



CITY OF SAN MATEO

City Hall
330 W. 20th Avenue
San Mateo CA 94403
www.cityofsanmateo.org

Agenda Report

Agenda Number: 16

Section Name: PUBLIC HEARING

File ID: 19-1259

TO: City Council
FROM: Drew Corbett, City Manager
PREPARED BY: City Manager's Office
MEETING DATE: August 19, 2019

SUBJECT:

Ordinance Introduction - Local Amendments to the California Energy and Green Building Code

RECOMMENDATION:

Introduce an Ordinance to amend San Mateo Municipal Code Chapter 23.24, "Energy Code," and an ordinance to amend Chapter 23.70, "Green Building Code," to make local amendments to the State Energy and Green Building Codes.

BACKGROUND:

In 2016, the San Mateo City Council adopted local amendments to the State Energy Code and Green Building Code or "Reach Codes" to reduce greenhouse gas emissions from the building sector. The City's adopted Reach Codes require solar panel or solar thermal systems on all new construction and increase the electric vehicle (EV) infrastructure readiness requirements. These Reach Codes will expire on December 31, 2019 as part of the State's triennial code cycle, and the City will need to adopt new Reach Codes in order to continue to require more sustainable construction in San Mateo.

The California Statewide Codes and Standards Program (Statewide Program) and Peninsula Clean Energy (PCE) spearheaded efforts to support local jurisdictions in the adoption of Reach Codes for the 2019 code cycle. The Statewide Program led the development of cost-effectiveness studies that analyzed all-electric and mixed-fuel new construction. The California Energy Commission (CEC) requires cost-effectiveness studies to demonstrate that local amendments to the Energy Code are cost-effective and do not cause an unreasonable burden on builders. Any local jurisdiction can leverage the results of the Statewide Program's studies, the 2019 Residential New Construction Cost-effectiveness Study and 2019 Nonresidential New Construction Cost-effectiveness Study are available [online](#).

PCE developed model Reach Codes in three focus areas: encouraging building electrification, requiring solar installation, and enhancing EV infrastructure readiness. Staff leveraged the results of the Statewide Program's cost-effectiveness studies and PCE's model codes to draft Reach Codes in the same three focus areas. The draft Reach Codes were reviewed and supported by the Sustainability and Infrastructure Commission and shared with local developer stakeholders. Staff presented the draft code options to the City Council at the June 3, 2019 City Council Study Session. The City Council indicated support for the adoption of the proposed Reach Codes in each focus area and directed staff to adopt the more stringent options presented.

This report introduces two ordinances to amend the Municipal Code to adopt the proposed Reach Codes for the 2019 code cycle to go into effect on January 1, 2020, concurrent with the effective date of the State 2019 Building Codes.

Proposed Reach Codes

Encouraging Building Electrification (Energy Code Reach Code)

Building electrification means constructing buildings without any natural gas services. The City's Reach Code will encourage building electrification by giving builders the choice of two options, either building an all-electric building at the

minimum efficiency as required by the Energy Code, or building a mixed-fuel building (uses electricity and natural gas) at a higher energy efficiency level than the Energy Code. The Reach Code will use this two-pronged approach to encourage building electrification in single-family, duplex, and office-use buildings as summarized in Table 1.

Table 1: Encouraging Building Electrification

	Proposed Reach Code
Single Family and Duplex	Two compliance pathways: 1) All-electric 0% 2) Mixed-fuel 15%
Office Use	Two compliance pathways: 1) All-electric 0% 2) Mixed-fuel 10%

The proposed Reach Code does not address multifamily buildings at this time. The Statewide Program is developing a cost-effectiveness study that will determine if and how jurisdictions can encourage building electrification in multifamily buildings of four stories or more. This cost-effectiveness study is not yet complete and is slated to be published in Fall 2019. Staff will return to the Sustainability and Infrastructure Commission and to a City Council Study Session to present the results later this year. Depending on the findings of the study and City Council’s direction at that time, staff could return to City Council with another Reach Code that could be adopted and implemented mid-code cycle.

Requiring Solar Installation (Energy Code Reach Code)

In 2016, the City adopted a Reach Code that required all new construction install a minimum size solar photovoltaic (PV) or solar thermal system. The 2019 State Code will require that all residential construction three stories or less install solar PV to offset annual electricity usage. Staff recommends a Reach Code to continue the solar mandate for all other building types as summarized in Table 2. The minimum size systems required are very small and most projects typically exceed that requirement. The idea behind this requirement is that by requiring the solar installation, the owner or developer will be incentivized to right-size the system themselves based on their site and building requirements in order to maximize cost effectiveness.

Table 2: Requiring Solar Installation

	Proposed Reach Code
Multifamily (4 stories or more)	Minimum 3 kW PV system or solar thermal
Non-residential (<10,000 SF)	Minimum 3 kW PV system or solar thermal
Non-residential (>10,000 SF)	Minimum 5 kW PV system or solar thermal

Increasing Electric Vehicle Readiness (Green Building Code Reach Code)

On-road transportation accounts for the majority of greenhouse gas emissions in the City. By encouraging the use of EVs, the City helps reduce emissions from the transportation sector. The City’s existing Reach Code requires a higher number of electric vehicle capable (EV Capable) parking spaces than what is required by the State for new construction projects. An EV Capable space contains electrical panel capacity and raceway; however, it is not required to contain the actual electric vehicle supply equipment (EVSE) installed. By requiring EV capable spaces, it makes it much easier to install EVSE at these sites in the future since the cost significantly increases if adequate electrical capacity is not built into a project at the onset. Staff recommends requiring a higher percentage of EV Capable spaces as summarized in Table 3, as well as a mandatory EVSE installation for non-residential (office and retail) projects. These measures align with the approach presented at the June 3, 2019 City Council Study Session.

Since the City Council Study Session, staff received public comment regarding the City’s proposed EV infrastructure readiness reach codes urging the City to require one EV charging outlet per residential unit. Staff did additional research on EV readiness Reach Code options and is recommending that the City expand the proposed Reach Codes to require one- and two-dwelling/townhouse residential development install a receptacle, or outlet. The State Code already requires that one- and two-dwelling/townhouse residential development install raceway and panel capacity. The proposed Reach Code

would require that a 208/240-volt branch circuit and an outlet also be installed and labeled “EV READY.”

Staff is not recommending a Reach Code that requires outlets be installed in multifamily development. Often, multifamily parking is located in common areas that are not sub-metered for electricity. By mandating outlets in common areas, this requirement makes it difficult for the multifamily property owner to manage the use of electricity at these outlets. Additionally, the typical EV chargers installed in multifamily and commercial development are “hardwired” and connected via conduit to a junction box, as opposed to the “plug-in” model that is plugged into an outlet. The City’s proposed Reach Code requires multifamily parking to construct a higher number of EV Capable spaces, and allows flexibility for the property owner to decide where and how to manage the later installed EVSE.

Table 3: Electric Vehicle Readiness

	Proposed Reach Code
One- and Two-family Dwellings and Town-houses	Require complete circuit and receptacle (outlet)
Multifamily	15% EV Capable spaces
Non-residential	10% EV Capable spaces and 5% EVSE installed spaces

Next Steps

The CEC requires local jurisdictions to file Energy Code Reach Codes with the State and await a 60-day comment period. Following City Council approval of the proposed Reach Code Ordinances, staff will file the proposed amendments to the Energy Code with the CEC and respond to public comments as needed. Green Building Code amendments do not require a cost-effectiveness study and can be adopted directly by the jurisdiction through a public hearing held at the jurisdiction level. If approved by the City Council and the CEC, all Reach Codes would go into effect at the start of the next code cycle on January 1, 2020. This timeline ensures that there is no lapse in the City’s existing Reach Codes that address solar installation and EV readiness.

Reach Codes can be adopted at any time; however, by adopting Reach Codes before the beginning of the three-year code cycle the implementable time is maximized and it makes it easier for the enforcing department. Even so, a Reach Code could be adopted at any time and go into effect later during in a code cycle. As a result, there will still be an opportunity to evaluate Reach Code options that encourage building electrification in multifamily buildings after the Statewide Program’s analysis is published.

There has also been interest in Reach Codes related to electrical safety and electrician training requirements. Since this potential Reach Code is not an Energy Code Reach Code, the City would be able to adopt the Reach Code at the jurisdiction level, a much faster process than the Energy Code Reach Code process. Staff plans to make a presentation on this topic at a City Council Study Session later this year in conjunction with the results of the multifamily cost-effectiveness study.

BUDGET IMPACT:

The proposed local amendments will not have a budgetary impact on the City since the City is required to enforce the Energy and Green Building Code and the local amendments will not be onerous to implement and track.

ENVIRONMENTAL DETERMINATION:

In accordance with CEQA Guidelines Section 15308, adoption of the Reach Code ordinances is categorically exempt from CEQA as an action by a regulatory agency for the protection of the environment, because the Reach Codes are intended to reduce greenhouse gas emissions.

NOTICE PROVIDED

All meeting noticing requirements were met.

ATTACHMENTS

Att 1 – Proposed Energy Code Ordinance
Att 2 – Proposed Green Building Code Ordinance
Att 3 – Track Changes Energy Code Ordinance
Att 4 – Track Changes Building Code Ordinance
Att 5 – Public Comment

STAFF CONTACT

Andrea Chow, Sustainability Analyst
achow@cityofsanmateo.org
(650) 522-7007