



*City
Council
Report*

Item: 5
Category: PUBLIC HEARINGS AND
 INTRODUCTION OF
 ORDINANCES
Meeting Date: November 1, 2022

TITLE: Text Amendment (PLN-2022-112) to Titles 1 (General Provisions), 14 (Sewers), 17 (Fire Protection), 18 (Building Codes and Regulations), and 20 (Subdivision and Land Development) of the Campbell Municipal Code to Adopt the 2022 Editions of the California Building & Fire Codes and Incorporate Electrification Reach Codes with Local Amendments (Ordinance/Roll Call Vote)

RECOMMENDED ACTION

That the City Council introduce an Ordinance amending Titles 1 (General Provisions), 14 (Sewers), 17 (Fire Protection), 18 (Building Codes and Regulations), and 20 (Subdivision and Land Development) of the Campbell Municipal Code to adopt the 2022 Editions of the California Building & Fire Codes and incorporate Electrification Reach Codes with local amendments.

PURPOSE

In compliance with State Law, the California Building Standards Code (“Building Code”) is revised and updated every three (3) years. As the 2022 Building Code will go into effect on January 1, 2023, the City needs to amend the Campbell Municipal Code (“CMC”) to reference the new Building Code standards by the end of this year.

The subject CMC amendments will adopt the 2022 Editions of the California Building & Fire Codes and incorporate Electrification Reach Codes as identified in the Bay Area Model Reach Code recommended by Silicon Valley Clean Energy (SVCE) and include amendments identified by the Acting Building Official and the County Fire District in response to local conditions.

BACKGROUND

On October 4, 2022, the City Council received a report regarding adoption of the 2022 Building Code and policy options concerning potential ‘Reach Code’ amendments. At the meeting, Council directed staff to pursue adoption of the Bay Area Model Reach Code for new construction projects and major remodels with the 2022 Building Code update and consider exceptions for industrial buildings/processes and restaurants.

Council also directed staff to evaluate further Reach Code updates that include potential incorporation of Cal Green Tier standards and Water efficiency measures in 2023 in association with preparation of a Climate Action Plan. In late October, staff conducted

public outreach including distribution of a public survey and held a public meeting (October 17, 2022) to solicit feedback on the 'Reach Code' updates under consideration. A detailed summary of public feedback received has been provided as part of the Electrification Reach Code discussion. Further, the City received several emails in response to the update which are provided as a separate attachment (reference Attachment C – Public Comment).

DISCUSSION

Under State law, cities are allowed to make amendments to the State Building Code that are more restrictive¹ when they address local or regional conditions. In adopting the 2022 Building Code, the staff has proposed amendments that require greater electrification requirements for new construction and major remodels with limited exceptions, in addition to non-substantiative, technical amendments as recommended by the Acting Building Official and the County Fire District.

Electrification Reach Code

The proposed amendments to the 2022 Building Code will require more restrictive electrification requirements based largely on the Bay Area Model Reach Code proposed by SVCE. The following table summarizes the key differences between the 2022 State Code, Campbell's Existing Reach Code, and that proposed.

Appliance	2022 State Code	Existing Campbell Reach Code	Proposed
Water Heating	Gas or Electric	Electric Required (SF Res Only)	Electric Required (All Buildings)
Space Heating	Encourages Electric	Electric Required (SF Res Only)	Electric Required (All Buildings)
Cooking	Gas or Electric	Gas or Electric	Electric Required
Outdoor (SF Res)	N/A	Gas or Electric	Electric Required
Specialized Processes (Industrial / Restaurants)	Gas or Electric	Gas or Electric	Electric Exemptions apply

Table 1: New Buildings and Single Family Rebuilds – Building Requirements

Building Type	2022 State Code	Existing Campbell Reach Code	Proposed
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¹ While jurisdictions may make the Building Code more restrictive, they are prohibited from making it less restrictive.

Single Family and Multi Family with Private Garages	1 L2 ² Capable	N/A	1 L1 Ready, 1 L2 Ready
Multi Family with Shared Parking	10% L2 Capable	N/A	40% L2, 60%L1
Office	NA	N/A	20% EVSE, 30% L2 Capable
Other Non. Res.	5% L2 EVSE, 15% L2 Capable	N/A	10% EVSE, 10% L2 Capable

Table 2: New Buildings and Single Family Rebuilds – EV Charging Requirements
(Note: See Table 1 & 2 for Definitions of Terms)

Public Survey Feedback: To solicit feedback on the proposed Reach Code updates under consideration, staff distributed a public survey which received a total of 114 responses (reference Attachment B – Reach Code Survey). Most of the responses received were from Campbell property owners that were not supportive of additional electrification requirements. Key concerns identified by survey respondents are listed below followed by responses provided by Silicon Valley Clean Energy (SCVE) staff:

1. Electric ranges are inferior to gas.

Historically, many people have preferred gas stoves, and they were considered the fuel source of choice for cooking. This is rapidly changing with the development of induction ranges. While many people are unfamiliar with induction ranges, they offer superior heating speed, cool and safe surfaces while cooking, precise temperature control, and better indoor air quality from avoided GHG and particulate emissions. Consumer Reports' top-ranked cooktops are regularly electric. As a bonus, they don't heat up the kitchen while in use. For cooks used to cooking with woks, induction cooktops the high heat necessary in wok cooking is met easily on induction thanks to the power and quick response it delivers. In addition, the easy-to-clean surface of an induction cooktop is ideal given the splattering common with wok use.

2. Heating/cooking with electricity is more expensive than gas.

This concern relates tightly to the electric appliances of the past that were inefficient. Today's modern electric appliances cost only slightly more to operate as gas appliances and this difference is being mitigated by new "all-electric" utility rates that are scheduled to be introduced next year. In addition, it is possible for many customers to completely offset their utility bill with solar in an all-electric home.

3. The grid is unreliable and cannot handle additional loads.

² Reference 'Attachment D – Electric Vehicle Equipment' for definitions of L1 (Level 1), L2 (Level 2), EVSE (Electric Vehicle Supply Equipment).

There is no question that California's power grid needs improvement and State agencies have ordered significant upgrades to the electrical supply grid to be built without delay. Battery storage, which is needed to bridge over times of peak demand, is rapidly expanding. Over 3,000 MW of battery power was active during the September heat wave and was key to avoiding rolling blackouts. The state forecasts ~1% growth in load per year -we can handle that. And many of the major stresses on the grid are caused by the very thing electrification will help stop: the use of fossil fuels.

4. Gas is environmentally preferable and electricity comes from dirty sources.

While much of the power in California's grid comes from natural gas, the renewable component is growing every day. Renewable energy was responsible for over 1/3 of California's power in 2021. Since Campbell is served by SVCE, nearly all of the electricity provided by SVCE in Campbell is considered carbon free already and the rest of California's power is required to be carbon free by 2045. Lastly, electrical appliances are tremendously more efficient than their gas counterparts.

5. Low-income residents will be adversely impacted by the requirements.

Any additional increase in utility costs would be mitigated in one of two ways. First, low-income customers are entitled to lower electricity rates already. Second, SVCE and PG&E are both working on "all-electric" utility rates that will reduce the costs for those residing in all-electric homes.

6. Uncertainty about when a remodel would trigger electrification.

A remodel or addition to a single family home would need to be truly significant (essentially replacing over 75% of a building) to trigger electrification requirements.

7. It's not wise to rely on only one fuel source.

While this initially sounds valid, it ignores the fact that nearly every gas appliance in a modern home relies on electricity and won't work during a power outage. Gas heaters and dryers require electric motors to blow and tumble. Modern gas water heaters have electronic controls. Even many new gas ranges have lockout devices to shut off the flow of gas when their electronic ignitions aren't powered.

Outreach Meeting & Feedback

Further, staff held a virtual public meeting on October 17, 2022, which was attended by approximately 30 members of the public. Comments raised by the public are captured below followed by staff responses.

1. Electric ovens are inferior to gas.

One member of the public commented that electric ovens can cause baked goods to dry out when compared with gas appliances. While staff acknowledges that some processes may be impacted, covering food that needs more moisture or adding a pan with water to evaporate may offset such impacts.

2. All electric buildings should do more to support the grid.

Several residents expressed concerns that the proposed requirements would adversely impact the grid and that new buildings should be required to do more to support the grid – such as requiring battery backup or requiring the installation of oversized PV systems on the roof. At the meeting, staff noted that such requirements would add to the cost of construction and, in the case of rooftop PV, may not be able to be accommodated depending on the type of roof.

3. Some public assembly uses may not be able to find qualified contractors.

One resident expressed a concern that it may be challenging for certain public assembly uses (i.e., religious institutions) to find qualified contractors to install EV equipment for smaller projects. Staff is unaware of such a challenge and recognizes that increased market demand generally results in increased supply.

4. The Ordinance should include a hardship exemption process to allow for gas service in limited circumstances which places burden of proof on applicants.

A representative from the Sierra Club indicated that the City should consider adding a hardship exemption process recognizing there may be circumstances that warrant an exception to the City's all-electric requirement. An exemption process has been included in the draft Reach Code Ordinance in response (see related discussion below).

Limited Exemption to All Electric Service Requirements

As discussed at the October 4, 2022, meeting, Council provided direction to allow exemptions in the Reach Codes for certain types of businesses or processes where full electrification may be infeasible or present an unreasonable hardship, such as certain industrial processes or the cooking needs of restaurants. The Electrification Reach Code will include criteria which may be used to consider a limited exemption to the City's all-electric service requirements as follows:

1. Gas dependent processes. Industrial and certain commercial uses, which require the use of natural gas for specific operational processes, shall be allowed use of natural gas for that need. Examples include, but shall not be limited to, metallurgy, glass blowing, pottery, research and development uses, and certain medical processes.

2. Commercial cooking. Commercial restaurants and similar commercial food preparatory facilities shall be permitted natural gas service for food preparation. Examples include, but shall not be limited to, restaurants, bakeries, grocery stores, and commercial kitchens.
3. Cost prohibitive. Gas service shall be permitted when it can be demonstrated that the 10-year life-cycle cost analysis of installing and using all-electric equipment will be 50% or greater than that of using natural gas and/or would render the project financially infeasible. When estimating the life-cycle cost, all calculations will assume the purchase and use of all new equipment.
4. Emergency services. Natural gas may be permitted for facilities providing emergency services. Examples include backup generators for wireless cell towers and public heating centers.
5. Reconstruction after damage or destruction. A nonconforming structure which is involuntarily damaged or partially destroyed to the extent that the cost of restoration does not exceed seventy-five percent of the cost of construction of a comparable new structure (as determined by the Building Official) may be restored or reconstructed; provided, the restoration is started within twelve months thereafter.

These criteria will be used by the Building Official to determine if a limited exemption is warranted and, even in situations where an exemption is granted, electric service will still be required to any location where a primary gas connection is made.

Findings and Adoption of Reach Codes

When local adoption of the Building Code includes local amendments, each amendment must be justified through findings that demonstrate the proposed amendment is “reasonably necessary because of local climatic, geologic, or topographical conditions.” Amendment findings must be filed with the California Building Standards Commission (CBSC). Once received by the CBSC, the findings are evaluated to ensure they are acceptable. Amendments become effective once findings are received by the Commission. The proposed Ordinance (reference Attachment A) includes findings responsive to these requirements and will be sent to the Building Standards Commission pending adoption.

FISCAL IMPACT

As the proposed code requirements are anticipated to result in a slight increase in construction costs, particularly to comply with expanded EV charging infrastructure requirements, a minor increase in building permit revenues may be anticipated.

ALTERNATIVES

1. Do not adopt proposed Ordinance changes.
2. Adopt the proposed changes without the amendments to the Reach Code.
3. Provide direction for additional local amendments to the State Building Code or local Reach Code.

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Approved by: Brian Loventhal
Brian Loventhal, City Manager

Attachment:

- a. Draft Ordinance for Approval
- b. Reach Code Survey
- c. Public Comment