

**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUNNYVALE TO AMEND CHAPTER 16.42 (ENERGY 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. Section 16.08.020 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. 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 3. 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 4. 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 5. 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 6. 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 7. EFFECTIVE DATE. This ordinance shall be in full force and effect on January 1, 2021.

SECTION 8. 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 \_\_\_\_\_, and adopted as an ordinance of the City of Sunnyvale at a regular meeting of the City Council held on \_\_\_\_\_, by the following vote:

AYES:  
NOES:  
ABSTAIN:  
ABSENT:  
RECUSAL:

ATTEST:

APPROVED:

\_\_\_\_\_  
City Clerk  
Date of Attestation: \_\_\_\_\_

\_\_\_\_\_  
Mayor

(SEAL)

APPROVED AS TO FORM:

\_\_\_\_\_  
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 utilize natural gas for cooking appliances.

**Exception 5:** 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, 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(b)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
<b>EXCEPTION:</b> 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.