



County of San Mateo

Inter-Departmental Correspondence

Department: COUNTY MANAGER: OFFICE OF SUSTAINABILITY

File #: 19-992

Board Meeting Date: 10/22/2019

Special Notice / Hearing: None
Vote Required: Majority

To: Honorable Board of Supervisors

From: Jim Eggemeyer, Director, Office of Sustainability
Steve Monowitz, Community Development Director, Planning & Building Department

Subject: Study Session to Discuss Building Standards Reach Codes

RECOMMENDATION:

Recommendation to provide input and direction to staff on any proposed energy reach code and green building code amendment measures in the Unincorporated County areas for the 2019 California Building Standards Code update.

BACKGROUND:

Building Standards Code Adoption Process

Every three years, the State of California adopts new building standards that are organized in Title 24 of the California Code of Regulations, referred to as the California Building Standards Code. This regular update is referred to as a "code cycle." The next code cycle will be adopted in 2019 and will be effective January 1, 2020. This upcoming code cycle is an opportunity to adopt optional local energy code amendments or reach codes that exceed State code standards. Historically, cities and counties have adopted reach codes to the California Energy Code (Title 24, Part 6) and the California Green Building Standards - CALGreen (Title 24, Part 11) codes to meet local climate action goals.

Optional local amendments and reach codes must be filed with the California Building Standards Commission for the amendments to be in effect in the local jurisdiction. In addition, the reach code amendments of the Energy Code must be approved by the California Energy Commission (CEC) requiring the jurisdiction to demonstrate that the proposed amendments to the code are cost effective and do not represent an unreasonable burden to builders and ultimately, the building's occupants. Unlike amendments to the Energy Code, a cost-effectiveness study is not required for amendments to the Green Building Standards Code for increased amounts of electric vehicle (EV) infrastructure.

Community Benefits

Natural gas usage in buildings is one of the largest sources of greenhouse gas (GHG) emissions. Reducing or eliminating natural gas usage in the building sector is an important component of climate mitigation to achieve the State's goal of Carbon Neutrality by 2045. Since Senate Bill 100 requires a

100% clean electric grid by 2045, passing a reach code that prohibits or disincentivizes natural gas infrastructure will enable San Mateo County to achieve carbon neutrality by 2045.

Support for Local Reach Codes and Local Momentum

Several agencies have stepped up to support local governments in adopting reach codes. The California investor-owned utilities (IOUs), including PG&E Codes and Standards program, led the development of a cost-effectiveness study for the Energy Code reach codes that examined different approaches for construction of new single family, low-rise multifamily, high-rise multifamily, and commercial buildings (referred to as Buildings throughout the report). Peninsula Clean Energy (PCE) and Silicon Valley Clean Energy (SVCE) leveraged the statewide cost-effectiveness analysis to draft model code ordinances and are providing technical support to jurisdictions interested in adopting reach codes. Eighteen cities in San Mateo County are participating in this effort by bringing code options to their Councils for consideration. San Mateo and Menlo Park have already passed reach codes for their jurisdictions.

DISCUSSION:

Energy Reach Codes

The Planning and Building Department and the Office of Sustainability, in collaboration, explored reach code options and have refined their research to two specific approaches to focus on and encourage electrification of new buildings. The initial reach code model was developed by PCE and SVCE in collaboration with consultants and the Office of Sustainability. The approach provides two pathways for builders. To construct all-electric, there are no additional code requirements, the builder follows the State Energy Code. To construct mixed fuel buildings, the builder must achieve a higher level of building performance. Higher building performance requirements vary between building types, i.e. single-family, low-rise multifamily, etc. A second approach was adopted by the Menlo Park City Council in early October, requiring all new buildings to use electric space and water heating. There are some exceptions and details included in the summary table, see Attachment A. County staff believes that Menlo Park's approach would be best suited for the County as it eliminates confusion for permit applicants and is a more progressive move to eliminate greenhouse gas emissions from buildings.

Green Building Code Amendments

The Green Building code amendments for consideration would require additional EV charging infrastructure for the construction of new buildings. PCE and their consultants have recommended that jurisdictions require 2 EV spaces for single family, charging access for 100% of multifamily dwelling units, and higher percentages of spaces for commercial and office parking lots. County staff believes that PCE's recommendation for installed charging infrastructure would then enable more people to purchase, drive, and charge electric vehicles in San Mateo County.

Building Costs and Affordable Housing Considerations

The Statewide Cost Effectiveness Studies act as tools for communities to select different Reach Code options ranging from increased energy efficiency to all-electric requirements. The studies demonstrate the estimated cost savings between new all-electric and natural gas buildings. For Single Family and Multifamily lower than four stories, it costs approximately \$5,349 less to build an all-electric single-family home than to build mixed-fuel. Attachment D indicates where the cost savings are in a home. High Rise Multifamily, Office, and Commercial buildings are significantly less expensive to build as all-electric (between \$24,000 and \$1.3 Million) when compared to a mixed-fuel version which can be attributed to the cost savings from avoided natural gas infrastructure. Cost effectiveness findings for all building types in Climate Zone Three, the location of San Mateo County, are summarized in Attachment E.

Alternatives

Alternatives for your Board's consideration could include the County taking no action on either energy reach codes or green building code amendments and adopt the 2019 State Building Standards Code as provided by the State and presented by the Planning and Building Department at a future Board meeting. Or another alternative the County could consider is to ban new natural gas connections through the municipal codes and use permits.

ENVIRONMENTAL REVIEW

Environmental review consistent with the California Environmental Quality Act (CEQA) will be completed and considered at the time of adoption of any proposed reach code regulations.

FISCAL IMPACT:

No Net County cost associated with this study session discussion.

ATTACHMENTS

- A. Building Electrification Reach Code Options
- B. Electric Vehicle Charging Infrastructure Green Building Code Amendment Options
- C. Status of Jurisdictions in San Mateo County Considering Reach Codes
- D. Cost Comparison of an All-Electric Home vs. a Mixed Fuel Home
- E. Cost Effectiveness Study Results