

2022 TITLE 24 CODE CYCLE, PART 11

CALGreen Recommendations

Statewide Utility Codes and Standards Team

California Department of Housing and Community Development
CALGreen Focus Group Meeting

December 17, 2020



Introduction

The Statewide Utility Codes and Standards (C&S) Program support achieving statewide energy and climate goals by advocating for new and revised appliance standards and building codes on the local, state, and national level.

This includes recommending code changes for the California Green Building Standards Code (CALGreen or Title 24, Part 11).



Approach for CALGreen Proposals Presented Today

1. Complement California Energy Commission's proposed revisions to Title 24, Part 6
2. Offer recommendations that align with local jurisdictions' needs
3. Continue to support code changes that benefit human health

Three Code Change Proposals



Electric Infrastructure for Mixed Fuel Buildings



Indoor Air Quality and Exhaust



Light Pollution Reduction

Electric Infrastructure for Mixed Fuel Buildings

Rationale

- Ensure all buildings will be ready to transition to all-electric in the future
- Aid California in reducing statewide building-related GHG emissions to a level at least 40 percent below 1990 levels by 2030, as directed by AB 3232
- Installing electric infrastructure during initial construction is less expensive than retrofitting for electric service – avoided costs

Electric Infrastructure for Mixed Fuel Buildings

Summary of Code Changes

- Single Family:
 - **Dedicated electric circuits** for: space heating, cooking equipment, and clothes dryers
- Multifamily and Hotel/Motel:
 - **Dedicated electric circuits:**
 - Conductors or raceway installed with termination points at the main electrical panel into a listed box and no more than 3 feet from each gas outlet
 - Circuit capacity requirements for: domestic hot water, space heating, clothes dryers, cooking equipment, and pool and spas.
 - **Service capacity:** overcurrent protection and bus bar capacity, raceway sizing
 - **Condensate drains**
 - **Physical space for electric water heating equipment**

Indoor Air Quality and Exhaust

Rationale

- **Bathroom exhaust fans:**
 - Harmonization with likely changes to Title 24, Part 6
 - U.S. EPA does not have an ENERGY STAR rating for ERVs/HRVs, which will be prescriptively required in Title 24, Part 6
- **Kitchen range hood ventilation airflow testing:**
 - Complement substantial revisions to Title 24, Part 6 that establish minimum kitchen range hood capture efficiency requirements that vary by dwelling unit floor area and whether the hood is over an electric or gas range.
 - Ensure that installed products, when in the context of attached ventilation duct work and building enclosure, produce adequate kitchen ventilation

Indoor Air Quality and Exhaust

Summary of Code Change

- 4.506 Indoor Air Quality and Exhaust:
 - **Bathroom exhaust fans:** Add exception to ENERGY STAR fan requirement if connected to an energy or heat recovery system (ERV/HRVs are not currently ENERGY STAR labeled)
- A4.506 Indoor Air Quality and Exhaust
 - **Kitchen range hood ventilation airflow testing:** Add installer testing (and reporting) of kitchen range hoods to meet 70% of design flow rate

Reduce Light Pollution

Rationale

- Consensus among lighting researchers that reducing light levels, lowering the correlated color temperature, controlling glare, and reducing the total light exposure through nighttime setback has environmental and human health benefits
- Consistency with nonresidential structure/requirement (already mandatory) for streamlined compliance in multifamily mixed-use buildings

Summary of Code Change

- Move Section A4.106.10 (voluntary) to Section 4.106.10 (mandatory)
- Apply to all multifamily and hotel/motel (not just high-rise)

Thank You

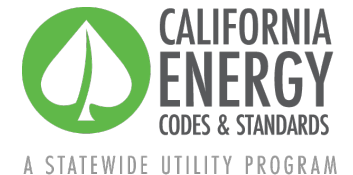
Questions?

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Electric Infrastructure for Mixed Fuel Buildings

Summary of Code Changes – Circuit Capacity Requirements

- Single Family
 - Space heating - dedicated 240-volt, 30 amp or greater
 - Cooking equipment - dedicated 240-volt, 50 amp or greater
 - Clothes dryers - dedicated 240-volt, 30 amp or greater
- Multifamily and hotel/motel
 - Space Heating – dedicated 240-volt electrical circuit (30-amp for individual system, 24-amp per dwelling unit for shared system)
 - Cooktop/Oven – dedicated 240-volt electrical circuit (50-amp in dwelling unit, as calculated by design professional for common areas and nonresidential spaces)
 - Clothes Dryer – dedicated 240-volt electrical receptacle (30-amp in dwelling unit, 24-amp per dwelling or 0.85kVA per 10,000 Btus per hour of rated gas input or pipe capacity for shared laundry)
 - Domestic hot water – 240-volt electrical circuit at 24 amps per dwelling unit or 1.2 kVA for each 10,000 Btus per hour of rated gas input or pipe capacity
 - Pools and spas - 0.85 kVA for each 10,000 Btus per hour of rated gas input or gas pipe capacity for commercial dryers