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EXPRESS TERMS

CALIFORNIA CODE OF REGULATIONS, TITLE 24,

PARTS 11, 5, 4, 3, 2.5, 2

CALIFORNIA BUILDING STANDARDS CODE

Part 11 – California Green Building Standards Code (CALGreen)

APPENDIX A4 RESIDENTIAL VOLUNTARY MEASURES

Division A4.2 – ENERGY EFFICIENCY

SECTION A4.201 GENERAL

A4.201.1 – Scope.

For the purposes of mandatory energy efficiency standards in t~~his code~~ the California Building Standards Code (Title 24), the California Energy Commission will continue to adopt mandatory standards in the California Energy Code (Title 24, Part 6). It is the intent of these voluntary provisions to encourage local jurisdictions through codification to achieve exemplary performance in the area of building energy efficiency. Local jurisdictions adopting these voluntary provisions as mandatory local energy efficiency standards shall submit the required application to and receive the required approval of the California Energy Commission in compliance with Title 24, Part 1, Section 10-106 prior to enforcement. Once ~~approval is granted~~ the required filing has been verified and finding has been made by the Energy Commission, local jurisdictions shall file an ordinance expressly marking the local modification along with findings and receive the required acceptance from the California Building Standards Commission in compliance with Section 101.7 of this code, prior to enforcement. (Title 24, Part 1, Section 10-106 is available at ~~http://www.energy.ca.gov/title24/2019standards/~~ http://www.energy.ca.gov/title24/2022standards/)

SECTION A4.202 – DEFINITIONS- No Changes

SECTION A4.203 – PERFORMANCE APPROACH FOR NEWLY CONSTRUCTED BUILDINGS

A4.203.1 Energy efficiency. Newly constructed low-rise residential buildings shall comply with Sections A4.203.1.1 through A4.203.1.3~~4~~.

~~**A4.203.1.1 Tier 1, and Tier 2 prerequisites.** A4.203.1.1.1 Energy design ratings AND A4.203.1.1.2 Quality Insulation Installation are required for all applicable components of the building project.~~

A4.203.1.1.~~1~~ Hourly Source Energy Design Ratings (EDR1)~~: Total Energy Design Rating (Total EDR) and Energy Efficiency Design Rating (Efficiency EDR).~~ ~~Total EDR and Efficiency~~ EDR1 rating~~s~~ for the building's Proposed Design ~~Building~~ shall be computed by Compliance Software certified by the Energy Commission as ~~described~~ specified in Title 24, Part 6, Section 100.1 and 150.1(b), and shall reduce the EDR1 required in the Compliance Software for minimum performance-based compliance with the California Energy Code by the compliance margin specified in Table A4.203.1.1. The~~se~~ rating~~s~~ shall be included in the Certificate of Compliance documentation.

~~Table A4.203.1.1.1~~

~~Recommended EDR Targets by Climate Zones~~				
	~~Tier 1~~		~~Tier 2~~	
~~CZ~~	~~Mixed Fuel~~	~~All-Electric~~	~~Mixed Fuel~~	~~All-Electric~~
~~1~~	~~23~~	~~36~~	~~13~~	~~0~~

~~2~~	~~12~~	~~16~~	~~5~~	~~0~~
~~3~~	~~10~~	~~14~~	~~0~~	~~0~~
~~4~~	~~8~~	~~12~~	~~0~~	~~0~~
~~5~~	~~10~~	~~16~~	~~0~~	~~0~~
~~6~~	~~10~~	~~12~~	~~0~~	~~0~~
~~7~~	~~5~~	~~7~~	~~0~~	~~0~~
~~8~~	~~10~~	~~10~~	~~0~~	~~0~~
~~9~~	~~13~~	~~13~~	~~0~~	~~0~~
~~10~~	~~10~~	~~11~~	~~0~~	~~0~~
~~11~~	~~11~~	~~12~~	~~0~~	~~0~~
~~12~~	~~12~~	~~13~~	~~0~~	~~0~~
~~13~~	~~11~~	~~13~~	~~0~~	~~0~~
~~14~~	~~15~~	~~16~~	~~5~~	~~0~~
~~15~~	~~11~~	~~8~~	~~0~~	~~7~~
~~16~~	~~22~~	~~39~~	~~14~~	~~10~~
~~**Note:** Community shared options complying with Title 24, Part 1, Section 10-115 may be used to achieve Total EDR targets.~~				

Table A4.203.1.1
Recommended EDR1 Margins by Climate Zones

California Energy Code Climate Zone	**EDR1 Compliance Margin**
1	4.3
2	4.4
3	6.0
4	5.8
5	5.8
6	3.5
7	2.9
8	2.1
9	3.6
10	6.5
11	4.3
12	4.4
13	4.9
14	5.8
15	1.8
16	4.3

Note: Community shared options complying with Title 24, Part 1, Section 10-115 may be used to achieve EDR1 targets.

~~**Note:** For Energy Budget calculations, high-rise residential and hotel/motel buildings are considered nonresidential buildings.~~

~~**A4.203.1.1.2 Quality Insulation Installation (QII).** The QII procedures specified in the Building Energy Efficiency Standards Reference Appendices RA3.5 shall be completed.~~

A4.203.1.2 ~~Tier 1 and Tier 2~~ Prerequisite options. In addition, a minimum of~~ONE~~ TWO of the ~~following~~ efficiency measures specified in sections A4.203.1.2.1 through A4.203.1.2.8 will be required to be met~~: A4.203.1.2.1 Roof deck insulation, or ducts in conditioned space OR A4.203.1.2.2 High Performance Walls OR A4.203.1.2.3 HERS Verified Compact Hot Water Distribution System OR A4.203.1.2.4 HERS Verified Drain Water Heat Recovery~~.

A4.203.1.2.1 Roof deck insulation, or ducts in conditioned space. Meet one of the three options for the location of ducts and air handler as well as insulation R values and installation of a radiant barrier as specified in Title 24, Part 6, Section 150.1(c)9A or B:

1. Below roof deck insulation with a minimum R-value of 19; or,

2. Continuous above deck insulation with a minimum R-8 and with an air space present between the roofing and the roof deck; or,

3. All ducts and air handlers in conditioned space as specified in the Title 24, Part 6 Reference ~~Appendices~~ Appendix RA3.1.

A4.203.1.2.2 High Performance Walls ~~(HPW)~~. Meet ~~HPW meet~~ the climate zone dependent U-factor ~~and~~ or insulation R-value~~s~~ for either 2x6 or 2x4 framing as specified in Title 24, Part 6, Section 150.1(c)1B, and shall not exceed a U-factor of 0.048.

A4.203.1.2.3 ~~HERS Verified~~ Compact Hot Water Distribution System ~~(CHWDS-H)~~. ~~CHWDS-H~~ Meet the requirements for installation of Compact Hot Water Distribution Systems ~~shall be installed as~~ specified in the Title 24, Part 6 Reference Appendix RA3.6.5.

A4.203.1.2.4 ~~HERS Verified~~ Drain Water Heat Recovery ~~(DWHR-H)~~. ~~DWHR-H~~ Meet the requirements for installation of Drain Water Heat Recovery ~~shall be installed as~~ specified in Title 24, Part 6 Reference Appendix RA4.4.21.

A4.203.1.2.5 High Performance Vertical Fenestration. Meet the climate zone dependent U Factor and Solar Heat Gain Co-efficient (SHGC) specified in Title 24, Part 6, Section 110.6, Maximum U Factor 0.21, SHGC 0.23.

A4.203.1.2.6 Heat Pump Water Heater Demand Management. For buildings with heat pump water heating, meet the requirements for installation of controls specified by Title 24, Part 6 Reference Appendix JA13.3.3.

A4.203.1.2.7 Battery Storage System Controls. For buildings with battery storage systems, meet the requirements for installation of controls specified by Title 24, Part 6, Reference Appendix JA12 for either the Time-Of-Use Control or Advanced Demand Flexibility Control option.

A4.203.1.2.8 Heat Pump Space and Water Heating. Meet the space heating and water heating

loads using heat pump equipment.

~~**A4.203.1.3 Performance standard.** Comply with one of the advanced efficiency levels , either A4.201.1.3.1 OR A4.201.1.3.2, indicated below.~~

~~**A4.203.1.3.1 Tier 1.** Buildings complying with the first level of advanced energy efficiency shall have additional integrated efficiency and onsite renewable energy generation sufficient to achieve a Total EDR of the Tier 1 value indicated by Table A4.203.1.1.1 or lower as calculated by Title 24, Part 6 Compliance Software approved by the Energy Commission. This requirement is in addition to meeting the Efficiency EDR required for compliance with Title 24, Part 6. Measures considered to meet the Total EDR targets calculated by the compliance software include, but are not limited to, the prerequisite options specified in Section A4.203.1.2, use of Demand Response. additional energy efficiency measures (e.g. triple pane windows), as well as onsite electric battery and/or thermal storage.~~

~~**A4.203.1.3.2 Tier 2.** Buildings complying with this second elective designation shall have additional integrated efficiency and onsite renewable energy generation sufficient to achieve a Total EDR of the Tier 2 value indicated by Table A4.203.1.1.1 or lower as calculated by Title 24, Part 6 Compliance Software approved by the Energy Commission. This may be reached by various paths including improved space and water heating efficiencies, advanced electric battery controls, as well as modest oversizing of the photovoltaic system. This requirement is in addition to meeting the Efficiency EDR required for compliance with Title 24, Part 6. Measures considered to meet the Total EDR targets calculated by the compliance software include, but are not limited to, the prerequisite options specified in Section A4.203.1.2, use of Demand Response. additional energy efficiency measures (e.g. triple pane windows), as well as onsite electric battery and/or thermal storage.~~

A4.203.1.34 Consultation with local electric service provider. Local jurisdictions considering adoption of ~~Tier I as specified by A4.203.1.3.1 or Tier II as specified by A4.203.1.3.2~~reduced EDR targets based on using solar photovoltaic (PV) systems larger than required by the California Energy Code~~, including local jurisdictions considering community shared solar or storage options consistent with Part 1 Section 10-115,~~ shall consult with the local electric service provider to ensure that that ~~solar~~PV system sizing required to comply with the EDR targets will be acceptable to the local electric service provider. The local jurisdiction shall not require onsite ~~renewable energy generation~~PV systems that are larger than the local electric service provider will allow to be interconnected.

Note: Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25402, 25402.1, 25402.4, and 25402.8, Public Resources Code

[…]

Division A4.6 – TIER 1 AND TIER 2

SECTION A4.601 GENERAL

A4.601.4.2 Prerequisite and elective measures for Tier 1. In addition to the mandatory measures, compliance with the following prerequisite and elective measures from Appendix A4 is also required to achieve Tier 1 status:

[…]

2. From Division A4.2, Energy Efficiency.

2.1 For newly constructed low-rise residential buildings, comply with the energy efficiency requirements in Sections A4.203.1~~.1.1~~, A4.203.1.1~~.2~~, Table A4.203.1.1~~.1~~, A4.203.1.2, and A4.203.1.3~~.1, and A4.203.1.4~~.

A4.601.5.2 Prerequisite and elective measures for Tier 2. In addition to the mandatory measures, compliance with the following prerequisite and elective measures from Appendix A4 is also required to achieve Tier 2 status:

[…]

2. From Division A4.2, Energy Efficiency.

2.1 For newly constructed low-rise residential buildings, comply with the energy efficiency requirements in Sections A4.203.1~~.1.1~~, A4.203.1.1~~.2~~, Table A4.203.1.1~~.1~~, A4.203.1.2, and A4.203.1.3~~.1, and A4.203.1.4~~.

APPENDIX A5 NONRESIDENTIAL VOLUNTARY MEASURES

Division A5.2 – ENERGY EFFICIENCY

SECTION A5.201 GENERAL

A5.201.1 Scope. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards. It is the intent of these voluntary provisions to encourage local jurisdictions through codification to achieve exemplary performance in the area of building energy efficiency. Local jurisdictions adopting these voluntary provisions as mandatory local energy efficiency standards shall submit the required application and receive the required ~~approval~~ findings of the California Energy Commission in compliance with Title 24, Part 1, Section 10-106 prior to enforcement. Once ~~approval is granted~~ the required filing has been verified and finding has been made by the Energy Commission, local jurisdictions shall file an ordinance expressly marking the local modifications along with findings and receive the required acceptance from the California Building Standards Commission in compliance with Section 101.7 of this code, prior to enforcement. (Title 24, Part 1, Section 10-106 is available at ~~http://www.energy.ca.gov/title24/2019standards/~~ http://www.energy.ca.gov/title24/2022standards/)

SECTION A5.202 – DEFINITIONS – No Changes

SECTION A5.203 – PERFORMANCE APPROACH – No Changes

SECTION A5.211 RENEWABLE ENERGY – No Changes

SECTION A5.212 – ELEVATORS, ESCALATORS AND OTHER EQUIPMENT – No Changes

SECTION A5.213 – ENERGY EFFICIENT STEEL FRAMING- No Changes

Part 5 – California Plumbing Code

Chapters 4, 5, and 6

Chapter 1, Section 1.1.8

1.1.8 City, County, or City and County Amendments, Additions or Deletions.

[…]

1.1.8.2 ~~Locally Adopted Energy Standards – California Energy Code, Part 6.~~ California Energy Code Requirements for Locally Adopted Energy Standards. In addition to the provisions of Section 1.1.8.1 of this part, ~~the provisions of this section apply to cities, counties, and cities and counties amending adopted energy standards affecting buildings and structures subject to the California Energy Code, Part 6.~~ local jurisdictions that adopt changes to energy conservation or insulation standards (including energy efficiency measures) may not enforce such changes until the California Energy Commission has made the findings required by Public Resources Code Section 25402.1(h)(2), following the process specified in Section 10-106 of the California Administrative Code. ~~Applicable provisions of Public Resources Code Section 25402.1 and applicable provisions of Chapter 10 of the California Administrative Code, Part 1 apply to local amendment of energy standards adopted by the California Energy Commission.~~

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 4, Section 401

401.3 Water-conserving fixtures and fittings.

[…]

Note 4: Appliance Efficiency Regulations – Water Efficiency. Where California law in Title 20 Sections 1601 et seq. applying to water-using appliances sold or offered for sale within the state specifies a lower maximum flow rate than specified in Section 407.2, 408.2, or 411.2, the lower maximum flow rate shall be required.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 5, Section 501

501.0 General.

[…]

501.2. California Energy Code Water Heating System Requirements. See California Energy Code Section 110.3 for additional mandatory requirements for all service water heating systems, and 150.0(n) for additional mandatory requirements for residential service water heating systems.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 6, Section 609.12

609.12 Pipe Insulation.

[…]

609.12.3 California Energy Code Pipe Insulation Requirements. See California Energy Code Sections 150.0(j)2 and 120.3(c) for pipe insulation requirements based on fluid temperature and pipe diameter – for domestic hot water piping. The California Energy Code requires that piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. The California Energy Code also requires that insulation shall abut securely against all framing members, and places conditions on when installed wall or attic insulation that surrounds installed piping can be considered to provide pipe insulation meeting requirements.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Part 4 – California Mechanical Code

Chapters 1, 3, 6, and 12

Chapter 1, Section 1.1.8

1.1.8 City, County, or City and County Amendments, Additions or Deletions.

[…]

1.1.8.2 ~~Locally Adopted Energy Standards – California Energy Code, Part 6.~~ California Energy Code Requirements for Locally Adopted Energy Standards. In addition to the provisions of Section 1.1.8.1 of this part, ~~the provisions of this section apply to cities, counties, and cities and counties amending adopted energy standards affecting buildings and structures subject to the California Energy Code, Part 6.~~ local jurisdictions that adopt changes to energy conservation or insulation standards (including energy efficiency measures) may not enforce such changes until the California Energy Commission has made the findings required by Public Resources Code Section 25402.1(h)(2), following the process specified in Section 10-106 of the California Administrative Code. ~~Applicable provisions of Public Resources Code Section 25402.1 and applicable provisions of Chapter 10 of the California Administrative Code, Part 1 apply to local amendment of energy standards adopted by the California Energy Commission.~~

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 3, Section 311

311.0 Heating or Cooling Air System.

[…]

311.5 California Energy Code Requirements for Residential Air Filtration. In mechanically ventilated residential buildings, air filters shall be provided to clean outdoor air and return air prior to its delivery to occupied spaces where specified in California Energy Code Sections 150.0(m)12 and 160.2(b). The air filters shall comply with California Energy Code requirements for labeling, ventilation system design and installation, air filter efficacy, and air filter pressure drop.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 4, Section 402.1

402.1 Occupiable Spaces

Occupiable Spaces […] shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter. *Ventilation air requirements for occupancies regulated by the California Energy Commission ~~are~~ and found in the California Energy Code supersede those of the California Mechanical Code.*

Chapter 6, Section 601.2

601.2 Sizing Requirements.

[…]

Section 601.2.1. California Energy Code Residential Return Duct Sizing Requirements. California Energy Code Tables 150.0-B and 150.0-C specify return duct sizing requirements for single return and multiple return duct systems, respectively, that are applicable as an alternative to confirming system airflow via field verification and diagnostic testing. See California Energy Code Section 150.0(m)13 for provisions applicable to newly constructed buildings, and Section 150.2(b)1Fiia for alterations.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 6, Section 603.9.2

603.9.2 Duct Leakage Tests.

[…]

603.9.2.1 Duct Leakage Tests for Buildings that Meet Air Distribution System Duct Leakage Sealing Criteria in Title 24, Part 6. For duct leakage testing, see California Energy Code Sections 150.0(m)(11) for single family buildings, Section 160.3(b) for multifamily buildings, and Section 120.4(g) for nonresidential and Hotel Motel buildings.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 12, Section 1217.5.2

1217.5.2 Insulation.

[…]

1217.5.2.1 California Energy Code Insulation Requirements for Heated Slab Floors. See California Energy Code Section 110.8(g) for additional insulation requirements for heated slab floors – a

higher level of insulation is required for Climate Zone 16, and more detailed installation requirements apply to all climate zones.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 12, Section 1217.7

1217.7 Wall and Ceiling Panels.

[…]

1217.7.1 California Energy Code Pipe Insulation Requirements. See California Energy Code Sections 150.0(j)2 and 120.3(c) for pipe insulation requirements based on fluid temperature and pipe diameter – where California Energy Code Table 120.3-A specifies insulation greater than R-12, the higher value is required.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 12, Section 1220.4.5

1220.4.5 Insulation.

[…]

1220.4.5.1 California Energy Code Insulation Requirements for Heated Slab Floors. See California Energy Code Section 110.8(g) and Table 110.8-A for additional insulation requirements for heated slab floors – a higher level of insulation is required for Climate Zone 16, and more detailed requirements for installing insulation are specified in all climate zones.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Part 3 – California Electrical Code

Articles 89, 422, 440, 408, 706

Article 89 General Code Provisions

89.101.8 City, County, or City and County Amendments, Additions or Deletions.

[…]

89.101.8.2 ~~Locally Adopted Energy Standards – California Energy Code, Part 6.~~ California Energy Code Requirements for Locally Adopted Energy Standards. In addition to the provisions of Section 89.101.8.1 of this part, ~~the provisions of this section apply to cities, counties, and cities and counties amending adopted energy standards affecting buildings and structures subject to the California Energy Code, Part 6.~~ local jurisdictions that adopt changes to energy conservation or insulation standards (including energy efficiency measures) may not enforce such changes until the California Energy Commission has made the findings required by Public Resources Code Section 25402.1(h)(2), following the process specified in Section 10-106 of the California Administrative Code. ~~Applicable provisions of Public Resources Code Section 25402.1 and applicable provisions of Chapter 10 of the California Administrative Code, Part 1 apply to local amendment of energy standards adopted by the California Energy Commission.~~

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Article 408 Switchboards and Panelboards

[…]

408.2(A) California Energy Code Requirements for panelboards in single-family buildings. In single-family residential buildings that include one or two dwellings, panelboards serving the individual dwelling unit shall be provided with circuit breaker spaces for heat pump water heaters, heat pump space heaters, electric cooktops and electric clothes dryers as specified in California Energy Code Section 150.0 (n), (t), (u) and (v).

[…]

408.2(B) California Energy Code Requirements for panelboards in multifamily buildings. In multifamily buildings, panelboards serving the individual dwelling unit shall be provided with circuit breaker spaces for heat pump space heaters, electric cooktops and electric clothes dryers as specified in California Energy Code Section 160.9 (a), (b) and (c).

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code
Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and

25943, Public Resources Code.

Article 422 Appliances

[…]

422.3(A) California Energy Code Requirements for heat pump water heaters, electric cooktops, electric clothes dryers and their readiness in single-family buildings. In single-family residential buildings that include one or two dwellings, each dwelling unit shall be provided with:

(1) designated spaces, receptacles, branch circuits and circuit identifications as specified for heat pump water heaters in California Energy Code Section 150.0(n); and

(2) dedicated circuits and circuit identifications as specified for electric cooktops in California Energy Code Section 150.0(u); and

(3) dedicated circuits and circuit identifications as specified for electric clothes dryers in California Energy Code Section 150.0(v).

[…]

422.3(B) California Energy Code Requirements for electric cooktops, electric clothes dryers and their readiness in multifamily buildings. In multifamily buildings, each dwelling unit shall be provided with:

(1) dedicated circuits and circuit identifications as specified for electric cooktops in California Energy Code Section 160.9(b); and

(2) dedicated circuits and circuit identifications as specified for electric clothes dryers in California Energy Code Section 160.9(c).

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code.

Article 440 Air-Conditioning and Refrigeration Equipment

[…]

440.3(E) California Energy Code Requirements for heat pump space heaters and their readiness in single-family buildings. In single-family residential buildings that include one or two dwellings, each dwelling unit shall be provided with designated spaces, receptacles, branch circuits and circuit identifications as specified for heat pump space heaters in California Energy Code Section 150.0(t).

[…]

440.3(F) California Energy Code Requirements for heat pump space heaters and their readiness in multifamily buildings. In multifamily buildings, each dwelling unit shall be provided with

designated spaces, receptacles, branch circuits and circuit identifications as specified for heat pump space heaters in California Energy Code Section 160.9(a).

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code.

Article 706 Energy Storage Systems

[…]

706.10 California Energy Code Requirements for energy storage systems and their readiness in single-family buildings. In single-family residential buildings that include one or two dwellings, each dwelling unit shall be provided with dedicated raceways, designated branch circuits and isolation devices for energy storage systems as specified in California Energy Code Section 150.0(s). Additionally, the panelboards shall be provided with the minimum busbar rating as specified in California Energy Code Section 150.0(s).

Alternatively, an energy storage systems (ESS) shall be installed with minimal backup capacity and ESS supplied branch circuits as specified in California Energy Code Section 150.0(s).

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code.

Part 2.5 – California Residential Code

Chapters 4, 7, 8, and Appendix S

Chapter 4, Section R408.8

[…]

Note: The International Energy Conservation Code (IECC) climate zones used by this Section differ from those used by the California Energy Code to determine applicability of energy efficiency measures. Comparison of IECC and California Energy Code climate zones is shown in Table R702.7.4.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 7, Section R702.7

[…]

R702.7.2 California Energy Code and International Energy Conservation Code Climate Zones. The IECC climate zones used by this Section differ from those used by the California Energy Code to determine applicability of energy efficiency measures. Comparison of IECC and California Energy Code climate zones is shown in Table R702.7.(5).

Table R702.7.(5)
IECC vs California Energy Code Climate Zone Comparison

IECC[a]	California Energy Code	Description[b]
6	16	Includes Alpine, Mono Counties
5	11, 12, 16	Includes Siskiyou, Modoc, Lassen, Plumas, Sierra, Nevada Counties
4 (marine)	1, 2, 16	Includes Del Norte and Humboldt Counties
4	2, 12, 13, 16	Includes Inyo, Trinity, Lake, El Dorado, Amador, Calaveras, Tuolumne, Mariposa Counties
3	8, 9, 10,11,12, 13, 14, 15, 16	Includes Shasta, Tehama, Butte, Glenn, Colusa, Yuba, Contra Costa, Sutter, Yolo, Sacramento, Placer, San Joaquin, Solano, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, Kern, Ventura, Los Angeles, Orange, San Bernardino, Riverside Counties

3 (marine)	1, 2, 3, 4, 5, 6, 9, 12, 16	Includes Mendocino, Sonoma, Marin, San Francisco, San Mateo, Alameda, Santa Cruz, Monterey, San Benito, San Luis Obispo, Santa Barbara, Ventura, San Diego Counties
2	14, 16	Includes Imperial County

a. IECC climate zones 1, 7 and 8 do not occur in California, nor do any IECC moist climate zones.

b. IECC boundaries are defined by county political boundary lines. California Energy Code boundaries are based on metes and bounds specifications aligned with climate-affecting geographic features, which often do not coincide with county lines.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 8, Section R806

[…] [Editor's note: insertion of new note is proposed to occur at the end of Section R806.]

Note: The IECC climate zones used by this Section differ from those used by the California Energy Code to determine applicability of energy efficiency measures. Comparison of IECC and California Energy Code climate zones is shown in Table R702.7.4.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Appendix S

[…][Editor's note: insertion of new note is proposed to occur at the end of Appendix S.]

Note: The IECC climate zones used by this Section differ from those used by the California Energy Code to determine applicability of energy efficiency measures. Comparison of IECC and California Energy Code climate zones is shown in Table R702.7.4.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Part 2 – California Building Code

Chapters 2, 12, 14, 21, and 25

Chapter 2, Section 202

[…]

CLIMATE ZONE. A geographical region that has been assigned climatic criteria as specified in ~~{~~ Chapters 3 [CE] } and ~~{~~ 3[RE] ~~}~~ of the International Energy Conservation Code <u>(IECC) or, for California Energy Code provisions, Figure 100. 1-A of the California Energy Code</u>.

[…]

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 12, User Note

About this chapter: Chapter 12 provides minimum provisions for the interior of buildings—the occupied environment. Ventilation, lighting, and space heating are directly regulated in this chapter and in conjunction with the {~~International~~ <u>California</u> Mechanical Code }~~®~~ and the { ~~International~~ <u>California</u> Energy ~~Conservation~~ Code }~~®~~.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 12, Table 1202.3

[…]

a. Contributes to, but does not supersede, thermal resistance requirements for attic and roof assemblies in ~~Section C402.2.1 of the International Energy Conservation Code~~ <u>the California Energy Code.</u>

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and

25943, Public Resources Code

Chapter 12, Section 1202.3

[…]

1202.3.1 California Energy Code and International Energy Conservation Code Climate Zones. The IECC climate zones used by this Section differ from those used by the California Energy Code to determine applicability of energy efficiency measures. Comparison of IECC and California Energy Code climate zones is shown in Table 1202.3.1.

Table 1202.3.1
IECC vs California Energy Code Climate Zone Comparison

IECC[a]	California Energy Code	Description[b]
6	16	Includes Alpine, Mono Counties
5	11, 12, 16	Includes Siskiyou, Modoc, Lassen, Plumas, Sierra, Nevada Counties
4 (marine)	1, 2, 16	Includes Del Norte and Humboldt Counties
4	2, 12, 13, 16	Includes Inyo, Trinity, Lake, El Dorado, Amador, Calaveras, Tuolumne, Mariposa Counties
3	8, 9, 10,11,12, 13, 14, 15, 16	Includes Shasta, Tehama, Butte, Glenn, Colusa, Yuba, Contra Costa, Sutter, Yolo, Sacramento, Placer, San Joaquin, Solano, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, Kern, Ventura, Los Angeles, Orange, San Bernardino, Riverside Counties
3 (marine)	1, 2, 3, 4, 5, 6, 9, 12, 16	Includes Mendocino, Sonoma, Marin, San Francisco, San Mateo, Alameda, Santa Cruz, Monterey, San Benito, San Luis Obispo, Santa Barbara, Ventura, San Diego Counties
2	14, 16	Includes Imperial County

a. IECC climate zones 1, 7 and 8 do not occur in California, nor do any IECC moist climate zones.

b. IECC boundaries are defined by county political boundary lines. California Energy Code boundaries are based on a metes and bounds specifications aligned with climate-affecting geographic features, which often do not coincide with county lines.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 14, Section 1404.3

[…]

1404.3.3 California Energy Code and International Energy Conservation Code Climate Zones. The IECC climate zones used by this Section differ from those used by the California Energy Code to determine applicability of energy efficiency measures. Comparison of IECC and California Energy Code climate zones is shown in Chapter 12, Table 1202.3.1.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 21, Section 2109.2.4.8.2

[…]

Exception: Insulation products applied to the exterior of stabilized adobe masonry walls in IECC Climate Zones 2B, 3B, 4B and 5B shall not have a vapor permeance requirement. Comparison of IECC and California Energy Code climate zones is shown in Chapter 12, Table 1202.3.1.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 25, Section 2510.6

[…]

2510.6.3 California Energy Code and International Energy Conservation Code Climate Zones. The IECC climate zones used by this Section differ from those used by the California Energy Code to determine applicability of energy efficiency measures. Comparison of IECC and California Energy Code climate zones is shown in Chapter 12, Table 1202.3.1.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code