CALIFORNIA ENERGY COMMISSION

Elevators

When do the Standards Apply?

The 2019 Building Energy Efficiency Standards (Energy Code) has efficiency requirements for elevators in nonresidential newly constructed buildings, and existing elevators undergoing major alterations involving mechanical equipment, lighting and/or controls. Requirements for elevators can be found in the California Code of Regulations, Title 24, Part 6, §120.6(f). The requirements for elevators are mandatory and may not be traded off when using the performance method of compliance. Elevators in healthcare facilities are exempt from these requirements.

What are the Requirements?

The Energy Code has requirements for elevator lighting efficacy, ventilation fan efficacy, controls, and acceptance testing.

Lighting Efficacy

The light power density for luminaires inside the elevator cab must be no more than 0.6 watts per square foot. Interior signal lighting and display lighting are excluded from the lighting power density requirement.

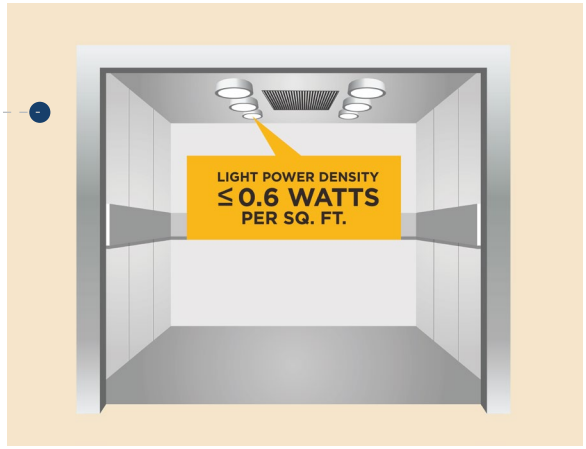
Ventilation Fan Efficacy

Elevator cab ventilation fans for cabs without space conditioning must not exceed 0.33 watts per cfm when measured at maximum speed.

Controls

When the elevator cab is stopped and unoccupied with the doors closed for over 15 minutes, the cab interior lighting and ventilation fans must be switched off until the elevator cab operation resumes.

Controls must allow lighting and ventilation to remain operational in the event that the elevator cab is stuck when passengers are in the cab.



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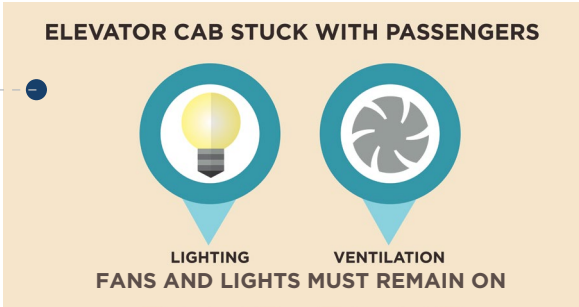

Acceptance Testing

Elevators must meet the acceptance requirements for code compliance, as specified by the Reference Nonresidential Appendix NA7.14.

Prior to functional testing, the following must be verified and documented on the NRCA-PRC-12-F form for each elevator cab:

- ✓ Occupancy sensor location minimizes false signals
- ✓ Passive infrared sensor pattern does not enter into the elevator lobby
- ✓ Obstructions that could adversely affect occupancy sensors are not present
- ✓ Ultrasonic occupancy sensors do not emit audible sound

The following functional testing must be performed and documented on the NRCA-PRC-12-F form for each elevator cab:

- ✓ Verify that the interior lighting and ventilation turn off after 15 minutes when unoccupied
- ✓ Verify that the occupancy sensor signal sensitivity achieves the desired control; the sensor should not detect motion in the elevator lobby
- ✓ Verify that the lighting and ventilation turn on immediately upon occupancy
- ✓ Verify that the lighting and ventilation does not shut off while the cab is occupied

Source: California Energy Commission Video - Mandatory Requirements for Elevators, Escalators, and Moving Walkways

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