

BLUEPRINT

CALIFORNIA ENERGY COMMISSION
EFFICIENCY DIVISION

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For additional help with the Energy Code see Energy Code Ace's **online offerings** of trainings, tools, and resources.



2022 Energy Code: Multifamily Summary

The 2022 Building Energy Efficiency Standards (Energy Code) reorganizes low-rise (three or fewer habitable stories) and high-rise (four or more habitable stories) multifamily buildings into one building type, updates the multifamily buildings definition in § 100.1, and moves all requirements for multifamily buildings to §§ 160.0-180.4. This and other significant changes include:

Mandatory Requirements

- Updates minimum efficiencies for HVAC equipment; adds minimum efficiency requirements for dedicated outdoor air systems (DOAS), heat pump, and heat recovery chiller packages. § 110.2
- Changes demand responsive lighting controls trigger to 4,000 watts or more; adds requirements for controlled receptacles. §§ 110.12, 160.5(b)4E
- Unifies envelope insulation, vapor retarder, and fenestration requirements. § 160.1
- For dwelling units
 - Adds requirements for central fan integrated ventilation systems requiring a motorized controlled damper, damper controls, and variable ventilation. § 160.2(b)2Aii
 - Requires vented kitchen range hoods ventilation rates or capture efficiencies based on conditioned floor area and fuel type per Tables 160.2-E, F, G. § 160.2(b)2Avic2
 - Requires a HERS-verified maximum fan efficacy of 1.0 Watts per cfm for heat recovery ventilation (HRV) and energy recovery ventilation (ERV) systems. § 160.2(b)2Biii
 - Adds mechanical acceptance testing requirements. § 160.3(d)2
 - Adds electric-ready requirements when gas equipment is installed for space heating, cooking, and clothes dryers. § 160.9(a-c)

- For common areas
 - Requires mandatory duct leakage testing. § 160.3(c)2H
 - Adds electric-ready requirements when gas clothes dryers are installed. § 160.9(c)2
- Adds air sealing for filter racks or grilles to prevent air from bypassing the filter. §§ 160.2(b)1Bv, 160.2(c)1D
- Requires mechanical ventilation systems of enclosed parking garages to meet § 120.6(c). § 160.2(d)
- Requires water heating pipe insulation per Table 160.4-A. § 160.4(f)
- Unifies lighting requirements; clarifies applicability for dwellings, common areas, and outdoor areas. § 160.5
- Clarifies requirements for communal or single-tenant pool and spa systems. § 160.7(b)

Prescriptive Compliance

- Clarifies vertical fenestration and glazed door area is based on conditioned floor area and gross wall area; updates fenestration efficiency values per type, climate zone, and number of habitable stories. § 170.2(a)
- For dwelling units:
 - Establishes heat pump space heating baselines for most climate zones. § 170.2(c)3A
 - Requires ERV or HRV in some climate zones when balanced ventilation is used for indoor air quality. § 170.2(c)3Biv



Figure 1: Multifamily dwelling units with PV

- For common areas:
 - Revises fan power requirements, including 1kW fan electrical input power trigger, adds new allowances for system type, air flow, filtration, etc. § 170.2(c)4
 - Adds requirements for DOAS and exhaust air heat recovery. § 170.2(c)4N-0
 - Unifies water heater requirements; clarifies water heaters serving single dwelling units may be a heat pump water heater (HPWH) or gas instantaneous water heater; adds plumbing and configuration requirements for central HPWHs; requires gas/propane central water heater systems to meet minimum equipment thermal efficiency, recirculation, and solar water heating criteria. § 170.2(d)
 - Unifies indoor common area lighting and outdoor lighting requirements; updates indoor luminaire power densities (LPDs), outdoor hardscape and additional lighting power allowances. § 170.2(e)
 - Updates photovoltaic (PV) for three habitable stories or less; adds PV and battery storage for multifamily of four or more habitable stories. § 170.2(f-h)
- #### *Additions and Alterations*
- For additions:
 - Unifies envelope, indoor air quality (IAQ), and water heater requirements, including exceptions. § 180.1(a)
 - Clarifies new water heaters installed to serve dwelling units must meet prescriptive requirements in § 170.2(d). § 180.1(a)3

- For alterations:
 - Unifies envelope, HVAC, water heating, lighting, electrical power distribution, and IAQ requirements. § 180.2(b)
 - Adds insulation, air sealing, and recessed luminaire requirements for vented attics. § 180.2(b)1Bi
 - Updates fenestration efficiency per type, climate zone, and number of habitable stories. § 180.2(b)1C
 - Adds fan power requirements for HVAC in common areas. § 180.2(b)2Bi
 - Clarifies individual dwelling units may use HPWH or gas/propane water heater. § 180.2(b)3C
 - Clarifies applicability of IAQ and mechanical exhaust requirements. § 180.2(b)5

The significant changes for single-family residential summary will be highlighted in a future Blueprint. Download final documents on the [2022 Energy Code webpage](#).

2022 Energy Code: Compliance Software

The 2022 Energy Code compliance software and forms were approved and are available on the [2022 Energy Code webpage](#).

For single-family buildings:

- CBECC-Res 2022.1.0

For nonresidential and multifamily buildings:

- CBECC 2022.1.0

All permit applications submitted on or after January 1, 2023, will need to comply using software and forms approved for the 2022 Energy Code.

2019 Energy Code: HERS Verifications

The [Home Energy Rating System \(HERS\) webpage](#) has been updated with an announcement for multifamily ventilation HERS verifications. When constructing low-rise multifamily homes under the 2019 Energy Code to meet § 150.0(o)1E, documentation of continuous supply or continuous exhaust ventilation installations must be accompanied by a HERS rater compartment leakage (blower door) test. Early coordination gives builders, installers, and HERS raters time to plan field testing and verification.

Q&A

Solar PV for Multifamily Buildings

Do newly constructed multifamily buildings need to have PV and battery storage under the 2022 Energy Code?

Yes. The prescriptive requirements in § 170.2(f-g) for PV apply to new multifamily buildings. The battery storage requirements in § 170.2(h) apply to new multifamily buildings with more than three habitable stories.

Do alterations to existing multifamily buildings trigger PV and battery storage requirements under the 2022 Energy Code?

No. The prescriptive requirements for PV and battery storage only apply to newly constructed buildings.

Do the PV and battery capacity factors in § 170.2(g-h) of the 2022 Energy Code apply to the entire building for a mixed occupancy in which multifamily is more than 80% of the building?

No. The PV and battery capacity factors apply separately to each corresponding space type. For example, if 85% is multifamily, the multifamily capacity factor applies to 85% of the building. If 15% is office space, the office capacity factor applies to other 15% of the building.

ENERGY STANDARDS

HOTLINE

Available to help with Energy Code (Title 24, Part 6) questions.

✉ EMAIL
title24@energy.ca.gov

☎ CALL
800-772-3300 | 916-654-5106
Toll free in CA | Outside CA

HOURS 8 a.m.–12 p.m. and 1 p.m.–4:30 p.m.

When calculating PV, is the entire building considered a multifamily building for a senior living facility with a community dining room?

Yes. Since the dining area is part of the living facility, the entire building would be multifamily. The dining area would only be considered a restaurant if it is designed to serve outside customers. Depending on the number of habitable stories, the PV requirements in the 2022 Energy Code § 170.2(f-g) will apply to the entire building.

Does the multifamily PV exception when the minimum PV system size specified by section 170.2(f) is less than 1.8 kW apply per building?

Yes. Exception 2 to § 170.2(f) applies to each building (not individual dwelling units) if the minimum PV size specified is less than 1.8 kW, then no PV is required for that building.

Multifamily Water Heating

Will PV need to support the solar thermal requirements when using a central heat pump water heater in the 2022 Energy Code?

No. The 2022 Energy Code does not have a solar thermal requirement for central HPWHs.

Multifamily Common Use Areas

Are the 2022 Energy Code requirements for multifamily common use areas treated the same as the dwelling units?

No. The requirements that apply to common areas are treated more like nonresidential spaces. Common use areas are defined in Part 2 of Title 24 as private use areas within multifamily residential facilities where the use of these areas is limited exclusively to owners, residents, and their guests. The areas may be defined as rooms, spaces, or elements inside or outside of a building.

FOR MORE INFORMATION

Online Resource Center (ORC):
www.energy.ca.gov/orc

Home Energy Rating System (HERS):
www.energy.ca.gov/HERS

Acceptance Test Technician Certification Provider Program (ATTCP): www.energy.ca.gov/ATTCP

2019 Approved Compliance Software:
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-2>

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Blueprint newsletter serves as a resource to assist stakeholders in complying with the Energy Code. It does not provide legal advice. Please refer to California Code of Regulations, Title 24, Parts 1 and 6 for specific requirements.



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