

Amendments to Definitions

Section 100.1(b) is modified by adding the following definitions:

ALL-ELECTRIC BUILDING is a building that has no natural gas or propane plumbing installed within the building and that uses electricity as the source of energy for all space heating, water heating, cooking appliances, and clothes drying appliances. An All-Electric Building may be plumbed for the use of natural gas or propane as fuel for cooking appliances in a commercial kitchen.

MIXED-FUEL BUILDING is a building that is plumbed for the use of natural gas or propane as fuel for space heating, water heating, cooking or clothes drying appliances.

ACCESSORY DWELLING UNIT, DETACHED is an Accessory Dwelling Unit (see City of San Luis Obispo Municipal Code 17.156.004) that provides new residential square footage not attached or sharing any walls with the primary existing single-unit dwelling.

ACCESSORY DWELLING UNIT, ATTACHED is an Accessory Dwelling Unit (see City of San Luis Obispo Municipal Code 17.156.004) that is either attached to (by a minimum of one shared wall), or completely contained within, the primary existing space of the single-unit dwelling unit or existing accessory structure..

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.

Amendments for Certified Energy Analyst Requirements

SECTION 10-103(a)1 is modified as follows:

Certificate of Compliance. For all buildings, the Certificate of Compliance described in Section 10-103 shall be signed by the person who is eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design (responsible person); and submitted in accordance with Sections 10-103(a)1 and 10-103(a)2 to certify conformance with Part 6. If more than one person has responsibility for the building design, each person shall sign the Certificate of Compliance document(s) applicable to that portion of the design for which the person is responsible. Alternatively, the person with chief responsibility for the building design shall prepare and sign the Certificate of Compliance document(s) for the entire building design. Subject to the requirements of Sections 10-103(a)1 and 10-103(a)2, persons who prepare Certificate of Compliance documents (documentation authors) shall sign a declaration statement on the documents they prepare to certify the information provided on the documentation is accurate and complete. In accordance with applicable requirements of 10-103(a)1, the signatures provided by responsible persons and documentation authors shall be original signatures on paper documents or electronic signatures on electronic documents conforming to the electronic signature specifications in Reference Joint Appendix JA7.

Draft City of San Luis Obispo Proposed Local Amendments to the 2019 California Energy Code - August 22, 2019 DRAFT – Subject to Additional Revision

For nonresidential projects that are 10,000 square feet or larger, the Certificate of Compliance must be prepared and signed by a Certified Energy Analyst.

For multifamily projects with 10 or more units, the Certificate of Compliance must be prepared and signed by a Certified Energy Analyst.

Amendments for Nonresidential Solar Requirements

SECTION 140.0(b) is modified as follows:

- (b) The requirements of Sections 120.0 through 130.5 (mandatory measures for nonresidential, high-rise residential and hotel/motel buildings):
 - 1. The entire solar zone of newly constructed buildings, as specified in Section 110.10, shall have a solar PV system installed that meets the minimum qualification requirements as specified in Joint Appendix JA11, subject to the exceptions in Section 110.10.

Amendments for Nonresidential Energy Performance

Section 140.0 (c) is modified as follows:

- (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.

EXCEPTION to 140(c). Mixed-Fuel buildings shall use the performance compliance approach (energy budgets) specified in Section 140.1

SECTION 140.1 is modified as follows:

SECTION 140.1 – PERFORMANCE APPROACH: ENERGY BUDGETS

A newly constructed All-Electric Building complies 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).

A newly constructed Mixed-Fuel Building complies with the performance approach if the energy budget calculated for the Proposed Design Building under Subsection (b) has a compliance margin, relative to the energy budget calculated for the Standard Design Building under Subsection (a), of at least the value specified for the corresponding occupancy type in Table 140.1-A below.

Table 140.1-A MIXED FUEL BUILDING COMPLIANCE MARGINS

<u>Occupancy Type</u>	<u>Compliance Margins</u>
<u>Office / Retail</u>	<u>15%</u>
<u>Hotel/motel and High-rise residential</u>	<u>9%</u>

Draft City of San Luis Obispo Proposed Local Amendments to the 2019 California Energy Code - August 22, 2019 DRAFT – Subject to Additional Revision

All other occupancies in buildings with both indoor lighting and mechanical systems	8%
All other occupancies in buildings with indoor lighting or mechanical systems but not both	5%

- (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.

NOTE: Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.5, 25402.8, and 25943, Public Resources Code.

EXCEPTION 1 to 140.1. The following buildings and uses shall 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):

- A. Essential Service buildings and public facilities where natural gas is necessary to meet the requirements of other permitting agencies or is demonstrated to be necessary for the purpose of protecting public health, safety and welfare.

Section 140.2 is modified as follows:

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.

NOTE: Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.5, 25402.8, and 25943, Public Resources Code.

EXCEPTION to 140.2. Mixed-Fuel Buildings, except those buildings and uses identified in Exception 1 to 140.1, shall only use the performance compliance approach (energy budgets) specified in Section 140.1.

Amendments for Electric Appliance Retrofit Readiness

SECTION 150.0 is modified to change the first two paragraphs as follows:

SECTION 150.0 – MANDATORY FEATURES AND DEVICES

Low-rise residential buildings shall comply with the applicable requirements of Sections 150(a) through 150.0(¶5).

NOTE: The requirements of Sections 150.0(a) through 150.0(¶5) apply to newly constructed buildings. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.0(a) through 150.0(¶5) also apply to additions or alterations.

SECTION 150.0(h) is modified to add a new subsection (5) as follows:

5. Systems using gas or propane space heating equipment shall include the following components:
 - (a) A designated exterior location for a future heat pump compressor unit with either a drain or natural drainage for condensate from possible future operation as cooling equipment.
 - (b) For equipment serving individual units, a dedicated 208/240 volt, 30-amp or greater electrical circuit that is able to be connected to the electric panel with conductors of adequate capacity, terminating within 3 feet from the designated future location of the compressor unit with no obstructions. In addition, all of the following:
 - i. Both ends of the conductor shall be labeled with the word "For Future Heat Pump Space Heater" and be electrically isolated;
 - ii. A double pole circuit breaker in the electrical panel labeled with the words "For Future Heat Pump Space Heater"; and
 - iii. Other electrical components, including conductors, receptacles or blank covers, related to this section shall be installed in accordance with the California Electrical Code.

EXCEPTION to Section 150.0(h)5.B. If a 240 volt 30 amp or greater electrical circuit and compressor unit location exists for space cooling equipment.

- (c) For equipment serving more than one dwelling unit, electric capacity, determined at 240 volts, in the form of raceway and service and subpanel capacity installed with a termination point of no more than 3 feet from each gas outlet. Capacities shall be determined to be sufficient for heat pump space heating equipment to provide the same heat output as the gas or propane equipment.

EXCEPTION 1 to Section 150.0(h)5. If centralized space cooling equipment is installed for all the affected dwelling units.

EXCEPTION 2 to Section 150.0(h)5. Systems serving Accessory Dwelling Units, Attached to an existing single-family home.

SECTION 150.0(n) is modified as follows:

(n) Water Heating System.

1. Systems using gas or propane water heaters to serve individual dwelling units shall include the following components:
 - (a) A dedicated 120/240 ~~125~~ volt, 30 ~~20~~-amp 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:
 - i. Both ends of the ~~unused~~ conductor shall be labeled with the words “~~spare~~ For Future Heat Pump Water Heater” and be electrically isolated;
 - ii. 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 “~~For Future 240V Use~~” “For Future Heat Pump Water Heater”;
 - iii. Other electrical components, including conductors, receptacles or blank covers, related to this section shall be installed in accordance with the California Electrical Code.

EXCEPTION to Section 150.0(n)1.(a). Systems serving Accessory Dwelling Unit, Attached to an existing single-family home.

- (b) 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
- (c) 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
- (d) A gas supply line with a capacity of at least 200,000 Btu/hr.
- (e) Located in an area that is both:
 - i. At least 3 feet by 3 feet by 7 feet high; and
 - ii. Has a minimum volume of 760 cubic feet or a ventilation plan that includes the equivalent of one 16 inch by 24 inch grill for warm supply air and one 8 inch duct of no more than 10 feet in length for cool exhaust air.

EXCEPTION to Section 150.0(n)1.e. Located in Accessory Dwelling Units, Detached

2. Water heating recirculation loops serving multiple dwelling units shall meet the requirements of Section 110.3(c)5.

Draft City of San Luis Obispo Proposed Local Amendments to the 2019 California Energy Code - August 22, 2019 DRAFT – Subject to Additional Revision

3. 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.
4. Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2kW) shall meet the requirements of Section 110.3(c)7.
5. Systems using gas water heaters to serve multiple dwelling units and/or common areas shall:
 - (a) Be located in a space that can accommodate a heat pump water heating system of equivalent capacity and performance; and
 - (b) Have electrical capacity installed for a heat pump water heater(s) in the form of raceway and service and subpanel capacity, with a termination point of no more than 3 feet from each gas outlet. The electrical capacity shall be determined at 208/240 volts and shall be sufficient to power a heat pump hot water heater of equivalent capacity and performance. Plans shall include calculations and installations for equivalent capacity and performance, electrical power, conductors, raceway sizes and panel capacities in accordance with the California Electrical Code.

SECTION 150.0 is modified to add a new subsection (s) as follows:

- (s) Clothes Drying and Cooking. Buildings plumbed for natural gas or propane clothes drying or cooking equipment shall include the following components for each gas terminal or stub out:
 1. Clothes Drying.
 - (a) A dedicated 208/240-volt, 30 amp or greater electrical receptacle that is able to be connected to the electric panel with conductors of adequate capacity, within 3 feet of the appliance and accessible with no obstructions. In addition, all of the following:
 - i. Both ends of the conductor shall be labeled with the word "For Future Electric Clothes Dryer" and be electrically isolated;
 - ii. A double pole circuit breaker in the electrical panel labeled with the words "For Future Electric Clothes Dryer"; and
 - iii. All electrical components including conductors, receptacles or blank covers, related to this section shall be installed in accordance with the California Electrical Code.
 2. Cooktop or Range
 - (a) A dedicated 208/240-volt, 40 amp or greater circuit and 50 amp or greater electrical receptacle that is able to be connected to the electric panel with conductors of adequate capacity, within 3 feet of the appliance and accessible with no obstructions. In addition, all of the following:

Draft City of San Luis Obispo Proposed Local Amendments to the 2019 California Energy Code - August 22, 2019 DRAFT – Subject to Additional Revision

- i. Both ends of the conductor shall be labeled with the word “For Future Electric Range” and be electrically isolated;
 - ii. A double pole circuit breaker in the electrical panel labeled with the words “For Future Electric Range”; and
 - iii. All electrical components, including conductors, receptacles, or blank covers, related to this section shall be installed in accordance with the California Electrical Code.
3. Stand Alone Cooking Oven
- (a) A dedicated 208/240-volt, 20 amp or greater receptacle that is able to be connected to the electric panel with conductors of adequate capacity, within 3 feet of the appliance and accessible with no obstructions. In addition, all of the following:
 - i. Both ends of the conductor shall be labeled with the word “For Future Electric Oven” and be electrically isolated;
 - ii. A double pole circuit breaker in the electrical panel labeled with the words "For Future Electric Oven"; and
 - iii. All electrical components, including conductors, receptacles or blank covers, related to this section shall be installed in accordance with the California Electrical Code.

EXCEPTION to Section 150.0(s). Accessory Dwelling Units, Attached do not require the above mentioned components.

3.2 Amendments for Energy Performance

SECTION 150.1(b) is modified as follows:

- (b) Performance Standards. A building complies with the performance standards if the energy consumption 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. Mixed-Fuel Buildings must additionally reach an EDR threshold beyond the Standard Design in order to comply with performance standards.

SECTION 150.1(b)1 and 2 are modified as follows:

1. Newly Constructed Buildings. The Energy Budget for newly constructed buildings or newly constructed Detached Accessory Dwelling Units 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

Draft City of San Luis Obispo Proposed Local Amendments to the 2019 California Energy Code - August 22, 2019 DRAFT – Subject to Additional Revision

separately comply with the Energy Efficiency Design Rating and the Total Energy Design Rating.

- (a) An All-Electric Building complies with the performance standards if both the Total Energy Design Rating and the Energy Efficiency Design Rating for the Proposed Building are no greater than the corresponding Energy Design Ratings for the Standard Design Building.
- (b) A Mixed-Fuel Building complies with the performance standards if:
 - i. The Energy Efficiency Design Rating of the Proposed Building is no greater than the Energy Efficiency Design Rating for the Standard Design Building; and
 - ii. The Total Energy Design Rating of the Proposed Building is less than the Total Energy Design Rating of the Standard Design Building by at least 9 for a single family dwelling unit and 9.5 for a multi-family dwelling unit.

EXCEPTION to Section 150.1(b)1.B.ii. Buildings with limited solar access are excepted if all of the following are true:

- 1. The Total Energy Design Rating for the Proposed Building is no greater than the Total Energy Design Rating for Standard Design Building; and
- 2. A photovoltaic (PV) system(s) meeting the minimum qualification requirements as specified in Joint Appendix JA11 is installed on all available areas of 80 contiguous square feet or more with effective annual solar access. Effective annual solar access shall be 70 percent or greater of the output of an unshaded PV array on an annual basis, wherein shade is due to existing permanent natural or manmade barriers external to the dwelling, including but not limited to trees, hills, and adjacent structures; and
- 3. The Energy Efficiency Energy Design Rating for the Proposed Building is no greater than the respective value for the Standard Design Building by the EDR margin in Table 150.1(b)1 below.

Table 150.1(b)1 Energy Efficiency EDR Margins

<u>Building Type</u>	<u>Energy Efficiency EDR Margin</u>
<u>Single Family</u>	2.5
<u>Multifamily</u>	0.5

EXCEPTION 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

Draft City of San Luis Obispo Proposed Local Amendments to the 2019 California Energy Code - August 22, 2019 DRAFT – Subject to Additional Revision

required to comply with the Standards, as calculated according to methods established by the Commission in the Residential ACM Reference Manual.

SECTION 150.1(c) is modified as follows:

Prescriptive Standards/Component Package. All-Electric 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. Mixed-fuel buildings shall comply with requirements of section 150.1(b). Installed components for All-Electric Buildings shall meet the following requirements:

NOTE: The rest of the Section 150.1(c) applies without modifications but is not reproduced here for brevity.