

**DOCKETED**

<b>Docket Number:</b>	19-BSTD-06
<b>Project Title:</b>	Local Ordinances Exceeding the 2019 Energy Code
<b>TN #:</b>	235920-2
<b>Document Title:</b>	City of Sunnyvale 2019 Ordinance No 3168-20
<b>Description:</b>	Plain text of the City of Sunnyvale 2019 Approved Ordinance No. 3168-20
<b>Filer:</b>	Danuta Drozdowicz
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	12/11/2020 1:02:43 PM
<b>Docketed Date:</b>	12/11/2020

**ORDINANCE NO. 3168-20**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUNNYVALE TO AMEND CHAPTER 16.42 (ENERGY CODE) AND CHAPTER 16.43 (GREEN BUILDING CODE) OF TITLE 16 (BUILDINGS AND CONSTRUCTION) OF THE SUNNYVALE MUNICIPAL CODE**

WHEREAS, Sunnyvale's Climate Action Playbook, adopted in 2019 includes six key strategies to reduce greenhouse gas (GHG) emissions. Strategy 2 is Decarbonizing Buildings, which aims to reduce natural gas use and shift to all-electric buildings, including a target to achieve 100 percent all-electric new buildings by 2030; and

WHEREAS, pursuant to Sections 17922, 17958, 17958.5 and 17958. 7 of the California Health and Safety Code, the City may adopt the provisions of the California Building Standards Code amendments to those provisions which are reasonably necessary to protect the health, welfare and safety of the residents of Sunnyvale because of local climatic, geological and topographical conditions; and

WHEREAS, on November 25, 2019, the City Council adopted Ordinance No. 3149-19 adopting by reference the 2019 California Energy Code as Chapter 16.42 of the Sunnyvale Municipal Code; and

WHEREAS, the City Council hereby makes the following findings with respect to local geological, topographical and climatic conditions relating to the amendments to the California Energy Code for which such findings are required:

- A. Sunnyvale is located in the Santa Clara Valley which is densely populated and located in an area of high seismic activities. Sunnyvale is situated on alluvial soils between San Francisco Bay and the San Andreas Fault zone. The City's location makes it particularly vulnerable to damage by seismic events. The relatively young geological processes that have created the San Francisco Bay Area are still active today. Seismically, the City sits between two active earthquake faults (San Andreas and the Hayward/Calaveras) and numerous potentially active faults;
- B. Concern for fire-life safety associated with gas appliances and associated piping located in the ground and in the buildings increases with the risk of explosion or fire if there is a structural failure due to a seismic event considering the increasing number of buildings in the region;
- C. Severe seismic events could disrupt communications, damage gas mains, and place extreme demands on the limited and widely dispersed resources of the Public Safety Department necessary for the life safety needs of the community;
- D. The local geographic, topographic, and climatic conditions pose an increased hazard in acceleration, spread, magnitude, and severity of potential fires in the City,

and may cause a delayed response from emergency responders, allowing further growth of the fire;

- E. Over the next century, increasing levels of atmospheric greenhouse gas concentrates are expected to result in global temperature increases, causing a variety of local changes, including extreme weather conditions, sea level rise, more frequent heat waves and extended period of drought. Sea level rise as a result of climate change will have a dramatic local impact on the City. The City's northern area borders the southern end of the San Francisco Bay and is particularly vulnerable to sea level rise and is at an increased risk of flooding. Increased heat as a result of climate change can have a local impact on the health, safety, and welfare of the City's population, especially those without resources to purchase air conditioning, the elderly, disabled, or those with children. Failure to address and substantially reduce Greenhouse Gas creates an increased risk to the health, safety and welfare of the City residents;
- F. Amendments to the California Codes have been adopted in the past by the City Council based on specific findings of local geographic, topographic and climatic conditions; and the City Council hereby reaffirms such findings and confirms that the facts on which such findings were based continue to exist;
- G. The provisions of this Ordinance establishing certain more restrictive standards than the California Codes will better serve to prevent or minimize structural and environmental damage resulting from local conditions; and

WHEREAS, the City Council hereby makes the following additional findings with respect to cost effectiveness of any amendments to the California Codes for which such findings are required:

- A. An August 1, 2019 Low Rise Residential Reach Code Cost Effectiveness Study prepared by Frontier Energy, Inc. and Misti Bruceri & Associates, LLC, funded by California utility ratepayers and submitted to the California Energy Commission supports and documents the cost-effectiveness of the Ordinance; and
- B. A July 25, 2019 Non-residential New Construction Reach Code Cost Effectiveness Study prepared by TRC Advanced Energy and Energy Soft, funded by California utility ratepayers and submitted to the California Energy Commission further supports and documents the cost-effectiveness of the Ordinance; and
- C. This Ordinance is in alignment with the cost effectiveness studies and therefore the City Council finds them to be cost-effective; and
- D. None of the provisions of this Ordinance change minimum efficiency standards, and therefore this Ordinance is not preempted by federal appliance regulations;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SUNNYVALE DOES ORDAIN AS FOLLOWS:

SECTION 1. Chapter 16.42 REPEALED AND RE-ADOPTED. Chapter 16.42 (Energy Code) of Title 16 (Buildings and Construction) of the Sunnyvale Municipal Code is hereby repealed and re-adopted to read as stated in Exhibit "A" attached hereto and incorporated by reference.

SECTION 2. Chapter 16.43 REPEALED AND RE-ADOPTED. Chapter 16.43 (Green Building Code) of Title 16 (Buildings and Construction) of the Sunnyvale Municipal Code is hereby repealed and re-adopted to read as stated in Exhibit "B" attached hereto and incorporated by reference.

SECTION 3. STATUTORY REFERENCES, INCLUSIONS OF AMENDMENTS AND ADDITIONS. Whenever reference is made to any portion of this ordinance, or of any other chapter or section of the Sunnyvale Municipal Code, or of any other ordinance of the city of Sunnyvale, or of any law of the State of California, the reference applies to all amendments and additions now or thereafter made.

SECTION 4. INTERPRETATIONS. In interpreting and applying the provisions of this ordinance, the requirements contained herein are declared to be minimum requirements for the purposes set forth. The provisions of this ordinance, insofar as they are substantially the same as existing statutory provisions relating to the same subject matter, shall be construed as restatements and continuations and not as new enactments. This ordinance shall not nullify the more restrictive provisions of covenants, agreements or other ordinances or laws, but shall prevail as to such provisions which are less restrictive.

SECTION 5. FINDINGS. To the extent the changes and modifications set forth in this ordinance to the 2019 California Code are deemed more restrictive than the standards contained in the 2019 California Building Standards Codes, thus requiring findings describing local conditions that justify such modifications, the Council finds and determines that the changes are reasonably necessary because of local climatic, geologic, or topographic conditions and adopts the findings for local amendments to the California Energy Code, 2019 Edition, attached as Exhibit "B" and incorporated herein by reference.

SECTION 6. CEQA - EXEMPTION. The City Council finds, pursuant to Title 14 of the California Code of Regulations, Section 15308 (Class 8) Actions by Regulatory Agencies for Protection of the Environment and Section 15305 (Class 5) Minor alterations in Land Use Limitations and Section 15061 of the CEQA Guidelines, that this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) because it can be seen with certainty that there is no possibility that the changes adopted will have a significant effect on the environment.

SECTION 7. CONSTITUTIONALITY; SEVERABILITY. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision or decisions shall not affect the validity of the remaining portions of this ordinance. The City Council

hereby declares that it would have passed this ordinance, and each section, subsection, sentence, clause and phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 8. EFFECTIVE DATE. This ordinance shall be in full force and effect on January 1, 2021.

SECTION 9. POSTING AND PUBLICATION. The City Clerk is directed to cause copies of this ordinance to be posted in three (3) prominent places in the City of Sunnyvale and to cause publication once in The Sun, the official publication of legal notices of the City of Sunnyvale, of a notice setting forth the date of adoption, the title of this ordinance, and a list of places where copies of this ordinance are posted, within fifteen (15) days after adoption of this ordinance.

Introduced at a regular meeting of the City Council held on October 27, 2020, and adopted as an ordinance of the City of Sunnyvale at a regular meeting of the City Council held on December 1, 2020, by the following vote:

AYES: KLEIN, SMITH, LARSSON, HENDRICKS, MELTON  
NOES: NONE  
ABSTAIN: NONE  
ABSENT: NONE  
RECUSAL: GOLDMAN, FONG

ATTEST:

DocuSigned by:  
  
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DAVID CARNAHAN  
City Clerk

Date of Attestation: 12/02/2020

APPROVED:

DocuSigned by:  
  
36C5F28A37A9448...

LARRY KLEIN  
Mayor

(SEAL)

APPROVED AS TO FORM:

DocuSigned by:  
  
4831B06AAB76435...

JOHN A. NAGEL  
City Attorney

**EXHIBIT A**

**CHAPTER 16.42 —ENERGY CODE**

- 16.42.010. Title.**
- 16.42.020. Adoption by Reference.**
- 16.42.030. Scope.**
- 16.42.040. Definitions.**
- 16.42.050. Space-conditioning equipment.**
- 16.42.060. Service water-heating systems and equipment.**
- 16.42.070. Pool and spa systems and equipment.**
- 16.42.080. Natural gas pilot lights.**
- 16.42.090. Solar requirements.**

**16.42.010. Title.**

This chapter shall be known and may be cited and referred to as the “Energy Code for the City of Sunnyvale.”

**Section 16.42.020. Adoption by reference.**

The “2019 California Energy Code” adopted by the State Building Standards Commission in California Code of Regulations (CCR) Title 24, Part 6 is hereby adopted by reference, with changes and modifications as hereinafter set forth, as the energy code of the city of Sunnyvale.

**Section 16.42.030. Scope.**

- (a) Any project that has submitted a complete application for a planning or building entitlement prior to January 1, 2021, is not required to comply with the All-Electric Building requirements.
- (b) 2019 California Energy Code Section 100.0(e)2A (Newly constructed buildings – All newly constructed buildings) is hereby amended to read as follows:

**100.0(e)2A. All newly constructed buildings.** Sections 110.0 through 110.12 apply to all newly constructed buildings within the scope of Section 100.0(a). In addition, newly constructed buildings shall meet the requirements of Subsections B, C, D or E, as applicable; and shall be an All-Electric Building as defined in Section 100.1(b).

For the purposes of All-Electric Building requirements, “newly constructed buildings” shall include the buildings defined in Section 100.1 as well as newly constructed additions and improvements in existing buildings where more than 50 percent of the exterior walls are removed or 50 percent of the wall plate height is raised. The Chief Building Official shall make the final determination regarding the application of this section.

For the purposes of All-Electric Building requirements, “newly constructed buildings” shall not include newly constructed additions and tenant improvements in existing buildings except as defined above.

**Exception 1:** F, H, L Occupancies may utilize natural gas and shall provide installed prewiring for future use of electric appliances.

**Exception 2:** Exemption for public agency owned and operated emergency centers. To take advantage of this exception applicant shall provide third party verification that All-Electric space heating requirement is not cost effective and feasible.

**Exception 3:** Hotels with eighty or more guestrooms may utilize natural gas in on-site commercial laundry facilities only.

**Exception 4:** Non-residential kitchens may not utilize natural gas for cooking appliances unless the applicant establishes that there is not an all-electric option for the kitchen using commercially available technology. If the Building Official grants an exception, EnergySTAR rated natural gas appliances shall be used.

**Exception 5:** An All-Electric Building may receive power from equipment, located outside the building, that utilizes natural gas, propane, or other fuel to generate electricity. The Chief Building Official may grant an exception to allow natural gas or propane plumbing within an all-electric building to fuel such equipment if the applicant provides a third party verification that the standard electrical grid is not sufficiently reliable to meet the power needs for the intended use of the building.

**Exception 6:** If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building under the Energy Code, and that the building is not able to achieve the performance compliance standard applicable to the building under the Energy Code using commercially available technology and an approved calculation method or if it is demonstrated that there is equivalent greenhouse gas reduction, then the Building Official may grant a modification. If the Building Official grants a modification pursuant to this Exception, the applicant shall comply with the pre-wiring provision of Note 1 below.

**Note 1:** If natural gas appliances are used in any of the above exceptions 1-4, natural gas appliance locations must also be electrically pre-wired for future electric appliance installation. They shall include the following:

1. A dedicated circuit, phased appropriately, for each appliance, with a minimum amperage requirement for a comparable electric appliance (see manufacturer's recommendations) with an electrical receptacle or junction box that is connected to the electric panel with conductors of adequate capacity, extending to within 3 feet of the appliance and accessible with no obstructions. Appropriately sized conduit may be installed in lieu of conductors;
2. Both ends of the conductor or conduit shall be labeled with the words "For Future Electric appliance" and be electrically isolated;
3. A circuit breaker shall be installed in the electrical panel for the branch circuit and labeled for each circuit, an example is as follows (i.e "For Future Electric Range;") and

4. All electrical components, including conductors, receptacles, junction boxes, or blank covers, related to this section shall be installed in accordance with the California Electrical Code.

**Note 2:** If any of the exceptions 1-4 are granted, the Building Official shall have the authority to approve alternative materials, design and methods of construction or equipment per CBC 104.

**Section 16.42.040. Definitions.**

2019 California Energy Code Section 100.1(b) (Definitions) is hereby amended by adding the following definition:

**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 its space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances. All Electric Buildings may include solar thermal pool heating.

**Section 16.42.050. Space-conditioning equipment.**

2019 California Energy Code Section 110.2 (Mandatory Requirements for Space-Conditioning Equipment), first paragraph, is hereby amended to read as follows:

**110.2. Certification by Manufacturers.** Any space-conditioning equipment listed in this section may be installed only if the manufacturer has certified to the Commission that the equipment complies with all the applicable requirements of this section and section 100.0(e)2A.

**Section 16.42.060. Service water-heating systems and equipment.**

2019 California Energy Code Section 110.3 (Mandatory Requirements for Service Water-Heating Systems and Equipment), subsection (a), first paragraph, is hereby amended to read as follows:

**110.3(a). Certification by manufacturers.** Any service water-heating system or equipment may be installed only if the manufacturer has certified that the system or equipment complies with all of the requirements of this subsection and section 100.0(e)2A for that system or equipment.

**Section 16.42.070. Pool and spa systems and equipment.**

2019 California Energy Code Section 110.4 (Mandatory Requirements for Pool and Spa Systems and Equipment), subsection (a), first paragraph, is hereby amended to read as follows:

**110.4(a). Certification by manufacturers.** Any pool or spa heating system or equipment may be installed only if the system or equipment meets the requirements of section 100.0(e)2A and the manufacturer has certified that the system or equipment has all of the following:



**Section 16.42.080. Natural gas pilot lights.**

2019 California Energy Code Section 110.5 (Natural Gas Central Furnaces, Cooking Equipment, Pool and Spa Heaters, and Fireplaces: Pilot Lights Prohibited), first paragraph, is amended as follows:

**110.5.** Any natural gas system or equipment listed below may be installed only if it meets the requirements of Section 100.0(e) 2A and does not have a continuously burning pilot light:

**Section 16.42.090. Solar requirements.**

- (a) **Title.** 2019 California Energy Code Section 110.10 (Mandatory Requirements for Solar-Ready Buildings), title, is hereby amended to read as follows:

**SECTION 110.10 – MANDATORY REQUIREMENTS FOR SOLAR READY BUILDINGS AND SOLAR PANEL SYSTEM REQUIREMENTS FOR NON-RESIDENTIAL NEW BUILDINGS**

- (b) **Hotel/Motel Occupancies and High-rise Multifamily Buildings.** 2019 California Energy Code Section 110.10(a)3 (Covered Occupancies – Hotel/Motel Occupancies and High-rise Multifamily Buildings) is hereby amended to read as follows:

**110.10(a)3. Hotel/Motel Occupancies and High-rise Multifamily Buildings.** Hotel/motel occupancies and high-rise multifamily buildings with ten habitable stories or fewer shall comply with the requirements of Section 110.10(b) through 110.10(d) and Table 110.10-A.

- (c) **Nonresidential Buildings.** 2019 California Energy Code Section 110.10(a)4 (Covered Occupancies – Nonresidential Buildings) is hereby amended to read as follows:

**110.10(a)4. Nonresidential Buildings.** Nonresidential buildings with three habitable stories or fewer, other than healthcare facilities, shall comply with the requirements of Section 110.10(b) through 110.10(d) and Table 110.10-A.

- (d) **Solar panel requirements for all new nonresidential and high rise residential buildings.** 2019 California Energy Code Section 110.10(a) (Covered Occupancies) is hereby amended by adding the following table:

<b>Table 110.10-A: Solar panel requirements for all new nonresidential and high rise residential buildings</b>	
<b>Square footage of building</b>	<b>Size of panel</b>
Less than 10,000 sq. ft.	Minimum of 3-kilowatt PV systems
Greater than or equal to 10,000 sq. ft.	Minimum of 5-kilowatt PV systems

**EXCEPTION:** As an alternative to a solar PV system, the building type may provide a solar hot water system (solar thermal) with a minimum collector area of 40 square feet, additional to any other solar thermal equipment otherwise required for compliance with Part 6.

- (e) **Minimum solar area - exceptions.** 2019 California Energy Code Section 110.10(b)1B (Minimum Solar Area – Low-rise and High-rise Multifamily Buildings, Hotel/Motel Occupancies, and Nonresidential Buildings), Exception 2, is hereby amended to read as follows:

**EXCEPTION 2 to Section 110.10(b)1B:** High-rise multifamily buildings, hotel/motel occupancies with a permanently installed domestic solar water-heating system complying with Section 150.1(c)8Biii and an additional collector area of 40 square feet.

- (f) **Minimum solar area – performance equivalency.** 2019 California Energy Code Section 110.10(b)1B (Minimum Solar Area – Low-rise and High-rise Multifamily Buildings, Hotel/Motel Occupancies, and Nonresidential Buildings) is hereby amended by adding the following:

**EXCEPTION 6 to Section 110.10(b)1B:** Performance equivalency approved by the building official.

- (g) **Minimum solar area – shading.** 2019 California Energy Code Section 110.10(b)3 (Minimum Solar Area – Shading) is hereby amended by adding the following:

**110.10(b)3C.** The solar zone needs to account for shading from obstructions that may impact the area required in 110.10(b)1B. When determined by the Building Official that conditions exist where excessive shading occurs and solar zones cannot be met, a performance equivalency approved by the Building Official may be used as an alternative.

**EXHIBIT B**

**CHAPTER 16.43—GREEN BUILDING CODE**

- 16.43.010. Title.**
- 16.43.020. Adoption by Reference.**
- 16.43.030. Fireplaces and Wood-Burning Appliances.**
- 16.43.040. Definitions.**
- 16.43.050. Residential mandatory measures—Electric vehicle (EV) charging.**
- 16.43.060. Non-residential mandatory measures—Electric vehicle (EV) charging.**

**16.43.010. Title.**

This chapter shall be known and may be cited and referred to as the “Green Building Code for the City of Sunnyvale.”

**Section 16.43.020. Adoption by reference.**

The “2019 California Green Building Standards Code” adopted by the State Building Standards Commission in California Code of Regulations (CCR) Title 24, Part 11 is hereby adopted by reference, with changes and modifications as hereinafter set forth, as the green building code of the city of Sunnyvale.

**Section 16.42.030. Fireplaces and Wood-Burning Appliances.**

- (a) 2019 California Green Building Code Section 4.503 is amended to read as follows:

**Section 4.503.1. Fireplaces and Wood-Burning Appliances.** Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed wood stove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable and shall have a permanent label indicating they are certified to meet the emission limit.

This section shall not apply to the repair, reconstruction or replacement of any lawful, existing wood-burning appliance.

- (1) Coal;
- (2) Garbage;
- (3) Glossy or colored paper;
- (4) Paint;
- (5) Paint solvent;
- (6) Particle board;
- (7) Plastic or items made from plastic;
- (8) Rubber or items made from rubber;
- (9) Salt water driftwood;
- (10) Treated wood; and
- (11) Waste petroleum products.

- (b) 2019 California Green Building Code Section 5.503.1 is amended to read as follows:

**Section 5.503 Fireplaces and Wood-Burning Appliances.** Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed wood-stove or pellet stove. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

This section shall not apply to the repair, reconstruction or replacement of any lawful, existing wood-burning appliance.

It is unlawful to burn the following in any fireplace or wood-burning appliance:

- (1) Coal;
- (2) Garbage;
- (3) Glossy or colored paper;
- (4) Paint;
- (5) Paint solvent;
- (6) Particle board;
- (7) Plastic or items made from plastic;
- (8) Rubber or items made from rubber;
- (9) Salt water driftwood;
- (10) Treated wood; and
- (11) Waste petroleum products.

**Section 16.43.040. Definitions.**

2019 California Green Building Code Section 201 (Definitions) is hereby amended by adding the following definitions:

**EV Capable:** A parking space linked to a listed electrical panel with sufficient capacity to provide at least 110/120 volts and 20 amperes to the parking space. Raceways linking the electrical panel and parking space only need to be installed in spaces that will be inaccessible in the future, either trenched underground or where penetrations to walls, floors, or other partitions would otherwise be required for future installation of branch circuits. Raceways must be at least 1” in diameter and may be sized for multiple circuits as allowed by the California Electrical Code. The panel circuit directory shall identify the overcurrent protective device space(s) reserved for EV charging as “EV CAPABLE.” Construction documents shall indicate future completion of raceway from the panel to the parking space, via the installed inaccessible raceways.

**Level 1 EV Ready Space:** A parking space served by a complete electric circuit with a minimum of 110/120 volt, 20-ampere capacity including electrical panel capacity, overprotection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled “Electric Vehicle Outlet” with at least a ½” font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE).

**Level 2 EV Ready Space:** A parking space served by a complete electric circuit with 208/240 volt, 40-ampere capacity including electrical panel capacity, overprotection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled “Electric Vehicle Outlet” with at least a ½” font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes.

**Level 3 EV Ready Space:** A parking space served by a complete electric circuit with at least a 208/240 volt, 40-ampere capacity including electrical panel capacity, overprotection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled “Electric Vehicle Outlet” with at least a ½” font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes.

**Electric Vehicle Charging Station (EVCS):** A parking space that includes installation of electric vehicle supply equipment (EVSE) with a minimum capacity of 30 amperes connected to a circuit serving a Level 2 EV Ready Space. EVCS installation may be used to satisfy a Level 2 EV Ready Space requirement.

**Level 3 Electric Vehicle Charging Station (EVCS):** A parking space that includes installation of electric vehicle supply equipment (EVSE) with a minimum capacity of 40 amperes connected to a circuit serving a Level 3 EV Ready Space. EVCS installation may be used to satisfy a Level 3 EV Ready Space requirement. As applied to this code, a Level 3 shall be SAE J1772 (IEC Type 1) or alternative approved by the chief building official.

**Automatic Load Management Systems (ALMS):** (ALMS) A control system which allows multiple EV chargers or EV-Ready electric vehicle outlets to share a circuit or panel and automatically reduce power at each charger, providing the opportunity to reduce electrical infrastructure costs and/or provide demand response capability. ALMS systems must be designed to deliver at least 1.4kW to each EV Capable, EV Ready or EVCS space served by the ALMS. The connected amperage on-site shall not be lower than the required connected amperage per Part 11, 2019 California Green Building Code for the relevant building types.

**Section 16.42.050. Residential mandatory measures—Electric vehicle (EV) charging.**

- (a) 2019 California Green Building Code Section 4.106.4 (Electric vehicle (EV) charging for new construction) is hereby amended to read as follows:

**4.106.4. Electric vehicle (EV) charging for new construction.** New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers.

**Exceptions:**

1. Where there is no commercial power supply.

2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities, unless the electrical panel is upgraded, or a new panel is installed in which case only the electrical capacity requirements apply.
3. Spaces accessible only by automated mechanical car parking systems are exempted from providing EV charging infrastructure.

(b) 2019 California Green Building Code Section 4.106.4.1 (New one- and two-family dwellings and townhouses with attached private garages) is hereby amended to read as follows:

**4.106.4.1. New one- and two-family dwellings and townhouses.**

1. In private garages with two or more parking spaces, install a Level 2 EV Ready Space and Level 1 EV Ready Space.
2. In private garages with only one parking space, install a Level 2 EV Ready Space.
3. In each carport space assigned to a dwelling unit, install a Level 2 EV Ready Space.
4. For parking spaces not assigned to a dwelling unit:
  - a. 30% of the unassigned parking space(s) shall be provided with at least one Level 2 EV Ready Space. Calculations for the required minimum number of Level 2 EV Ready spaces shall be rounded up to the nearest whole number.
  - b. In addition, each remaining unassigned parking space(s) shall be provided with at least a Level 1 EV Ready Space.

(c) 2019 California Green Building Code Section 4.106.4.1.1 (Identification.) is hereby amended to read as follows:

**4.106.4.1.1. Identification.** The raceway termination location shall be permanently and visibly marked as “Level 2 EV-Ready”.

(d) 2019 California Green Building Code Section 4.106.4.2 (New multifamily dwellings) is hereby amended to read as follows:

**4.106.4.2. New multifamily dwellings.** The following requirements apply to all new multifamily dwellings:

1. 30% of the dwelling units with parking space(s) shall be provided with at least one Level 2 EV Ready Space. Calculations for the required minimum

number of Level 2 EV Ready spaces shall be rounded up to the nearest whole number.

2. In addition, each remaining dwelling unit with parking space(s) shall be provided with at least a Level 1 EV Ready Space.

**Notes:**

1. ALMS may be installed to decrease electrical service and transformer costs associated with EV Charging Equipment subject to review of the authority having jurisdiction.
  2. Installation of Level 2 EV Ready Spaces above the minimum number required level may offset the minimum number Level 1 EV Ready Spaces required on a 1:1 basis.
  3. The requirements apply to multifamily buildings with parking spaces including: a) assigned or leased to individual dwelling units, and b) unassigned residential parking.
  4. If a building permit applicant provides documentation detailing that the increased cost of utility service or on-site transformer capacity would exceed an average of \$4,500 among parking spaces with Level 2 EV Ready Spaces and Level 1 EV Ready Spaces, the applicant shall provide EV infrastructure up to a level that would not exceed this cost for utility service or on-site transformer capacity.
  5. All accessible parking spaces for covered newly constructed multifamily dwellings shall provide Level 1 EV Ready Space or Level 2 EV Ready Spaces.
- (e) 2019 California Green Building Code Section 4.106.4.2.2 (Electric vehicle charging space (EV space) dimensions) is hereby amended to read as follows:

**4.106.4.2.2 Electric vehicle charging space (EV space) dimensions.** The dimensions of the EV spaces shall comply with Chapter 19.46 (Parking) of the Sunnyvale Municipal Code.

- (f) The following sections of the 2019 California Green Building Code Section are deleted in their entirety: 4.106.4.2.3 (Single EV Space Required), 4.106.4.2.4 (Multiple EV spaces required), and 4.106.4.2.5 (Identification).
- (g) 2019 California Green Building Code Section 4.106.4.3 (New Hotels and Motels) is hereby amended to read as follows:

**4.106.4.3 New Hotels and Motels:** In residential new construction buildings designated primarily for hotel and motel use with parking:

1. 20% of parking spaces shall be provided with at least one Level 2 Ready Space. Calculations for the required minimum number of Level 2 Ready Space shall be rounded up to the nearest whole number.
2. An additional 50% shall be provided with at least EV Capable.

Calculations for the required minimum number of spaces equipped with Level 2 Ready Space and EV Capable spaces shall all be rounded up to the nearest whole number.

Construction plans and specifications shall demonstrate that all raceways shall be a minimum of 1" and sufficient for installation of Level 2 Ready Space and all required EV Capable spaces; Electrical calculations shall substantiate the design of the electrical system to include the rating of equipment and any on-site distribution transformers, and have sufficient capacity to simultaneously charge EVs at all required EV spaces including EV Capable spaces; and service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

**Notes:**

1. ALMS may be installed to increase the number of EV chargers or the amperage or voltage beyond the minimum requirements in this code. The option does not allow for installing less electrical panel capacity than would be required without ALMS.
- (h) The following sections of the 2019 California Green Building Code Section are deleted in their entirety: 4.106.4.3.1 (Number of required EV spaces), 4.106.4.3.3 (Single EV space required), 4.106.4.3.4 (Multiple EV spaces required), and 4.106.4.3.5 (Identification).

**Section 16.42.060. Nonresidential mandatory measures—Electric vehicle (EV) charging.**

- (a) 2019 California Green Building Code Section 5.106.5.3 (Electric vehicle (EV) charging) is hereby amended to read as follows:

**5.106.5.3. Electric vehicle (EV) charging.** New construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation and use of EV chargers.

**Exceptions:**

1. Where there is no commercial power supply.
  2. Spaces accessible only by automated mechanical car parking systems are exempted from providing EV charging infrastructure.
- (b) 2019 California Green Building Code Section 5.106.5.3.1 (Single charging space requirements) is hereby amended to read as follows:



**5.106.5.3.1. Office buildings:** In nonresidential new construction buildings designated primarily for office use with parking:

1. 35% of parking spaces shall be provided with at least one Level 2 EVCS. Calculations for the required minimum number of Level 2 EVCS shall be rounded up to the nearest whole number.
2. An additional 35% shall be provided with at least EV Capable.

Calculations for the required minimum number of spaces equipped with Level 2 EVCS and EV Capable spaces shall all be rounded up to the nearest whole number.

Construction plans and specifications shall demonstrate that all raceways shall be a minimum of 1" and sufficient for installation of EVCS at all required EV Capable spaces; Electrical calculations shall substantiate the design of the electrical system to include the rating of equipment and any on-site distribution transformers, and have sufficient capacity to simultaneously charge EVs at all required EV spaces including EV Capable spaces; and service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

**Notes:**

1. ALMS may be installed to increase the number of EV chargers or the amperage or voltage beyond the minimum requirements in this code. The option does not allow for installing less electrical panel capacity than would be required without ALMS.

(c) 2019 California Green Building Code Section 5.106.5.3.2 (Multiple charging space requirements) is hereby amended to read as follows:

**5.106.5.3.2. Other nonresidential buildings.** In nonresidential new construction buildings that are not designated primarily for office use, such as retail or institutional uses:

1. 35% of the available parking spaces on site shall be equipped with Level 2 EVCS;
2. An additional 35% shall be at least EV Capable.
3. A Level 3 EVCS (Direct Current Fast Charger) shall be provided for every one hundred (100) spaces on site or fraction thereof.

Calculations for the required minimum number of spaces equipped with Level 2 and Level 3 EVCS and EV Capable shall be rounded up to the nearest whole number.

**Exception:** Installation of each Direct Current Fast Charger with the capacity to provide at least 80 kW output may substitute for 6 Level 2 EVCS spaces after a minimum of 6 Level 2 EVCS are installed.

(d) 2019 California Green Building Code Section 5.106.5.3.3 (EV charging space calculation) is hereby amended to read as follows:

**5.106.5.3.3. Clean Air Vehicle Parking Designation.** EVCS qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

**Notes:**

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. [www.dot.ca.gov/hq/traffops/policy/13-01.pdf](http://www.dot.ca.gov/hq/traffops/policy/13-01.pdf).
2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.
3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. [www.opr.ca.gov/docs/ZEV\\_Guidebook.pdf](http://www.opr.ca.gov/docs/ZEV_Guidebook.pdf).
4. Section 11B-812 of the California Building Code requires that a facility providing EVCS for public and common use also provide one or more accessible EVCS as specified in Table 11B-228.3.2.1.
5. It is encouraged that shared parking, EV Ready are designated as "EV preferred."

(e) 2019 California Green Building Code Section 5.106.5.3.4 (Identification) is hereby amended to read as follows:

**5.106.5.3.4. Identification.** The raceway termination location shall be permanently and visibly marked as "EV CAPABLE Ready".

(f) 2019 California Green Building Code Section 5.106.5.3.5 (Future charging stations) is hereby deleted in its entirety.