

ORDINANCE NO. NS-1100.135

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SANTA CLARA AMENDING THE 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE AT ORDINANCE CODE SECTIONS C3-30 THROUGH C3-36 AND 2019 CALIFORNIA ENERGY CODE AT ORDINANCE CODE SECTIONS C3-61 THROUGH C3-63 TO REQUIRE BUILDING ELECTRIFICATION AND ELECTRIC VEHICLE INFRASTRUCTURE

Summary

This ordinance reflects the County's amendments to the 2019 California Green Building Standards Code to require electric vehicle infrastructure and to the 2019 California Energy Code to require building electrification in an effort to reduce carbon emissions and unhealthy air pollution.

WHEREAS, Health and Safety Code sections 17958.7 and 18941.5 provide that local jurisdictions may enact more restrictive building standards than those contained in the California Building Standards Code where reasonably necessary because of local climatic, geological, or topographical conditions; and

WHEREAS, Public Resources Code section 25402.1(h)(2) provides that local jurisdictions may enforce energy conservation standards for buildings if the local jurisdiction files the basis of its determination that the standards are cost effective with the California Energy Commission and the Commission finds that the standards will require the diminution of energy consumption levels.

THE BOARD OF SUPERVISORS OF THE COUNTY OF SANTA CLARA FINDS AS FOLLOWS:

- A. Each of the amendments set forth in this Ordinance are necessary because of local climatic, topological, and geological conditions, including the following:
 - i. The effects of climate change caused by greenhouse gas emissions from human activity, including higher temperatures and heat waves, decreased water availability and droughts, increased extreme weather, increased wildfires, and increased smog, pose multiple threats to the health and well-being of Santa Clara County residents.
 - ii. The County of Santa Clara ("County") has declared climate change caused by human activities to be an emergency that urgently and severely impacts the

economic and social well-being, health and safety, and security of the residents of the county, and that demands immediate mobilization of resources and labor at a massive scale and at every level.

iii. Because of its local climatic, topological, and geological conditions, the unincorporated county is particularly negatively impacted by climate change.

1. *Fires.* The U.S. Environmental Protection Agency¹ (EPA) and State agencies² have found that climate change is likely to continue to increase the severity, frequency, and extent of wildfires in California. Much of the unincorporated areas of the county are remote hillside and ranchland areas, characterized by dry grassland, steady winds, and steep terrain, which can rapidly spread fires and result in delays for emergency responders. Recent wildfires linked to and/or accelerated by climate change,³ including the 2020 SCU Lightning Complex fires, have burned more than 165,202 acres in the county and have caused weeks of unhealthy air throughout the county. The County has spent \$3,993,947.20 addressing damage from the SCU Lightning Complex fire alone.
2. *Landslides.* As described above, much of the unincorporated areas of the county are characterized by dry grassland and steep terrain. This terrain is not only particularly vulnerable to wildfires, but also is prone to landslides in extreme storms or if fire and drought kills the existing vegetation. Climate change is likely to increase extreme storms, fire, and drought.⁴
3. *Drought, water supply availability, and impact on agriculture.* The Santa Clara Valley Water District has identified droughts due to climate change to be a major threat to water supply reliability for the county.⁵ The reduction in water supply will be particularly acute for agriculture as rising temperatures will also increase the rate at which plants transpire water into

¹ U.S. Env't Prot. Agency, *What Climate Change Means for California*, EPA 430-F-16-007 (2016), <https://www.epa.gov/sites/production/files/2016-09/documents/climate-change-ca.pdf>.

² Cal. Air Res. Bd., *Wildfires & Climate Change*, <https://ww2.arb.ca.gov/wildfires-climate-change>.

³ Alejandra Borunda, *The Science Connecting Wildfires to Climate Change*, Nat'l Geographic (Sept. 17, 2020), <https://www.nationalgeographic.com/science/article/climate-change-increases-risk-fires-western-us>.

⁴ David Ackerly et al., Governor's Off. of Plan. & Rsch., *California's Fourth Climate Change Assessment: San Francisco Bay Area Region Report 6* (2019), <https://www.cakex.org/sites/default/files/documents/20190116-sanfranciscobayarea.pdf>.

⁵ Santa Clara Valley Water Dist., *Draft Climate Change Action Plan* (2021), https://www.valleywater.org/sites/default/files/ForPublic_CCAP_V2.pdf.

the air to keep cool.⁶ A significant portion of the unincorporated county is farmland and ranchland that will be particularly harmed if climate change continues to reduce the water supply.

4. *Heat.* According to Cal-Adapt, the number of extreme heat days in Santa Clara County is expected to increase six-fold by 2070, increasing from an average of 4 to up to 29 extreme heat days each year.⁷ The increase in extremely hot days will likely contribute to increased wildfires and have particularly harmful impacts to vulnerable county residents and local flora and fauna.
 5. *Flooding.* The unincorporated county contains multiple flood hazard areas. The EPA has recognized that climate change is linked to extreme single-day precipitation events,⁸ which are likely to result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary expenditures for flood protection and relief in those areas.
- iv. A recent 2017 greenhouse gas emissions inventory for the County, found that of the greenhouse gas emissions in the unincorporated county, 31% came from commercial natural gas, 12% came from residential natural gas, and 18% came from transportation.⁹
 - v. The amendments set forth in this Ordinance will decrease the use of natural gas in new buildings in favor of electricity and will support the increased use of electric vehicles in the unincorporated county. Pairing electrification of vehicles and buildings with high amounts of renewable energy generation is considered one of the lower-cost and lower-risk emissions reduction strategies.¹⁰ Since 2017, unincorporated Santa Clara County communities have been able to receive 100 percent carbon-free electricity.

⁶ U.S. Env't Prot. Agency, *What Climate Change Means for California*, EPA 430-F-16-007 (2016), <https://www.epa.gov/sites/production/files/2016-09/documents/climate-change-ca.pdf>.

⁷ Cal-Adapt, *Extreme Heat Days & Warm Nights*, <https://cal-adapt.org/tools/extreme-heat/>.

⁸ U.S. Env't Prot. Agency, *Climate Change Indicators: Weather and Climate*, <https://www.epa.gov/climate-indicators/weather-climate>; see also David Ackerly et al., Governor's Off. of Plan. & Rsch., *California's Fourth Climate Change Assessment: San Francisco Bay Area Region Report 6*, (2019).

⁹ Rincon Consultants, Inc. Santa Clara County Climate Action Roadmap, Greenhouse Gas Analysis Results Memo (2021).

¹⁰ Energy+Environmental Econs., *Achieving Carbon Neutrality in California: PATHWAYS Scenarios Developed for the California Air Resources Board* 8 (2020), https://ww2.arb.ca.gov/sites/default/files/2020-10/e3_cn_final_report_oct2020_0.pdf.

- vi. Separate from the harms from climate change, the unincorporated county's geologic and topographic conditions produce increased risk for earthquake-induced structural failure of natural gas infrastructure and consequent fire. Santa Clara County is in a high seismic zone and has multiple seismic faults located within it. The unincorporated county also has numerous areas at high risk from landslides. In some situations, after seismic events or landslides, natural gas infrastructure will take longer to resume service compared to electrical infrastructure. The amendments in this Ordinance to reduce the construction of new natural gas infrastructure are therefore necessary and appropriate.
 - vii. Gas appliances produce pollutants with known negative health effects if not properly ventilated, including nitrogen oxide (NO_x), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter (PM), and formaldehyde (CH₂O). Combustion of natural gas by appliances is linked to increased risk of asthma and respiratory illness.¹¹ This Ordinance protects the health and welfare of county residents who suffer from asthma and other health conditions associated with poor indoor and outdoor air quality, which are exacerbated by the combustion of natural gas.
- B. The amendments to the California Energy Code contained in this Ordinance are cost effective, as demonstrated by the following cost effectiveness studies:
- i. 2019 Reach Code Cost-effectiveness Study: Low-Rise Residential New Construction, prepared by Frontier Energy, Inc. and Misti Bruceri & Associates, LLC.
 - ii. 2019 Mid-Rise New Construction Reach Code Cost-Effectiveness Study, prepared by Frontier Energy, Inc., Misti Bruceri & Associates, LLC, and EnergySoft.
 - iii. 2019 Cost-Effectiveness Study: 2020 Analysis of High-Rise Residential New Construction, prepared by Frontier Energy, Inc., Misti Bruceri & Associates, LLC, and EnergySoft.
 - iv. 2019 Nonresidential Construction Reach Code Cost Effectiveness Study, prepared by TRC and EnergySoft.

¹¹ Jennifer M. Logue et al., Lawrence Berkeley Nat'l Lab., *Pollutant Exposures from Natural Gas Cooking Burners: A Simulation-Based Assessment for Southern California*, 122 Env't Health Persps. 43, 43 (2014), <https://ehp.niehs.nih.gov/doi/pdf/10.1289/ehp.1306673>; UCLA Fielding School of Public Health, *Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California* 6 (2020), <https://coeh.ph.ucla.edu/effects-residential-gas-appliances-indoor-and-outdoor-air-quality-and-public-health-california>.

v. 2020 Reach Code Cost-Effectiveness Analysis: Detached Accessory Dwelling Units, prepared by TRC and P2S Engineers.

C. The Department of Planning and Development has determined that the actions contemplated in this Ordinance comply with the California Environmental Quality Act, Cal. Pub. Res. Code § 21000 *et seq.* The determination is on file with the Clerk of the Board of Supervisors and is incorporated herein by reference. The Board affirms this determination.

**THE BOARD OF SUPERVISORS OF THE COUNTY OF SANTA CLARA
ORDAINS AS FOLLOWS:**

//

//

//

//

//

//

//

//

//

//

//

//

SECTION 1. Chapter III of Division C3 of Title C of the County of Santa Clara Ordinance Code relating to County Green Building Standards Code is hereby repealed and reenacted to read as follows.

CHAPTER III. COUNTY GREEN BUILDING STANDARDS CODE

ARTICLE 1. INCORPORATION BY REFERENCE

Sec. C3-30. 2019 California Green Building Standards Code adopted.

The County Green Building Standards Code is the 2019 California Green Building Standards Code (“CGBSC”) as modified by the additions, deletions, and amendments set forth in this chapter.

ARTICLE 2. ADDITIONS, DELETIONS, AND AMENDMENTS TO 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

Sec. C3-31. Additions, deletions, and amendments.

Additions, deletions, and amendments to the CGBSC are as set forth in this article.

Sec. C3-32. Chapter 2 amendments.

Chapter 2 of the CGBSC is adopted with the following amendments:

- (a) Section 202 (Definitions) is amended to add the following definitions:

EV Capable. A parking space served by a designated electrical panel with sufficient capacity to provide 110/120 volts at 20 amperes to the parking space, with raceways connecting the electrical panel and parking space that are installed in areas that will be inaccessible in the future, such as trenched underground or where penetrations to walls, floors, or other construction 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 County Electrical Code. The panel circuit directory shall identify the overcurrent protective device spaces reserved for EV charging as “EV CAPABLE.” Construction documents shall indicate future completion of the raceway from the panel to the parking space, using the installed raceway sections in the inaccessible areas.

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; an overprotection device; a minimum 1" diameter raceway that may include multiple circuits as allowed by the County Electrical Code; properly sized conductors; grounding and bonding; and either (a) a receptacle labelled "Electric Vehicle Outlet" with at least a ½" font adjacent to the parking space, or (b) labeled Electric Vehicle Supply Equipment (EVSE).

Level 2 EV Ready Space. A parking space served by a complete electric circuit with a minimum of 208/240 volt, 40-ampere capacity, including the required electrical panel capacity; an overcurrent protection device; a minimum 1" diameter raceway that may include multiple circuits as allowed by the County Electrical Code; properly sized conductors; grounding and bonding; and either (a) a receptacle labeled "Electric Vehicle Outlet" with a minimum ½" font, adjacent to the parking space, or (b) a blank labeled Electric Vehicle Supply Equipment (EVSE) with a minimum output of 40 amperes.

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

Automatic Load Management System (ALMS). A control system that allows multiple Level 2 EV chargers 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 is only allowed for Level 2 EVCS, Level 2 EV Ready, and Level 1 EV Ready Spaces. ALMS systems must be designed to deliver at least 1.4kW per charger. The connected amperage on-site shall not be lower than the required connected amperage per Part 11 of the CGBSC for the relevant building types.

Sec. C3-33. Chapter 4 Amendments.

Chapter 4 of the CGBSC is adopted with the following amendments:

- (a) Section 4.106.4 (Electric vehicle (EV) charging for new construction) is 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 spaces and without electrical panel upgrade or new panel installation. ADUs and JADUs without additional parking but with electrical panel upgrades or new panels must have reserved breakers and electrical capacity according to the requirements of 4.106.4.1.
- (b) Section 4.106.4.1 (New one- and two-family dwellings and townhouses with attached private garages) is amended to read as follows:

4.106.4.1. New one- and two-family dwellings and townhouses with attached private garages. For any new dwelling units and for rebuilds of existing dwelling units that include a panel upgrade or construction between the panel and parking area, install a Level 2 EV Ready Space and Level 1 EV Ready Space.

Exception: For each dwelling unit with only one parking space, install a Level 2 EV Ready Space.

- (c) Section 4.106.4.1.1 (Identification) is 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) Section 4.106.4.2 (New multifamily dwellings) is amended to read as follows:

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

1. For multifamily buildings with less than or equal to 20 dwelling units, one parking space per dwelling unit shall be provided with a Level 2 EV Ready Space.

Exception: Dwelling units without parking spaces do not need to be provided a Level 2 EV Ready Space.

2. For multifamily buildings with more than 20 dwelling units:

- a. For the first 20 dwelling units, at least one parking space per dwelling unit shall be provided with a Level 2 EV Ready Space.

- b. Twenty-five percent of the remaining dwelling units with parking spaces 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.
- c. In addition, each dwelling unit with parking spaces that does not have at least one Level 2 EV Ready Space shall be provided with at least one Level 1 EV Ready Space.

Notes:

- 1. Installation of Level 2 EV Ready Spaces above the minimum number required level may offset the minimum number of Level 1 EV Ready spaces required on a 1:1 basis.
 - 2. The requirements apply to multifamily buildings with parking spaces and includes spaces assigned or leased to individual dwelling units and unassigned residential parking.
 - 3. To adhere to accessibility requirements in accordance with California Building Code Chapters 11A and/or 11B, it is recommended that all accessible parking spaces for covered newly constructed multifamily dwellings are provided with Level 1 or Level 2 EV Ready Spaces.
- (e) Section 4.106.4.2.3 (Single EV space required) is deleted and replaced with the following:

4.106.4.2.3 Automated Load Management Systems.

- 1. As defined in Section 202, ALMS shall be allowed to meet the requirements of 4.106.4.2.
- 2. Where ALMS serve Direct Current Fast Charging stations, the power demand from the Direct Current Fast Charging station shall be prioritized above Level 1 and Level 2 spaces.

Sec. C3-34. Chapter 5 Amendments.

Chapter 5 of the CGBSC is adopted with the following amendments:

- (a) Section 5.106.5.3 (Electric vehicle (EV) charging) is 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. Installation of each Direct Current Fast Charger with the capacity to provide at least 80 kW output may substitute for 11 Level 2 EVCS spaces after a minimum of 11 Level 2 EVCS spaces are installed.
- (b) Section 5.106.5.3.1 (Single charging space requirements) is deleted and replaced with the following:

5.106.5.3.1. Office buildings. For any new nonresidential building designated primarily for office use:

1. When 10 or more parking spaces are constructed, 20% of the available parking spaces on site shall be equipped with Level 2 EVCS.
2. An additional 30% shall be at least EV Capable.

Notes:

1. Calculations for the required minimum number of spaces equipped with Level 2 EVCS, Level 1 EV Ready spaces, and EV Capable spaces shall be rounded up to the nearest whole number.
2. Construction plans and specifications shall demonstrate that all raceways shall be a minimum of 1" and sufficient for installation of spaces.
3. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers. The electrical system shall have sufficient capacity to simultaneously charge EVs at all required EV spaces, including Level 1 EV Ready and EV Capable spaces. Service panels or subpanels shall have sufficient capacity to accommodate the required number of dedicated branch circuits for the future installation of the EVSE.
4. ALMS may be installed to increase the number of EV chargers or the amperage or voltage beyond the minimum requirements in this code. This option does not allow for installing less electrical panel capacity than would be required without ALMS.

- (c) Section 5.106.5.3.2 (Multiple charging space requirements) is deleted and replaced with the following:

5.106.5.3.2. Nonresidential non-office buildings. For any new nonresidential building that is not designated primarily for office use (such as retail or institutional uses):

1. When 10 or more parking spaces are constructed to serve the building, a minimum of 10% of the available parking spaces on site shall be equipped with Level 2 EVCS.
2. Calculations for the required minimum number of spaces equipped with Level 2 EVCS shall be rounded up to the nearest whole number.

- (d) Section 5.106.5.3.3 (EV Charging Space Calculation) is deleted and replaced with the following:

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.
2. See California 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.
4. California Building Code section 11B-812 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 where shared parking is provided, EV Ready spaces are designated with signage as “EV preferred.”

- (e) Table 5.106.5.3.3 is deleted.
- (f) Section 5.106.5.3.4 ([N] Identification) is amended to read as follows:

5.106.5.3.4 [N] Identification. The raceway termination location shall be permanently and visibly marked as “EV Ready”.

- (g) Section 5.106.5.3.5 (Future Charging Spaces) is deleted.

Sec. C3-35. Appendix A4 added.

Appendix A4 of the CGBSC is added with the following amendments:

- (a) Division A4.2 (Energy Efficiency) is deleted in its entirety.
- (b) Section A4.601.1 (Scope) is amended to read as follows:

A4.601.1. Scope. The measures contained in this appendix are mandatory for new single-family dwellings equal to or greater than 3,000 square feet in area and new multi-family residential buildings equal to or greater than 25,000 square feet in area. The provisions of this section outline means of achieving enhanced construction or reach levels by incorporating additional green building measures. In order to meet one of the tier levels designers, builders or property owners are required to incorporate additional green building measures necessary to meet the threshold of each level.

- (c) Section A4.601.4.2 (Prerequisite and elective measures for Tier 1) is amended to delete subsection 2 (beginning “From Division A4.2, Energy Efficiency”) in its entirety.
- (d) Section A4.601.5 (Tier 2) is deleted in its entirety.

Sec. C3-36. Appendix A5 added.

Appendix A5 of the CGBSC is added with the following amendments:

- (a) Section A5.106.5.3 (Electric vehicle (EV) charging) is deleted in its entirety.
- (b) Division A5.2 (Energy Efficiency) is deleted in its entirety.
- (c) Section A5.601.1 (Scope) is amended to read as follows:

A5.601.1. Scope. The measures contained in this appendix are mandatory for new commercial buildings equal to or greater than 25,000 square feet in area. The provisions of this section outline means of achieving enhanced construction or reach levels by incorporating additional green building measures for newly constructed nonresidential buildings as well as additions. In order to meet one of the tier levels designers, builders or property owners are required to incorporate additional green building measures necessary to meet the threshold of each level. Refer to the provisions in Section 301.3 for nonresidential additions and alterations scope and application.

- (d) Section A5.601.2.3 (Tier 1) is deleted in its entirety.
- (e) Section A5.601.3 (CALGreen Tier 2) is deleted in its entirety.

Sec. C3-37 — C3-42. Reserved.

SECTION 2. A new chapter, Chapter VII of Division C3 of Title C of the County of Santa Clara Ordinance Code relating to County Energy Code, is hereby enacted to read as follows.

CHAPTER VII. COUNTY ENERGY CODE

ARTICLE 1. 2019 CALIFORNIA ENERGY CODE ADOPTED

The County Energy Code is the 2019 California Energy Code (“CEC”) as modified by the additions, deletions, and amendments set forth in this chapter.

ARTICLE 2. ADDITIONS, DELETIONS, AND AMENDMENTS TO 2019 CALIFORNIA ENERGY CODE

Sec. C3-61. Additions, deletions, and amendments.

Additions, deletions, and amendments to the CEC are as set forth in this article.

Sec. C3-62. Subchapter 1 amendments.

Subchapter 1 of the CEC is adopted with the following amendments:

(a) Subsection (e)(2)(A) of Section 100.0 (Scope) is amended to read as follows:

2. Newly constructed buildings.

A. 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 Subsection B, C, D, or E, as applicable, and shall be All-Electric Buildings as defined in Section 100.1(b).

Exception 1 to Section 100.0(e)(2)(A): Non-Residential F, H and L occupancies, or other similar research and development uses as determined by the Building Official, are exempt from the all-electric building provisions of this section until the next code adoption cycle.

Exception 2 to Section 100.0(e)(2)(A): Group I occupancies such as hospitals and correctional facilities are exempt from the all-electric building provisions of this section until the next code adoption cycle.

Exception 3 to Section 100.0(e)(2)(A): Junior accessory dwelling units to mixed-fuel buildings are exempt from the all-electric building provisions of this section.

Exception 4 to Section 100.0(e)(2)(A): If the applicant establishes there is not an all-electric compliance pathway for the building under the Energy Code, and 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, the Building Official may grant a modification to the all-electric building provisions of this section.

Exception 5 to Section 100.0(e)(2)(A): If the applicant establishes that constructing an All-Electric Building would be infeasible, the Building Official may grant a modification to the all-electric building provisions of this section.

Note 1: If natural gas plumbing is used per Exception 1-5, the natural gas appliance locations must also be electrically pre-wired for future electric appliance installation, including all of 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 (*i.e.*, "For Future Electric Range").
4. All electrical components, including conductors, receptacles, junction boxes, or blank covers, related to this section shall be installed in accordance with the County Electrical Code.

Note 2: If any of Exception 1-5 are met, the Building Official shall have the authority to approve alternative materials, design, and methods of construction or equipment per CBC section 104.

B. Stationary Battery Storage Pre-wire. All single-family residential and low-rise multifamily buildings as defined in Section 100.1 of this code and Accessory Dwelling Units (ADUs) as defined in the County Zoning Ordinance Code Section 2.10.030 shall be prewired for the installation of battery storage. The prewiring shall be in accordance with the California Building, Residential and Electrical Codes and be adequately sized by a licensed professional to accommodate the back-up loads installed in the critical load panel with a minimum of 5 kwh.

- (b) Subsection (b) of Section 100.1 (Definitions and Rules of Construction) is amended to add 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 its space heating, water heating (including pools and spas), cooking, and clothes drying.

INFEASIBLE is when the enforcing agency finds that compliance with the all-electric building standards would make the specific work of the project affected by the all-electric standards not feasible, based on an overall evaluation of the following factors: 1. The cost of complying with all-electric construction. 2. The cost of all construction contemplated. 3. The impact of proposed improvements on the financial feasibility of the project 4. Existing physical or site constraints that prohibit all-electric construction that is in full and strict compliance with the minimum requirements. The details of any finding of infeasibility shall be recorded and entered in the files of the enforcing agency.

Sec. C3-63. Subchapter 5 amendments.

Subchapter 5 of the CEC is adopted with the following amendments:

- (a) Section 140.0 (Performance and Prescriptive Compliance Approaches) is amended to read as follows:

140.0. Performance and prescriptive compliance approaches. Nonresidential, high-rise residential, and hotel/motel buildings shall comply with all of the following:

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

- (b) The requirements of Sections 120.0 through 130.5 (mandatory measures for nonresidential, high-rise residential and hotel/motel buildings).
- (c) For all newly constructed buildings, a solar photovoltaic system shall be installed that is equivalent in size to 15 percent of the roof area, excluding any skylight area, shall be installed on the roof or overhang of the building, on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project.

Exception 1 to 140.0(c): The Building Official or their designee may grant a modification to this requirement if the applicant demonstrates that the required percentage of PV installation will over-generate the annual kWh required to operate the proposed building.

Exception 2 to 140.0(c): The PV system size may be reduced in size to the maximum that can be accommodated by the effective annual solar access due to shading from existing permanent natural or manmade barriers external to the building, including but not limited to trees, hills, and adjacent structures. The effective annual solar access shall be 70 percent or greater of the output of an unshaded PV array on an annual basis. No PV system is required if the effective annual solar access is restricted to less than 200 contiguous square feet. If the applicant demonstrates that conditions exist where excessive shading occurs, a performance equivalency approved by the Building Official may be used as an alternative.

Exception 3 to 140.0(c): Vegetative roofs covering 35 percent of the roof area or greater, meeting all relevant code requirements including considerations for wind, fire, and structural loads.

- (d) 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.

Note to Section 140.0(d): The Commission periodically updates, publishes and makes available to interested persons and local enforcement agencies precise descriptions of the climate zones, which is available by zip code boundaries depicted in the Reference Joint Appendices along with a list of the communities in each zone.

Note to Section 140.0: The requirements of Sections 140.1 through 140.9 apply to newly constructed buildings. Section 141.0 specifies which requirements of

Sections 140.1 through 140.9 also apply to additions or alterations to existing buildings.

PASSED AND ADOPTED by the Board of Supervisors of the County of Santa Clara, State of California, on December 14, 2021, by the following vote:

AYES: CHAVEZ, ELLENBERG, LEE
SIMITIAN, WASSERMAN

NOES: ☒ NONE

ABSTAIN: NONE

ABSENT: ☒ NONE



MIKE WASSERMAN, President
Board of Supervisors

Signed and certified that a copy of this document has been delivered by electronic or other means to the President, Board of Supervisors.

ATTEST:



TIFFANY LENNEAR
Acting Clerk of the Board of Supervisors

APPROVED AS TO FORM AND LEGALITY:



AARON H. BLOOM
Deputy County Counsel