Please read:

1. This model code language is based on technical feasibility and recently approved and enacted code language by other local cities and the state, but has not been tested in a court of law. It is the responsibility of each city to review and understand this language before adoption.
2. This language is currently in draft form and will be continually updated based on feedback from cities and the latest research. This is one model code, and sections can be revised/re-worded based on City preferences.
3. Language highlighted in green can be removed without significant deviation of the overall reach code intent. Please reach out to PCE/SVCE with any questions.
4. This language is specifically for Climate Zone 4.

City of X Adopts California Energy Code, 2019 Edition, Title 24, Part 6 of the California Code of Regulations in it’s full form with the following local amendments:

# ALL BUILDINGS

## SUBCHAPTER 1 ALL OCCUPANCIES—GENERAL PROVISIONS

### SECTION 100.1(b) – DEFINITIONS

In this article the following definitions apply:

**ALL-ELECTRIC BUILDING** or **ALL-ELECTRIC DESIGN** is a building or building design that uses a permanent supply of electricity as the only source of energy for space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances, and has no natural gas or propane plumbing installed at the building.

**CERTIFIED ENERGY ANALYST** is a person registered as a Certified Energy Analyst with the California Association of Building Energy Consultants as of the date of submission of a Certificate of Compliance as required under Section 10.103

**ELECTRICALLY HEATED BUILDING** or **ELECTRICALLY HEATED DESIGN** is a building or building design that uses a permanent supply of electricity as the only source of energy for space heating and water heating (including pools and spas), and uses natural gas or propane as fuel for cooking appliances or clothes drying appliances or is plumbed for such equipment.

**MIXED-FUEL BUILDING** or **MIXED-FUEL DESIGN** is a building or building design that uses natural gas or propane as fuel for space heating, water heating (including pools and spas), cooking appliances or clothes drying appliances or is plumbed for such equipment.

# NONRESIDENTIAL

## SUBCHAPTER 5 NONRESIDENTIAL, HIGH-RISE RESIDENTIAL, AND HOTEL/MOTEL OCCUPANCIES—PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR ACHIEVING ENERGY EFFICIENCY

### SECTION 140.0 - PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES

Nonresidential, high-rise residential and hotel/motel buildings shall comply with all of the following:

(a) The requirements of Sections 100.0 through 110.12 applicable to the building project (mandatory measures for all buildings).

(b) The requirements of Sections 120.0 through 130.5 (mandatory measures for nonresidential, high-rise residential and hotel/motel buildings) and:

1. **Retrofit-Ready Mixed Fuel Buildings.** Buildings using gas or propane for water heating, cooking, and/or clothes drying,shall include the following components for each end use:

1. Water Heating
   1. A dedicated 240 volt 30-amp electrical receptacle that is connected to the electric panel with a 240 volt 3 conductor, 10 AWG size copper branch circuit, within 3 feet from the water heater and accessible to the water heater with no obstructions.
   2. Both ends of the unused conductor shall be labeled with the words “For Future Heat Pump Water Heater” and be electrically isolated; and
   3. A reserved double pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words “For Future Heat Pump Water Heater”; and
   4. A condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance.
   5. Located in an unconditioned area with a minimum of 700 cubic feet of volume, or a ducting plan for eight-inch supply and exhaust ducts to the exterior.
2. Clothes Drying
   1. A dedicated 240-volt, 40 amp electrical receptacle that is connected to the electric panel with a 240-volt 3 conductor, 8 AWG copper branch circuit, within 3 feet of the appliance and accessible with no obstructions.
   2. Both ends of the unused conductor shall be labeled with the words “For Future Heat Pump Clothes Drying” and be electrically isolated; and
   3. A reserved double pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words “For Future Heat Pump Clothes Drying.”
3. Cooktop or Range
   1. A dedicated 240-volt, 50 amp electrical receptacle that is connected to the electric panel with a 240-volt 3 conductor, 6 AWG copper branch circuit, within 3 feet of the appliance and accessible with no obstructions.
   2. Both ends of the unused conductor shall be labeled with the words “For Future Inductive Range” and be electrically isolated; and
   3. A reserved double pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words “For Future Inductive Range.”
4. Space Air-Conditioning
   1. All space air-conditioners must include a reversing-valve and controls capable of enabling the air conditioner to deliver heat pump space heating.
   2. If a gas or propane furnace is the primary heating system, the heat pump shall be programmed as auxiliary heating system to be operated in the case of failure of the natural gas or propane system.

2. **Solar Photovoltaic Systems.** Solar photovoltaics shall be installed as follows:

1. New non-residential buildings with less than 10,000 square feet of gross floor area shall provide a minimum of a 3-kilowatt photovoltaic system.
2. New non-residential buildings greater than or equal to 10,000 square feet of gross floor area shall provide a minimum of a 5-kilowatt photovoltaic system.

**EXCEPTION to Section 140.0(b)2**: As an alternative to a solar photovoltaic system, all of the building types listed above may provide a solar hot water system (solar thermal) with a minimum collector area of 40 square feet.

(c) Either the performance compliance approach (energy budgets) specified in Section 140.1 or the prescriptive compliance approach specified in Section 140.2 for the Climate Zone in which the building will be located. Climate zones are shown in FIGURE 100.1-A.

### SECTION 140.1 - PERFORMANCE APPROACH: ENERGY BUDGETS

A building complies with the performance approach if the energy budget calculated for the Proposed Design Building under Subsection (b) is ~~no greater~~ seven percent (7%) less than the energy budget calculated for the Standard Design Building under Subsection (a), except office and mercantile occupancies, shall be fourteen percent (14%) less than the energy budget calculated for the Standard Design Building under Subsection (a).

(a) Energy Budget for the Standard Design Building. The energy budget for the Standard Design Building is determined by applying the mandatory and prescriptive requirements to the Proposed Design Building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation, service water heating, and covered process loads.

(b) Energy Budget for the Proposed Design Building. The energy budget for a Proposed Design Building is determined by calculating the TDV energy for the Proposed Design Building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation and service water heating and covered process loads.

(c) Calculation of Energy Budget. The TDV energy for both the Standard Design Building and the Proposed Design Building shall be computed by Compliance Software certified for this use by the Commission. The processes for Compliance Software approval by the Commission are documented in the ACM Approval Manual.

**EXCEPTION 1 to Section 140.1**: All Electric buildings comply with the performance approach if the energy budget calculated for the Proposed Design Building under subsection (b) is no greater than the energy budget calculated for the Standard Design Building under Subsection (a).

### SECTION 140.2 – PRESCRIPTIVE APPROACH

To comply using the prescriptive approach, a building shall be designed with and shall have constructed and installed systems and components meeting the applicable requirements of Sections 140.3 through 140.9 and the following sections as applicable:

1. Hotels
   1. Install fenestration with a solar heat gain coefficient no less than 0.22.
   2. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums.
   3. Include economizers and staged fan control in air handlers with a mechanical cooling capacity ≥ 33,000 Btu/h
   4. Reduce the total lighting power density (Watts/ft2) by ten percent (10%) from that required from Table 140.6-C.
   5. In common areas, without claiming any Power Adjustment Factor credits, do the following:
2. Control to daylight dimming plus off per Section 140.6(a)2H
3. Perform Institutional Tuning per Section 140.6(a)2J
   1. Install one drain water heat recovery device per every three guest rooms that is field verified as specified in the Reference Appendix RA3.6.9.
4. All Other Nonresidential Buildings
   1. Install fenestration with a solar heat gain coefficient no greater than 0.22.
   2. Limit the fenestration area on east-facing and west-facing walls to one-half of the average amount of north-facing and south-facing fenestration.
   3. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums.
   4. Include economizers and staged fan control in air handlers with a mechanical cooling capacity ≥ 33,000 Btu/h
   5. Reduce the total lighting power density (Watts/ft2) by ten percent (10%) from that required from Table 140.6-C.
   6. Without claiming any Power Adjustment Factor credits, improve lighting, do the following:
5. Control to daylight dimming plus off per Section 140.6(a)2H.
6. Install Occupant Sensing Controls in Large Open Plan Offices per Section 140.6(a)2I
7. Perform Institutional Tuning per Section 140.6(a)2J

**EXCEPTION to 140.2(a) and 140.2(b)**: All Electric buildings need not comply with Sections 140.2(a) and 140.2(b).

# RESIDENTIAL

## SUBCHAPTER 7 LOW-RISE RESIDENTIAL BUILDINGS – MANDATORY FEATURES AND DEVICES

### SECTION 150.0 - MANDATORY FEATURES AND DEVICES

Low-rise residential buildings shall comply with the applicable requirements of Sections 150(a) through 150.0(~~r~~s).

h) **Space-Conditioning Equipment.**

1. **Outdoor Condensing Units.**
   1. **Clearances.** Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five (5) feet (1.5 meters) from the outlet of any dryer vent.
   2. **Liquid Line Drier.** Installed air conditioner and heat pump systems shall be equipped with liquid line filter driers if required, as specified by manufacturer’s instructions.
2. **Central Forced-Air Heating Furnaces**.
   1. Temperature Rise. Central forced-air heating furnace installations shall be configured to operate in conformance with the furnace manufacturer's maximum inlet-to-outlet temperature rise specifications.
3. **Space Air Conditioner Heat Pump Operation**
4. All space air-conditioners must include a reversing-valve and controls capable of enabling the air conditioner to deliver heat pump space heating.
5. If a gas or propane furnace is the primary heating system, the heat pump shall be programmed as auxiliary heating system to be operated in the case of failure of natural gas or propane system.
6. **Water Heating System**.
7. Systems using gas or propane water heaters to serve individual dwelling units shall include the following components:
   1. A dedicated ~~125 volt~~240 volt, ~~20~~ 30-amp electrical receptacle that is connected to the electric panel with a ~~120/~~240 volt 3 conductor, 10 AWG copper branch circuit, within 3 feet from the water heater and accessible to the water heater with no obstructions. In addition, all of the following:
      1. Both ends of the unused conductor shall be labeled with the word “~~spare~~For Future Heat Pump Water Heater” and be electrically isolated; and
      2. A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words “~~Future 240V Use~~For Future Heat Pump Water Heater”; and
   2. A Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; and
   3. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance, and
   4. ~~A gas supply line with a capacity of at least 200,000 Btu/hr.~~ Located in an unconditioned area with a minimum of 700 cubic feet of volume, or a ducting plan for eight-inch supply and exhaust ducts to the exterior.
8. Water heating recirculation loops serving multiple dwelling units shall meet the requirements of Section 110.3(c)5.
9. Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.

[…]

1. **Clothes Drying and Cooking.** Systems using gas or propane for clothes drying or cooking shall include the following components for each end use:
2. Clothes Drying
   1. A dedicated 240-volt, 30 amp electrical receptacle that is connected to the electric panel with a 240-volt 3 conductor, 10 AWG copper branch circuit, within 3 feet of the appliance and accessible with no obstructions.
   2. Both ends of the unused conductor shall be labeled with the words “For Future Heat Pump Clothes Dryer” and be electrically isolated; and
   3. A reserved double pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words “For Future Heat Pump Clothes Dryer.”
3. Cooktop
   1. A dedicated 240-volt, 50-amp electrical receptacle that is connected to the electric panel with a 240-volt 3 conductor, 6 AWG copper branch circuit, within 3 feet of the appliance and accessible with no obstructions.
   2. Both ends of the unused conductor shall be labeled with the words “For Future Inductive Range” and be electrically isolated; and
   3. A reserved double pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words “For Future Inductive Range.”

## SUBCHAPTER 8 LOW-RISE RESIDENTIAL BUILDINGS - PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES

### SECTION 150.1 - PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR LOW-RISE RESIDENTIAL BUILDINGS

1. **Performance Standards**. ~~A b~~Building ~~complies with the~~ performance ~~standards if the energy consumption~~ is calculated ~~for the Proposed Design Building is no greater than the energy budget calculated for the Standard Design Building~~ using Commission-certified compliance software as specified by the Alternative Calculation Methods Approval Manual~~.~~
2. **Newly Constructed Buildings.** The Energy Budget for newly constructed buildings is expressed in terms of the Energy Design Rating, which is based on TDV energy. The Energy Design Rating (EDR) has two components, the Energy Efficiency Design Rating, and the Solar Electric Generation and Demand Flexibility Design Rating. The Solar Electric Generation and Demand Flexibility Design Rating shall be subtracted from the Energy Efficiency Design Rating to determine the Total Energy Design Rating. The Proposed Building shall separately comply with the Energy Efficiency Design Rating and the Total Energy Design Rating in the following ways:
3. **All-Electric Building.** All Electric Buildings comply if the energy consumption calculated for the Proposed Design Building is no greater than the energy budget calculated for the Standard Design Building using Commission-certified compliance software as specified by the Alternative Calculation Methods Approval Manual.
4. **Electrically Heated Buildings.** Buildings with a permanent supply of electricity as the only source of energy for water-heating and space-heating comply if:
   1. **Single family**. The energy consumption calculated for the Proposed Design Building shall be at least 3EDR points less than the Energy Efficiency Design Rating calculated for the Standard Design Building.
   2. **Multifamily**. The energy consumption calculated for the Proposed Design Building shall be at least 1 EDR point less than the Energy Efficiency Design Rating calculated for the Standard Design Building.
5. **Mixed Fuel Buildings**:
   1. **Single family**. The energy consumption calculated for the Proposed Design Building shall be at least 10 EDR points less than the Total Energy Design Rating calculated for the Standard Design Building.
   2. **Multifamily**. The energy consumption calculated for the Proposed Design Building shall be at least 11 EDR Points less than the Total Energy Design Rating calculated for the Standard Design Building.

**EXCEPTION 1 to Section 150.1(b)1**. A community shared solar electric generation system, or other renewable electric generation system, and/or community shared battery storage system, which provides dedicated power, utility energy reduction credits, or payments for energy bill reductions, to the permitted building and is approved by the Energy Commission as specified in Title 24, Part 1, Section 10-115, may offset part or all of the solar electric generation system Energy Design Rating required to comply with the Standards, as calculated according to methods established by the Commission in the Residential ACM Reference Manual.

1. **Additions and Alterations to Existing Buildings**. The Energy Budget for additions and alterations is expressed in terms of TDV energy. A building complies with the performance standards if the energy consumption calculated for the Proposed Design Building is no greater than the energy budget calculated for the Standard Design Building.
2. **Compliance Demonstration Requirements for Performance Standards.**
3. **Certificate of Compliance and Application for a Building Permit.** The application for a building permit shall include documentation pursuant to Sections 10-103(a)1 and 10-103(a)2 which demonstrates, using an approved calculation method, that the building has been designed so that its Energy Efficiency Design Rating and the total EDR meets or exceeds the Standard design EDR for the applicable Climate Zone. The Certificate of Compliance must be prepared and signed by a Certified Energy Analyst.
4. Prescriptive Standards/Component Package. Buildings that comply with the prescriptive standards shall be designed, constructed, and equipped to meet all of the requirements for the appropriate Climate Zone shown in TABLE 150.1-A or B. In TABLE 150.1-A and TABLE 150.1-B, a NA (not allowed) means that feature is not permitted in a particular Climate Zone and a NR (no requirement) means that there is no prescriptive requirement for that feature in a particular Climate Zone. Installed components shall meet the following requirements:
5. **Additional Prescriptive Requirements for Buildings Using Gas or Propane.**
6. Single Family
   1. Meet the requirements of Verified Low Leakage Ducts in Conditioned Space (VLLDCS) in the 2019 Reference Appendices RA3.1.4.3.8, with less than or equal to 25 cfm leakage to outside.
   2. Install R-10 perimeter slab insulation at a depth of 16-inches.
   3. Design the hot water distribution system to meet minimum requirements for the basic compact hot water distribution credit according to the procedures outlined in the 2019 Reference Appendices RA4.4.6
   4. Upgrade the duct distribution system to reduce external static pressure and meet a maximum fan efficacy of 0.35 Watts/cfm for gas furnaces operating at full speed. This may involve upsizing ductwork, reducing the total effective length of ducts, and/or selecting low pressure drop components such as filters. Fan watt draw is verified by a HERS rater according to the procedures outlined in the 2019 Reference Appendices RA3.3.
   5. For buildings with either space heating or water heating systems fueled by gas or propane, also include:
      1. 5 kWh battery of battery storage, OR
      2. A solar water heating system with a minimum solar savings fraction of 0.20.
7. Multifamily
   1. Install R-10 perimeter slab insulation at a depth of 16-inches.
   2. Design the hot water distribution system to meet minimum requirements for the basic compact hot water distribution credit according to the procedures outlined in the 2019 Reference Appendices RA4.4.6
   3. Upgrade the duct distribution system to reduce external static pressure and meet a maximum fan efficacy of 0.35 Watts/cfm for gas furnaces operating at full speed. This may involve upsizing ductwork, reducing the total effective length of ducts, and/or selecting low pressure drop components such as filters. Fan watt draw is verified by a HERS rater according to the procedures outlined in the 2019 Reference Appendices RA3.3.
   4. For buildings with either space heating or water heating systems fueled by gas or propane, also include:
      1. 2.75 kWh of battery storage per dwelling unit, OR
      2. A solar water heating system with a minimum solar savings fraction of 0.20.
   5. Meet the requirements of Verified Low Leakage Ducts in Conditioned Space (VLLDCS) in the 2019 Reference Appendices RA3.1.4.3.8, with less than or equal to 25 cfm leakage to outside.
   6. Install a roofing product that’s rated by the Cool Roof Rating Council to have an aged solar reflectance (ASR) of greater than or equal to 0.25.

## SUBCHAPTER 9 LOW-RISE RESIDENTIAL BUILDINGS – LOW-RISE RESIDENTIAL BUILDINGS – ADDITIONS AND ALTERATIONS TO EXISTING LOW-RISE RESIDENTIAL BUILDINGS

### SECTION 150.2 - ENERGY EFFICIENCY STANDARDS FOR ADDITIONS AND ALTERATIONS TO EXISTING LOW-RISE RESIDENTIAL BUILDINGS

**Additions.** Additions to existing low-rise residential buildings shall meet the requirements of Sections 110.0 through 110.9, Sections 150.0(a) through (q) and 150.0(s), and either Section 150.2(a)1 or 2.

# SUMMARY

## ALL CONSTRUCTION MANDATORY

All new construction, additions, or alterations must comply with the following mandatory requirements:

* Water heating: 240V/30A circuit, condensate drain, location/design that includes air source and footprint
* Clothes Drying: 240V/40A circuit
* Cooking: 240V/50A circuit
* Space air conditioning: Heat pump operation capability

## RESIDENTIAL PERFORMANCE AND PRESCRIPTIVE

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Type  and Size** | **Performance Path Requirements** | **Prescriptive Path Requirements** | |
| **Single and Two-family New Construction** | 1. **All Electric.** Demonstrate that the proposed home will be all electric, OR | Meet 2019 Title 24 Part 6. | |
| 2. **Mixed Fuel Building.** Proposed Design Building shall be at least 10 EDR points less than the Total Energy Design Rating calculated for the Standard Design Building, OR | a. Low leakage ducts in conditioned space PER 2019 Reference Appendices RA3.1.4.3.8. b. Install R-10 perimeter slab insulation at a depth of 16-inches. c. Compact hot water distribution per 2019 Reference Appendices RA4.4.6. d. Maximum fan efficacy of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3. e. Either 1) 5 kWh battery OR 2) A solar water heating system with a minimum solar savings fraction of 0.20. | |
| 3. **Electrically Heated Building (electric space and water heating, gas cooking and/or clothes drying)**. Proposed Design Building shall be at least 2 EDR points less than the Energy Efficiency Design Rating calculated for the Standard Design Building, OR | a. Low leakage ducts in conditioned space PER 2019 Reference Appendices RA3.1.4.3.8. b. Install R-10 perimeter slab insulation at a depth of 16-inches. c. Compact hot water distribution per 2019 Reference Appendices RA4.4.6. d. Maximum fan efficacy of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3. | |
| **Multifamily New Construction 3 stories or less** | 1. **All Electric.** Demonstrate that the proposed building will be all-electric, OR | Meet 2019 Title 24 Part 6. |
| 2. **Mixed Fuel Buildings.** Proposed Design Building shall be at least 10 EDR points less than the Total Energy Design Rating calculated for the Standard Design Building, OR | a. Install R-10 perimeter slab insulation at a depth of 16-inches. b. Compact hot water distribution per 2019 Reference Appendices RA4.4.6. c. Maximum fan efficacy of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3. d. Either 1) 2.75 kWh battery per dwelling unit OR 2) A solar water heating system with a minimum solar savings fraction of 0.20. *e. Meet the requirements of Verified Low Leakage Ducts in Conditioned Space (VLLDCS) in the 2019 Reference Appendices RA3.1.4.3.8, with less than or equal to 25 cfm leakage to outside. f. Install a roofing product that’s rated by the Cool Roof Rating Council to have an aged solar reflectance (ASR) of greater than or equal to 0.25.* |
| 3. **Electrically Heated Building (electric space and water heating, gas cooking and/or clothes drying).**  Proposed Design Building be no greater than the Energy Efficiency Design Rating calculated for the Standard Design Building. | a. Install R-10 perimeter slab insulation at a depth of 16-inches. b. Compact hot water distribution per 2019 Reference Appendices RA4.4.6. c. Maximum fan efficacy of 0.35 Watts/cfm and verification by a HERS rater according to 2019 Reference Appendices RA3.3. d. Meet the requirements of Verified Low Leakage Ducts in Conditioned Space (VLLDCS) in the 2019 Reference Appendices RA3.1.4.3.8, with less than or equal to 25 cfm leakage to outside. e. Install a roofing product that’s rated by the Cool Roof Rating Council to have an aged solar reflectance (ASR) of greater than or equal to 0.25. |
| **Low Rise Residential Additions or Alterations** | Meet 2019 Title 24 Part 6. | Meet 2019 Title 24 Part 6. |

**Optional:** Compliance documentation prepared by a Certified Energy Analyst.

## NONRESIDENTIAL PERFORMANCE AND PRESCRIPTIVE

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| --- | --- | --- |
| **Nonresidential New Construction – Office or Retail Occupancies** | **All Electric.** Demonstrate that the proposed building will be all electric | Meet 2019 Title 24 Part 6. |
| **All Occupancies Except Office and Mercantile.** Demonstrate that the energy use of the proposed building is 9% more efficient than the 2019 State Energy Code. | a. Install fenestration with a solar heat gain coefficient no less than 0.22. b. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums. c. Include economizers and staged fan control in air handlers with a mechanical cooling capacity ≥ 33,000 Btu/h d. Reduce the lighting power density (Watts/ft2) by ten percent (10%) from that required from Table 140.6-C. e. In common areas, improve lighting:  1) Control to daylight dimming plus off per Section 140.6(a)2H  2) Perform Institutional Tuning per Section 140.6(a)2J f. Install one drain water heat recovery device per every three guest rooms that is field verified as specified in the Reference Appendix RA3.6.9. |
| **Office and Mercantile.** Demonstrate that the energy use of the proposed building is 15% more efficient than the 2019 State Energy Code | a. Install fenestration with a solar heat gain coefficient no greater than 0.22. b. Limit the fenestration area on east-facing and west-facing walls to one-half of the average amount of north-facing and south-facing fenestration. c. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums. d. Include economizers and staged fan control in air handlers with a mechanical cooling capacity ≥ 33,000 Btu/h e. Reduce the lighting power density (Watts/ft2) by ten percent (10%) from that required from Table 140.6-C. f. Improve lighting: 1) Control to daylight dimming plus off per Section 140.6(a)2H 2) Install Occupant Sensing Controls in Large Open Plan Offices per Section 140.6(a)2I 3) Perform Institutional Tuning per Section 140.6(a)2J |
| **Mixed Occupancy** | For buildings that do not fall under the exceptions of 100.0(f) of Title 24 Part 6, the building must meet the performance requirements under the residential and nonresidential sections in this table based on a weighted-average by floor area. | Meet the appropriate prescriptive requirements under the residential and nonresidential elsewhere in this table, as applicable. |
| **Nonresidential Additions and Alterations** | Meet 2019 Title 24 Part 6. | Meet 2019 Title 24 Part 6. |