



COUNCIL REPORT

DATE: October 22, 2024

CATEGORY: Public Hearing

DEPTS.: Community Development and
Public Works

TITLE: **Building Reach Code Updates (Phase 1)—
Electrical Prewiring and Recycled Water**

RECOMMENDATION

1. Find the proposed amendments to Chapter 8 (Buildings) of the Mountain View City Code to be exempt under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15061(b)(3), the common-sense exemption, as it can be seen with certainty that there is no possibility that the changes adopted will have a direct or reasonably foreseeable indirect physical change in the environment or significant effect on the environment; and Section 15308 of the CEQA Guidelines as this ordinance is an action taken by a regulatory agency for the purpose of protecting the environment by reducing greenhouse gas emissions that are produced from buildings.
2. Introduce an Ordinance of the City Council of the City of Mountain View Adopting Required Findings, Amending Chapter 8 (Buildings) of the Mountain View City Code to Adopt Local Amendments to the 2022 Editions of the California Green Building Standards Code and the California Plumbing Code to Add Electrical Prewiring Requirements and to Make Clarifying Changes to Recycled Water Requirements, and Finding the Amendments to Be Exempt from Review Under the California Environmental Quality Act (CEQA) Pursuant to CEQA Guidelines Sections 15061(b)(3) and 15308, to be read in title only, further reading waived, and set a second reading for November 12, 2024 (Attachment 1 to the Council Report).

BACKGROUND

On [June 25, 2024](#), the City Council endorsed the Council Sustainability Committee's (CSC) recommendation for staff to: (1) prepare an ordinance updating Chapter 8 (Buildings) of the Mountain View City Code (commonly referred to as the "Mountain View Building Code") to expand electrical prewiring requirements in Q3 2024 (referred to as "Phase 1"); and (2) prepare energy performance requirements and additional electrical prewiring requirements as part of the 2025 Triennial Building Code Ordinance Update to Chapter 8 in Q3/Q4 2025 (referred to as "Phase 2").

This direction was brought to the City Council, after discussion with the CSC, in response to the ruling by the United States Court of Appeals for the Ninth Circuit on the California Restaurant Association’s lawsuit against the City of Berkeley regarding their prohibition on natural gas infrastructure in new buildings. On [April 9, 2024](#), the City suspended the all-electric building requirements in Chapter 8 specifically relating to the prohibition on natural gas appliances and equipment to align with the Ninth Circuit ruling.

The California Building Standards Code (California Code of Regulations, Title 24), often referred to as the “California Building Code” or the “Building Code,” sets minimum standards for the construction of new and altered buildings and is comprised of 13 specialty codes referenced in Parts. The City of Mountain View has adopted the California Building Standards Code and various Parts, including the California Plumbing Code (Part 5), often referred to as the “Plumbing Code,” and the California Green Building Standards Code (Part 11), often referred to as “CALGreen,” with amendments to address local geological, topographical, and climatic conditions as allowed by state law.

The proposed amendments in Attachment 1 include local amendments to the California Building Code in CalGreen and the Plumbing Code that expand the City’s “Reach Code.” A Reach Code generally refers to local building code amendments that exceed the California Building Code minimums related to energy use, electrification and electric-readiness, green building, and other sustainability and environmental factors. The City’s current Reach Code is focused on electrification, expanded electric vehicle (EV) parking, and solar requirements, as well as bird-safe glass requirements.

ANALYSIS

Since the June 25, 2024 meeting, City staff has worked with a consultant, TRC Companies, and Silicon Valley Clean Energy (SVCE) to prepare the Phase 1 amendments. The proposed amendments include electrical rewiring and electric-readiness requirements that go beyond the California Building Code minimums for single-family residential, multi-family residential, and nonresidential new construction to include additional indoor and outdoor appliances and equipment as well as commercial kitchens.

Staff has focused on electric rewiring as there are numerous benefits to these requirements, including:

- **Cost Efficiency:** Installing electrical rewiring during construction is significantly more cost-effective than retrofitting improvements later, particularly for multi-family central water heating systems where appliance replacements are likely to fall under Bay Area Air Quality Management District’s (BAAQMD) zero nitrogen oxide (zero-NOx) appliance [Rule 9-6](#): Boilers and Water Heaters, starting in 2027, and [Rule 9-4](#): Furnaces, starting in 2029;

- **Convenience:** Homeowners and property owners can easily add new appliances without needing major electrical work, improving convenience and flexibility in adapting to advancements in appliance technologies;
- **Futureproofing:** Prewiring ensures that a building can accommodate future appliances and electric technologies, like electric vehicle charging and/or smart home energy systems, without requiring major renovations; and
- **Energy Efficiency:** Prewired systems can be designed to support energy-efficient appliances and devices, promoting sustainability and decreasing utility bills.

City staff has also included minor amendments to Chapter 8 related to the City’s existing recycled water program to clarify those buildings required to install dual-plumbing, which is language reinstated from a prior version of the Mountain View Building Code that was mistakenly omitted in the 2022 Triennial Code adoption.

Electric Prewiring Requirements

Current 2022 California Building Code

The current 2022 California Building Code, specifically the California Energy Code (Part 6), includes electrical prewiring requirements when certain gas appliances are proposed in new single-family homes and new multi-family residential buildings. Electrical prewiring is the requirement to install all electrical components from the service panel to the area immediately adjacent to the installed natural gas or propane appliance in a building, including: installing the electrical line, installing an outlet or outlet cover, labeling the voltage for future use, providing dedicated space on the service panel for an appliance circuit and, in some cases, ensuring there is adequate space to accommodate the future electric appliance. Table 1 summarizes the existing 2022 California Energy Code electrical prewiring requirements, which are mandatory for new construction.

While current electrical prewiring requirements in the California Building Code are in the Energy Code (Part 6), cities can choose to place local amendments regarding electrical prewiring requirements into the CalGreen Code (Part 11). Since Mountain View currently has prewiring requirements already in the CalGreen Code, staff has opted to include the proposed new requirements as amendments to that same code.

Table 1: Current 2022 California Building (Energy) Code Prewiring Requirements for New Construction

Single-Family Residential, Duplexes	<ul style="list-style-type: none"> • Heat pump water heater • Heat pump space heater • Solar • Energy storage (e.g., battery backup system) • Stove • Clothes dryer
Multi-Family Residential	<ul style="list-style-type: none"> • Heat pump water heater • Heat pump space heater • Solar • Stove • Clothes dryer

Proposed New Requirements

Table 2 summarizes the additional electrical prewiring requirements included in Attachment 1. These additional requirements go beyond the California Building Code by requiring additional planning for and accommodation of future electric appliances and equipment with the intent to make “going electric” in the future that much easier when a natural gas or propane appliance is currently installed. This includes:

- Planning for the location and dimensions of appliances in construction drawings;
- Installing all necessary electrical infrastructure from the electrical service panel to the gas or propane appliance;
- Installing drainage or other infrastructure to a designated future location for the future electric appliance or equipment on-site; and
- Adding clear labeling so future tenants, property owners, and contractors understand what a particular electric line, circuit, and outlet has been installed for.

Specifically, the proposed new prewiring requirements include:

1. **For Single-Family Residential, Duplexes, and Townhomes:** Identifying a dedicated physical space on construction drawings and installing drainage for a future heat pump space heating/cooling system.

2. **For Multi-Family Residential, Motels, and Hotels:**
 - a. Requiring the building’s electrical panel service to accommodate the total electrical power supply needed to operate the future electrical appliances already required in the California Building Code (e.g., space conditioning equipment, cooking appliances, and clothes dryers), in addition to installing electrical prewiring for any other natural gas or propane appliance proposed to be installed beyond the California Building Code requirements;
 - b. Requiring a location to be identified that meets minimum spatial requirements on construction drawings for accommodating future heat pump water heaters for individual residential units or hotel/motel rooms; and
 - c. Requiring that minimum physical space for the equipment, ventilation, drainage, and electrical infrastructure is provided to accommodate a future central heat pump water heater system for the common areas of the building(s).¹
3. **For Nonresidential Commercial Kitchens:** Requiring quick-service restaurants (e.g., to-go restaurants, counter-order restaurants, etc.) and institutional kitchens (e.g., cafeterias) to install electrical prewiring to all natural gas or propane appliances installed, in addition to accommodating a service panel size to supply a minimum amount of electric power on-site.¹
4. **Electric-readiness for all gas/propane equipment:** A catch-all provision requiring all gas and propane appliances/equipment that are installed in all new construction buildings (residential and nonresidential) to include electric-ready design and installation of the following electrical infrastructure:
 - a. Install a dedicated circuit on the electrical panel of an appropriate size to accommodate the appliance(s);
 - b. Place the electric receptacle within three feet (3’) of the gas/propane appliance;
 - c. Label both ends of the electrical line “For Future Electric Appliance”;
 - d. Label the circuit breaker in the electrical panel as “Reserved for Future Electric Cooking Appliance” (or whichever appliance it is for); and

¹ These code requirements were adopted into the 2025 Energy Code on September 11, 2024 by the California Energy Commission (CEC) to be used in the upcoming 2025 Triennial Building Code Update: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-BUSMTG-01>. The City anticipates adopting the 2025 Triennial Building Code to be effective by no later than January 1, 2026.

- e. Identify the physical location on construction drawings where the electric appliance(s) could be accommodated.

For easy reference, staff has included in the proposed Ordinance a list of common types of equipment that are subject to the prewiring requirement, such as indoor or outdoor installations of cooking appliances, space-conditioning (heating/cooling) equipment, clothes dryers, pool/spa heating equipment, fireplaces, and fire pits. Additionally, for single-family homes, duplexes, and townhomes, staff has introduced a table of the minimum required electrical supply (in amps) for common appliances for easy implementation by homeowners and contractors when submitting for permits, shown on Page 8 of Attachment 1.

Table 2: Proposed New Electrical Prewiring Requirements

Development Type	Requirement	Location in Attachment 1
Single-Family Residential, Duplexes, Townhomes	<ul style="list-style-type: none"> • Heat pump space heating (furnace) • All gas or propane appliances¹ 	Page 6—Section 8.20.34
Multi-Family Residential, Hotels/Motels	<ul style="list-style-type: none"> • Minimum building electrical panel system sizing • Central (shared) and individual heat pump water heaters • All gas or propane appliances¹ 	Page 8—Section 8.20.35
Nonresidential	<ul style="list-style-type: none"> • Commercial kitchens • All gas or propane appliances¹ 	Page 17—Section 8.20.47
¹ “Appliances” refers to, but is not limited to, indoor or outdoor installations of space-conditioning (heating/cooling) equipment, water-heating equipment, clothes dryer, cooking appliances, firepits, fireplaces, and heating equipment for pools, spas, saunas.		

Projects Subject to Prewiring Requirements

City staff is not proposing any modifications to the existing City Code for defining projects subject to Reach Code requirements. Thus, the proposed prewiring requirements would continue to capture the same projects under the current City Reach Code, which includes:

- Any ground-up new residential or nonresidential construction; and

- Any addition or improvement to an existing residential and nonresidential structure where greater than 50% of structural elements are added, removed, replaced, or relocated (e.g., footings and foundation, roof-framing, and exterior walls).

Projects currently subject to Reach Code requirements are those undergoing significant upgrades to a building(s), whereby the additional electrical work being required for prewiring is nominal in relation to the work already proposed in the project. Additionally, the proposed new requirement regarding dedicated future locations for heat pump equipment can be accommodated outdoors or, in some cases, could be within an interior area. Allowing flexibility on location helps to ensure these requirements are not a physical hindrance, while also requiring a project to consider layouts that will accommodate future electric equipment in their current design.

Comparison to Other Cities

The proposed prewiring requirements align with requirements that can be found in those cities that currently have adopted Energy Performance approaches, such as the cities of Brisbane, East Palo Alto, Santa Cruz, and San Jose. Mountain View is one of the only cities that already applies Reach Code requirements to existing buildings; most cities apply these requirements exclusively to new construction. Additionally, there are other cities who are developing Energy Performance approaches that will likely include similar prewiring requirements, such as the cities of Cupertino, Menlo Park, San Mateo, and Burlingame. A key difference between the prewiring requirements under the Energy Performance approach and those in the proposed ordinance is the expansion of prewiring mandates for gas and propane appliances/equipment to all building types, not only nonresidential buildings as found in most Energy Performance approaches.

Of the new electric-readiness requirements proposed, those for commercial kitchens are greater than the requirements of the current California Building Code as it requires a commercial kitchen to install 800 amps of electrical service on-site. [NOTE: the City has typically issued permits for commercial kitchens with approximately 400 or less amps of electrical power.] These requirements align with the forthcoming 2025 Energy Code (based on requirements approved by the California Energy Commission in September 2024).

By adopting these requirements in this Ordinance (anticipated to be effective by January 1, 2025), the City would be an early adopter of code minimums that are anticipated to become effective by January 1, 2026. The state has specifically selected these commercial kitchen requirements as industry professionals believe their operations are conducive to going all-electric in the near future. Overall, the impact of requiring the electrical infrastructure to be installed now for future electric appliance demand will allow for easier transition for building owners and tenants moving forward. Since the City would be an early adopter, to allow for some flexibility in transitioning to the new code requirements, staff has included an option in the proposed ordinance that would allow a commercial kitchen operator to demonstrate, during building

permit review, that the maximum electrical power required to serve their all-electric kitchen demand may be less than 800 amps.

Recycled Water

In Attachment 1, staff included a new section to clarify when projects are subject to installing dual plumbing in the City. This language previously existed in Chapter 8 of the City Code and was omitted in error in 2022, so staff is proposing to reinstate it. The 2022 State Plumbing Code allows cities to regulate the installation of dual plumbing for nonpotable water use in buildings. As such, staff is proposing to restore provisions requiring that new nonresidential buildings of 25,000 square feet or greater in size are required to install dual plumbing. **This code language does not modify the City’s current recycled water program, but instead provides clarity to an applicant on when installation of this infrastructure is required.**

FISCAL IMPACT—None.

LEVINE ACT

California Government Code Section 84308 (also known as the Levine Act) prohibits city officials from participating in any proceeding involving a “license, permit, or other entitlement for use” if the official has received a campaign contribution exceeding \$250 from a party, participant, or agent of a party or participant in the proceeding within the last 12 months. A city official is similarly prohibited from accepting, soliciting, or directing a campaign contribution exceeding \$250 from a party, participant, or agent of a party or participant to any proceeding involving a license, permit, or other entitlement for use for 12 months after a final decision is rendered in said proceeding.

Please refer to the “X” in the checklist below for information about whether the recommended action for this agenda item is subject to or exempt from the Levine Act.

SUBJECT TO THE LEVINE ACT

- Land development entitlements
- Other permit, license, or entitlement for use
- Contract or franchise

EXEMPT FROM THE LEVINE ACT

- Competitively bid contract
- Labor or personal employment contract
- General policy and legislative actions

For more information about the Levine Act, please see the Fair Political Practices Commission website: www.fppc.ca.gov/learn/pay-to-play-limits-and-prohibitions.html.

CONCLUSION/NEXT STEPS

Adoption of the proposed electrical prewiring requirements and recycled water requirement furthers the City’s Reach Code implementation that supports reduced greenhouse gas emissions, encourages an all-electric future, and clarifies our existing recycled water requirements. If Council adopts the proposed ordinance following a second reading, City staff will then submit the ordinance to the California Building Standards Commission for filing. The second reading of the ordinance is scheduled for November 12, 2024 with an anticipated ordinance effective date of January 1, 2025.

In 2025, City staff will continue working with Silicon Valley Clean Energy on Phase 2 of the Reach Code updates to develop an Energy Performance approach and expanded electrification requirements, including expanded thresholds for triggering electrification and zoning incentives, as part of the 2025 Triennial Building Code Update. The Triennial Update will include community engagement and collaboration with the Fire Department, Public Works Department, City Manager’s Office (Sustainability), and City Attorney’s Office. Phase 2 is anticipated to return to Council for consideration of adoption in Q3/Q4 2025.

ALTERNATIVE

Do not proceed with, in whole or in part, the proposed text amendments until the 2025 Triennial Building Code Update in 2025.

PUBLIC NOTICING

An email notification was sent through the City’s email subscription list for members of the public interested in building code amendments. Notification was also provided on the City’s website. The Agenda posting and ordinance was published at least two days prior to the adoption in accordance with City Charter Section 522.

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Attachment: 1. Ordinance of Building Reach Code Amendments (Chapter 8)