirements in Tables 120.3-A1 & -A2. § 120.3(a)
- Adds efficiency requirements for fan-powered evaporators utilizing volatile refrigerants. Exception for evaporators for quick chilling/ freezing. Updated efficiencies in Table 120.6-A-2. § 120.6(a)3D
- Adds requirement for 0.5 inch applied static pressure drop maximum for evaporators. § 120.6(a)3E
- Updates efficiency requirements for controlled environmental horticulture lighting systems to no less than 2.3 micromoles per joule. § 120.6(h)
- Adds mandatory requirements for electric readiness for commercial kitchens. Exceptions for healthcare facilities, all-electric commercial kitchens. § 120.6(k)
- Updates requirements for laboratory and factory exhaust systems. § 140.9(c)
- Adds alteration requirements for process piping. § 141.1(d)

Performance Compliance

- Energy budget is now expressed in terms of long-term system cost (LSC) and source energy; LSC is categorized as Total LSC and Efficiency LSC; Total LSC is the sum of LSC energy for Efficiency, the photovoltaic system, battery energy storage system, and demand flexibility; Efficiency LSC energy is the sum of the LSC energy for space-conditioning, water heating, mechanical ventilation, and lighting; and the source energy budget sums the same end uses as Total LSC but in source energy instead of LSC. § 140.1(a)