

CITY COUNCIL AGENDA REPORT

October 18, 2022
 Community Development Department
 Building & Safety Division

TITLE: INTRODUCE AN ORDINANCE, AND WAIVE FIRST READING, TO AMEND TITLE 20 AND TITLE 18 OF THE PLEASANTON MUNICIPAL CODE TO ADOPT BY REFERENCE THE 2022 EDITION OF THE CALIFORNIA CODE OF REGULATIONS TITLE 24, INCLUDING THE 2021 INTERNATIONAL BUILDING, EXISTING BUILDING, RESIDENTIAL, FIRE, PROPERTY MAINTENANCE, AND SWIMMING POOL AND SPA CODES; THE 2021 UNIFORM PLUMBING AND MECHANICAL CODES; THE 2020 NATIONAL ELECTRICAL CODE AND THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE; WITH LOCAL AMENDMENTS INCLUDING PROVISIONS OF REACH CODE

SUMMARY

Every three years, the State of California adopts new building standards that make up the California Code of Regulations, Title 24. The prior Code was adopted in 2019 and the 2022 Code will become effective on January 1, 2023. The proposed ordinance amends the Pleasanton Municipal Code to coincide with the State's adoption of the 2022 California Code of Regulations, Title 24 encompassing the Building, Existing Building, Residential, Green, Plumbing, Mechanical, Electrical and Fire Codes. These codes are also known collectively as the California Building Standards Code (CBSC). Updates to existing local amendments, and some additional local amendments related to the city's geological, topographical, and climatic conditions are included in the proposed amendments. Additionally, consistent with the City's Climate Action Plan 2.0 (CAP 2.0), local "reach code" amendments are suggested in the Green Code for required electric vehicle (EV) charging infrastructure and building electrification for new construction.

RECOMMENDATION

Staff recommends the City Council introduce the attached ordinance updating various chapters within Pleasanton Municipal Code Title 20 concerning the adoption of the 2022 Edition of the California Building Standards Code (Title 24 C.C.R.), including by reference the 2021 International Building, Existing Building, Residential, and Fire Codes; the 2021 Uniform Plumbing and Mechanical Codes; the 2020 National Electrical Code; and the 2022 California Green Building Standards Code (CALGreen) and amending Title 18 to conform to Title 20 as identified in Attachment 1.

FINANCIAL STATEMENT

There is no anticipated fiscal impact associated with the adoption of this ordinance. In considering the reach codes for EV charging and building electrification, staff considered cost-effectiveness information which demonstrated that the requirements of the proposed reach codes would be cost-effective and not impose undue burdens on property owners or developers.

BACKGROUND

California Code of Regulations

Nationally, building codes are updated every three years by the various model code making organizations, and the State of California modifies and adopts these updated codes in the California Code of Regulations, Title 24. Title 24, also known as the California Building Safety Codes, is a broad set of requirements for “energy conservation, green design, construction and maintenance, fire and life safety, and accessibility” that apply to the “structural, mechanical, electrical, and plumbing systems” in a building.

All jurisdictions in the state are required to adopt the California Building Standards Code for local enforcement within 180 days after it is published, with an effective date of January 1, 2023, for this 2022 edition. In adopting the California Building Standards Code for local enforcement, jurisdictions may amend building standards if such amendments are necessary to address a local geologic, topographic, or climatic condition. When the State last adopted revised California Building Safety Codes the City adopted by reference those revised codes along with local amendments in 2019, with a January 2020 effective date (Ordinance No. 2239).

Climate Action Plan 2.0

The City’s adopted CAP 2.0 outlines greenhouse gas (GHG) emissions in the City. Pleasanton’s largest source of emissions comes from transportation, comprising 64-percent of all emissions; followed by natural gas use in buildings comprising 20-percent of all emissions.

The CAP 2.0 includes 16 primary actions and 9 secondary actions intended to improve community resilience and reduce GHG emissions by 70 percent, per capita, by 2030.

Given the significant contribution of transportation-derived and building-based emissions to the overall emissions, the CAP 2.0 includes two relevant primary actions as follows to address these two specific areas

- **Primary Action 1: Reach Codes**
 - This action indicates that the City will adopt an all-electric building reach code for new construction that limits the development of new gas infrastructure (indicating that exceptions can be considered).
- **Primary Action 5: Zero Emission Vehicle Infrastructure Plan**
 - This action includes several components, one of which is that new construction (specifically housing) will be required to install EV charging capabilities.

Bay Area Reach Codes

Over the past seven months, a group of public agencies including East Bay Community Energy (EBCE), Peninsula Clean Energy, Silicon Valley Clean Energy, the San Mateo County Office of Sustainability, the County of Santa Clara, and StopWaste developed a set of resources to assist cities with development of local Building Electrification and EV Infrastructure codes that may go over and above the standards included in the California Building Safety Code - also referred to as reach codes. The group developed model reach code templates that can be used by its member cities, including the analysis and findings necessary to support adoption of local reach codes.

For Pleasanton, staff proposes to use the model reach codes as a template for much of the proposed local amendment - however, some adjustments are suggested to better align with Pleasanton's goals. In recent years, over 50 cities in the Bay Area have adopted some form of reach code (i.e., building electrification and/or EV charging) for the current (2019) code cycle –these include Contra Costa County, Fremont, San Carlos, Los Altos, Alameda, and Emeryville. In addition to Pleasanton, several additional cities are considering reach codes this code cycle including Dublin, Walnut Creek, and Hayward. The City of Livermore adopted its local reach codes on September 26, 2022.

In drafting the proposed reach codes, staff considered a range of aspects including greenhouse gas (GHG) implications, costs and cost savings, vehicle and construction trends, indoor air quality and safety, neighboring jurisdictions, and resilience and conservation impacts. Many of these ideas were also considered and vetted in the CAP 2.0 in considering inclusion of Primary Actions 1 and 5 to advance building electrification and expand the EV charging network.

DISCUSSION

Overview

The proposed ordinance adopts the state's new California Building Standards Codes, as well as carries forward the City's current local amendments relating to local conditions Exhibit 2, based upon the specific findings set forth in Exhibit 1 of the Ordinance. The proposed local amendments encompass EV charging and building electrification reach codes, as a component of the Green Building Code.

The Pleasanton Building and Construction Code is comprised of sixteen (16) distinct Chapters of the Pleasanton Municipal Code Title 20. Specifically, the proposed ordinance would amend Chapters 20.04 (Pleasanton Building Administrative Code), Chapter 20.06 (Existing Building Code), 20.08 (Building Code), 20.10 (Residential Code), 20.12 (Plumbing Code), 20.16 (Mechanical Code), 20.20 (Electrical Code), 20.24 (Fire Code), 20.26 (Green Building Code), 20.36 (Security Regulations), 20.55 (Swimming Pool, Spa and Hot Tub Code) and 20.65 (Property Maintenance Code) of the Pleasanton Municipal Code (PMC), adopting by reference and amending the 2021 Editions of the International Building, Existing Building, Residential, Fire, Property Maintenance and the Swimming Pool and Spa Codes; the 2020 Edition of the National Electrical Code and the 2022 CALGreen. Amendments to Title 18, the Zoning Code (specifically Chapter 18.88), are also proposed to bring it into alignment with Title 20, as it pertains to EV charging requirements.

The remaining Chapters of PMC Title 20 do not reference specific editions of these codes and are not being amended at this time.

Local Amendments

Structural Design and Fire

Due to geographically specific issues within Pleasanton, including local seismic conditions and activity, presence of areas defined as being subject to severe fire hazard, and topographic, circulation, and weather conditions that may exacerbate local hazard risks, local amendments to the California Building Standards Codes relating to structural design standards and fire resistivity are necessary. These amendments include enhanced wall bracing and foundation requirements to improve earthquake resistance, fire sprinkler requirements when constructing additions to existing non-sprinklered structures, fire resistance in roofing materials and more stringent hazardous materials management. These local amendments are itemized in Exhibit B of Attachment 1 and shown as redline revisions to the existing PMC.

Building Electrification

The 2022 California Energy Code (Part 6) within Title 24 is more strongly oriented towards an all-electric preferred model¹ than prior code cycles but continues to allow for new mixed-fuel buildings to be constructed. As noted above, use of natural gas in buildings is a significant contributor to GHG emissions – transitioning from natural gas to electricity in buildings is a key strategy identified in the CAP 2.0 to meet the City's GHG reduction goals.

Staff recommends the City adopt a reach code through Part 11 (CALGreen) that would require newly constructed buildings to be built all-electric. Such buildings would have no gas infrastructure installed, and electricity would be the sole source of energy for all space heating, water heating, cooking, and clothes drying appliances.

While the reach code would generally require new building electrification, the ordinance as drafted provides for some limited exceptions, as follows:

- Multi-family residential buildings that have been granted entitlements the year prior to ordinance adoption.
- Commercial kitchens with a business-related need to cook with combustion equipment.
- Industrial processes for labs, research, or educational related needs.
- If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building under the California Building Energy Efficiency Standards and that the building is not able to achieve the performance compliance standard applicable to the building under the Energy Efficiency Standards.

¹ Examples of such requirements include improved TDV (time dependent valuation) performance, pre-wiring for gas appliances, and higher ventilation rates for gas stoves.

Staff notes that existing properties with gas infrastructure can maintain the existing infrastructure, and most additions to these properties could continue to include gas. Specifically, alterations to existing properties with gas (e.g., partial demolition and rebuild of an existing home) can continue include gas if the alteration is less than 50 percent of the total existing building size. Large-scale alterations, involving 50 percent or more of the existing building, would be required to convert to all-electric. Further, any construction of new buildings (e.g., a new detached ADU or pool house) on the property would need to be constructed all-electric. The redlines to Part 11, Title 24 for building electrification are included as Exhibit B of Attachment 1.

It is noted that certain types of buildings such as hospital buildings, skilled nursing facilities, and intermediate care facilities are the jurisdiction of the Office of Statewide Health Planning and Development (OSHPD) and not subject to the City's adopted codes.

Electric Vehicle Charging Infrastructure

Given the significant contribution of transportation-related emissions to the overall GHG inventory, a fundamental shift in the types of cars driven by Californians, and the fuel they use, is necessary to meet California's health-based air quality standards and greenhouse gas emission reduction goals. Recognizing this, Governor Newsom's recent Executive Order N-79-20, realized through the State of California Air Resource Board (CARB)'s Advanced Clean Cars II rule, establishes that 100 percent of new cars and light trucks sold in the state will be zero-emissions vehicles by 2035.

Increasing access to reliable electric vehicle charging stations at home and at work is key to increasing EV adoption. Lack of access to EV charging infrastructure at home, and particular at multi-family dwellings, is a major hurdle to EV ownership. As such, 2022 CALGreen (Part 11) within Title 24 outlines requirements for electric vehicle charging. The proposed reach codes would have more stringent requirements than the 2022 CALGreen, and so a comparison is provided of those "base" requirements, versus the reach codes in Tables 1, 2 and 3 below for different types of development.

The tables reference various types of EV infrastructure, principally related to the speed of charging and necessary electricity supply to achieve those speeds, and EV "readiness" based on the components that would be installed at time of construction.

EV charging infrastructure is categorized into three major types:

- **Level 1: 120V**, charge time 3-5 miles per hour
- **Level 2: 240V**, charge time 12-40 miles per hour²
- **Level 3: 480V**, 150+ miles per charging hour (typically, an EV can get 80% full charge in 20 minutes)

² Level 2 typically includes a 40-amp circuit whereas low power level 1 is a 20-amp circuit

There are three main types of EV charging readiness as follows:

- **EV Capable:** Panel capacity and conduit installed to support future build-out of EV charging
- **EV Ready:** The full circuit is installed including the conduit, wiring, and receptacle
- **EV Charging Station (EVCS):** EV Ready, plus the actual charging station required to charge is installed

Staff recommends the City adopt a reach code to require additional EV charging infrastructure as indicated in the tables below. Proposed reach code requirements for single-family residential, multi-family residential/hotel, and non-residential land uses are outlined in Tables 1 through 3, below, including a comparison is provided to the 2022 California Building Code “Base Code”. The proposed amendment to Part 11, Title 24 for electric vehicle charging is included as Exhibit B of Attachment 1.

Table 1: Single-Family Residential

	2022 Base Code	Proposed Reach Code
EV Capable	One (1) Level 2	
EV Ready	None	Two (2) Level 2 (if parking is provided)
EVCS	None	None

Table 2: Multi-Family Residential/Hotel and Motel

	2022 Base Code ³ <20 Units	2022 Base Code 20+ Units	Proposed Reach Code ⁴	
			MFR	Hotel
EV Capable	10% Level 2	10% Level 2	N/A	10% Level 2
EV Ready	25% Level 2 (low power)	25% Level 2 (low power)	85% Level 2 (low power)	25% Level 2 (low power)
EVCS	None	5% Level 2	15% Level 2	5% Level 2

³ The Base Code applies to the percent of total parking spaces. The proposed code applies to the percent of dwelling units with parking spaces.

⁴ Automatic load management (ALMS) is encouraged in the proposed code. ALMS manages the load across one or more charger to share capacity

Table 3: Non-Residential

	2022 Base Code ⁵⁶	Proposed Reach Code	
		Office	All Other
EV Capable	15% Level 2	30% Level 2	10% Level 2
EV Ready	-	-	-
EVCS	5% Level 2	20% Level 2	10% Level 2

An important distinction to note between the base code and the reach code is that the base code is applied as a proportion of total spaces, whereas the reach code is applied as a proportion of dwelling units with parking spaces. This approach is taken because the PMC requires more than one parking space per dwelling unit. If based on parking spaces alone instead of dwelling units, there would be an unnecessary amount of EV Capable spaces which would be a cost burden to a project.

Existing Reach Codes for EV Charging Infrastructure

In 2014, the City adopted some modest requirements for EV charging which are incorporated in Chapter 18.88, Off-Street Parking Requirements. Both the 2022 Base Code and the proposed reach code are more stringent than what is included in Chapter 18.88. To avoid duplication and conflict, it is proposed to amend Chapter 18.88 to delete references to EV charging spaces and instead rely on Title 20 to specify those requirements. The ordinance amending Section 18.88 of the Municipal Code can be reviewed in Exhibit C of Attachment 1.

Other Amendments

The remainder of staff’s proposed amendments are administrative in nature, and not subject to the legislative findings. Several prior local amendments have now been incorporated into the new model codes, and do not need to be carried forward.

COMMITTEE ON ENERGY AND ENVIRONMENT REVIEW

The Committee on Energy and Environment reviewed this proposed reach codes for both building electrification and EV charging on September 28, 2022. The Committee reviewed a range of supporting information and analysis provided by staff including background data and analysis on the costs and benefits of the proposed codes, GHG emissions, costs and cost-savings, and factors such as building construction trends, vehicle trends, efforts being made by neighboring jurisdictions, and secondary benefits such as indoor air quality (for electrification) and resilience.

⁵ The 2022 Base Code requirements are based on number of parking spaces in the parking lot. For Base code capable, it ranges from 0 required spaces up to 40% capable depending on quantity of spaces- averaging around 20%. For Base Code EVCS, it ranges from 0-8% installed- averaging around 5%. Additionally, the Base Code does not distinguish between office and other commercial uses.

⁶ The Base Code requires 20% capable (5% of which must be installed). As such, staff has modified the percentages noted here to reflect the credit.

The report is attached for reference as Attachment 2. The Committee recommended (by a vote of 5-0, with two members absent) the Council adopt the recommended reach codes for building electrification and EV charging as outlined by staff.

PUBLIC OUTREACH

The CAP 2.0 included policy direction to require reach codes for building electrification and EV infrastructure. The public outreach process for the CAP 2.0 was over the course of two years and over 20 public meetings. The general reach code policies were discussed, leaving the nuance to the actual implementation of the actions (e.g., quantity of chargers to require). There were high levels of support for both building and vehicle electrification and the suggested reach codes. During the CAP 2.0 outreach, there was concern requiring existing residences to convert to all-electric. Staff carefully considered the input during the CAP 2.0 process when developing the reach codes.

For the current discussions around reach codes, staff conducted outreach with the climate action mailing list (sent to over 200 recipients), local developers mailing list (over 100 recipients), posted meeting information to the City website, and included information in the City's community newsletter.

Ahead of this public hearing, staff held a community meeting on September 13, 2022, for which notice was provided to all interested parties on the CAP 2.0 mailing list, and the item was discussed at a Committee on Energy and Environment hearing on September 28, 2022. The community meeting had minimal attendance. There were questions about the level of charging required (e.g., why Level 2 vs Level 3 fast charging). There were some comments about installation of chargers and considering length of cords, location of spaces, and continued maintenance of chargers. There were also questions about examples when electrification would be required. Staff received one public comment for the Committee meeting on September 28 supporting electrification but requesting additional exceptions. The Committee discussed several factors related to the reach codes, as described in the agenda report above. Ultimately, the Committee recommended the City Council proceed with the reach codes as presented by staff.

GENERAL PLAN CONFORMANCE ANALYSIS

The City's General Plan includes the following policies that support the proposed amendments to the PMC:

Land Use Element <i>Program 8.1</i>	Enforce the provisions of the City's Zoning Ordinance and related planning ordinances to maintain the character of existing residential neighborhoods.
Circulation Element <i>Policy 21</i>	Support the use of alternative fuel vehicles.
Housing Element <i>Policy 15</i>	Make appropriate modifications to the Land Use Element of the General Plan, Zoning Ordinance, and other City ordinances, programs, and policies to facilitate the provision of housing.
Air Quality and Climate Change Element <i>Policy 6</i>	Reduce air pollution and the production of greenhouse gases by increasing energy efficiency, conservation, and the use of renewable resources.
Energy Element <i>Policy 3</i>	Reduce demand for electricity and natural gas by establishing guidelines, programs, and incentives that would achieve this end.
Energy Element <i>Policy 6</i>	Preserve and strengthen the City's green building policies and regulations.

ENVIRONMENTAL REVIEW

With respect to the 2022 Building Code, the amendments would implement the building codes approved and adopted by the State of California; local amendments would be incorporated to reflect the unique geological, topographical, and climatic conditions in Pleasanton and intended to reduce risks from natural hazards. Pursuant to CEQA Guidelines 15061(b)(3) it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment and thus is not subject to CEQA. With respect to the proposed reach codes, the amendments would be consistent with the CAP 2.0 for which an Initial Study/Negative Declaration was prepared, and which found that the CAP's actions would have a less than significant impact on the environment.

CONCLUSION

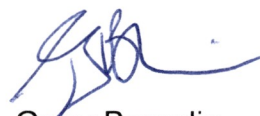
The 2022 California Building Code proposed with amendments are an effort to maintain the minimum fire and life safety standards that are currently in place to construct buildings throughout the city, local amendments to address additional safety due to specific local conditions, and local amendments to the Green Code for building electrification and electric vehicle charging infrastructure.

The adoption of these codes will provide the City with the most up-to-date standards available under state law. They will provide greatly enhanced national and regional consistency, resulting in a more uniform and streamlined design, application, and plan review process. They will also implement policies adopted in the CAP 2.0. The proposed ordinance provides that these changes will be effective January 1, 2023, the same time that the statewide codes go into effect.

Submitted by:


Ellen Clark
Director of
Community Development

Approved by:


Gerry Beaudin
City Manager

Attachments:

1. Ordinance to update Title 20
 - a. Exhibit A Findings related to local climatic, geological, and topographical conditions
 - b. Exhibit B Redlines to Title 20
 - c. Exhibit C Redlines to Chapter 18.88
2. Committee on Energy and Environment Agenda Report