

Notes

City of Culver City - Reach Code Policy Development & Adoption

Community Engagement Meetings

2020 Reach Code Public Meeting Results

Acting Building Official Stuart Tom spearheaded the community engagement for the Reach Code policy development and adoption in 2020. The follow is a summary of his work.

Public Notice

To ensure broad notification of the public outreach meetings, public notice was distributed through a number of different channels as follows:

Culver City Website

Publication in "Culver City News"

Notification to attendees of the 11/18/2019 City Council meeting

Notification to public utility companies

Notification to Culver City Downtown Business Association (DBA)

Notification to interested parties via Community Development email distribution lists

Public Outreach Meetings

The outreach program was presented in a two-hour long interactive format that encouraged audience participation. (A copy of the presentation is attached as Attachment "A" for reference.) The identical program was repeated nine (9) times. To afford the greatest opportunity for public input, the sessions were conducted on different days of the week over a three-week period. To accommodate individuals with varying schedules, sessions were held during the morning (9:00 am– 11 :00 am), afternoon (1 :00 pm– 3:00 pm), and evening (6:00 pm – 8:00 pm).

Attendance at each of the outreach meetings was light, with a maximum of less than a dozen individuals at any meeting. In some instances, only a single individual was present. Over the course of all meetings, participation included individuals from the following stakeholder categories:

Residents
(homeowners)
Residents (renters)
Business owners
Designers (architect/engineer)
Environmental groups
Utility company
Labor union
City Council (Vice Mayor Eriksson)

All meetings included open discussion. Frequent asked questions are summary below. While participants represented a broad range of perspectives, attendance at the outreach sessions was light. Additional outreach meetings can be scheduled if the City Council deems necessary.

Considerations

- 1) Reach code strategies do not need to be an "all or nothing" solution.
Four (4) different reach code strategies were widely discussed as follows:
 - 100% mandatory electrification
 - Incentivized voluntary electrification
 - Targeted electrification

- *Phased electrification*

Most attendees supported a program that would target space-heating and water-heating in low-rise residential buildings early, with gradual expansion to other appliances such as clothes drying and cooking later.

- 2) All buildings are not the same. Different building categories may warrant application of reach codes on different time schedules.

Five (5) different building categories were discussed as follows:

- *Low-rise residential buildings*
- *High-rise residential buildings*
- *Retail and office buildings*
- *Restaurants*
- *Hotels*

Most attendees supported a program that would affect new low-rise residential buildings.

Low-rise residential buildings include residential structures up to 4-stories in height.

- 3) Restaurants and hotels have special operational needs due to high-volume food preparation and laundry Processing.

Due to the rigorous demands on commercial cooking appliances and industrial laundry equipment, many jurisdictions have determined that inclusion of restaurants and hotels is not appropriate at this time. In particular, the lack of extremely durable electric commercial cooking appliance options would have a detrimental impact on the ability to prepare large volumes of food in a commercial kitchen environment. Similarly, the lack of industrial-scale electric water heating and clothes drying equipment would present obstacles in keeping up with the laundry demands large hotels face to effectively cycle towels and bed linens.

- 4) Electrical power outages are more common than gas outages.

Acknowledged.

- 5) Electricity is not a clean power source. Off-site power generation produces pollution.

Culver City is supplied by a high proportion of renewable electrical energy. Furthermore, the California Energy Code now requires all homes to be provided with on-site solar photo-voltaic systems that are sized to address the annual energy demand of the building. Consequently, the electrical power utilized by new buildings that would be affected by a local reach code would be accounted for by the net energy generated on-site.

- 6) Modern gas piping is flexible and less likely to be damaged or leak during an earthquake.

Acknowledged. If Culver City chooses to pursue the "Berkeley Strategy" of banning natural gas based on an inherent hazard created by natural gas infrastructure, such will be considered.

- 7) In Culver City, electricity costs more per unit of energy than natural gas, so electrification may result in higher utility bills.

Starting January 1, 2020, all new homes are required to have on-site solar PV, thereby resulting in either a net-zero electrical bill or a very small electrical bill to cover any excess consumption.

- 8) Renewable natural gas (RNG) is carbon negative, so it is better than electricity at reducing carbon.

Acknowledged. However, supplies of captured methane from dairy farms and other bio-sources does not appear to be sufficient to equal the full energy demand of natural gas appliance for all new construction. Therefore, RNG can only account for a portion of the natural gas consumption.

- 9) Any action that removes natural gas from new construction will affect 5,000 members of the Utility Workers of America Union.

Acknowledged. All existing buildings would be exempt from reach codes, so existing gas infrastructure would still present a need for workers that are skilled in the natural gas industry. New construction accounts for a very small fraction of the buildings in a "built-out" community such as Culver City, so the reduction in demand for workers that are skilled in the natural gas industry would be very small.

- 10) Reach codes seem like an over-reach that places a burden on the community.

Culver City will consider all options to find the best fit for the community.

- 11) Incentivized electrification sets a target energy reduction goal and affords the customer or the architect to a choice of how to achieve the standard (with or without natural gas).

Incentivized electrification establishes a higher effective energy conservation standard that can be met by any building (including a mixed-fuel building). If an individual voluntarily chooses a 100% electrified building, an incentive (such as requiring compliance with the basic California Energy Code) is allowed as an incentive. This strategy affords individuals a choice between a mixed-fuel building or 100% electrified building, but a mixed fuel building would be required to adhere to higher energy conservation standards than a 100% electrified building.

- 12) Targeted electrification seems to phase-in reach codes in a gradual fashion, while leaving room to augment the standards at a later date when technology makes it more feasible.

Acknowledged.

- 13) Southern California Gas Company has literature available related to "clean natural gas" and "renewable natural gas".

Acknowledged. The material will be available.

- 14) Reach codes should not be delayed. 100% electrification should be achieved within a maximum of 10 years. Any phased strategy should immediately target devices that will have the biggest impact of carbon reduction.

If phased reach code strategy is pursued, the City Council may establish a schedule to achieve serial improvements over time.

- 15) Modern electric appliances that utilize heat-pump technology for space heating, water heating and clothes drying are very efficient.

Acknowledged. Some electric heat-pump technology appliances have limited availability in the United States (compared to Europe) at this time. Additionally, some heat-pump technology appliances are more expensive than conventional electric or gas appliances at this time.

- 16) Mr. Christian Kienapfel has built a "passive house" that utilizes 100% electric appliances and other design features to be very efficient. He has extended an invitation to the City Council and staff to view his home located in Culver City.

Acknowledged.

Frequently Asked Questions

- 1) How would I cook meals in a 100% electrified building during an electrical power outage?

During an electrical power outage, all electric appliances would be compromised, unless the building is equipped with solar PV, a battery back-up system, or an electrical generator. Since all new residential buildings are now required to have solar PV, electrical cooking appliances would only be compromised at night or on days without sufficient sun exposure.

- 2) Solar PV panels produce pollution when manufactured and at "end-of-life" disposal.

Acknowledged. Modern solar PV Panels have a life expectancy of many years and the "cradle-to-grave" pollution impact of solar PV panels occurs at the beginning and end of the life-cycle.

- 3) Have other forms of energy been considered because hydrogen is net zero.

Electricity and natural gas are the predominant forms of energy that are available for new construction in Culver City at this time.

- 4) Why wouldn't reach codes go to a popular vote, instead of a decision by only five elected officials?

Adoption of reach Codes would be by local ordinance, which is the purview of the City Council selected by the Culver City electorate to act on their behalf.

- 5) Would reach codes apply to Accessory Dwelling Units (ADU)?

If the ADU is a newly constructed building, then reach code standards would apply. If the ADU is converted from an existing building (such as a garage), then the reach code standards would not apply.

- 6) Shouldn't the customer or the architect have a choice regarding what fuel type is best?

One of the possible reach code strategies ("Incentivized voluntary electrification") affords the customer or architect a choice.

- 7) Could a phased electrification strategy have a "sunset" objective of 100% electrification by 2035?

Yes. The parameters of a phased electrification strategy would be established by the City Council.

- 8) Will reach codes increase the cost of utilities in a manner that drives residents out of Culver City?

If reach code standards are adopted in a manner that follows regular code adoption procedures, a cost-effectiveness analysis would be required to be submitted to the California Energy Commission. Such analysis must demonstrate that if there is any increased costs associated with implementation of a local standard, the associated savings in energy cost would eventually result in cost recovery during the reasonable life expectancy of the building.

- 9) How much natural gas is actually used to prepare meals in a home, compared to the amount of natural gas used to cook meals in a restaurant.
In comparison to the amount of natural gas used within a commercial kitchen the amount of gas consumed within a residential kitchen is very small.
- 10) Which natural gas appliances tend to use the most energy in residential buildings?
The types of appliances that utilize the most natural gas in residential buildings are:
- Space heater (ie., gas furnace)
 - Water heater
 - Clothes dryer
- Targeting any (or all) of these appliances for electrification would have a significant effect on shifting fuel from natural gas to electricity in new buildings.*
- The types of appliances that utilize the least natural gas in residential buildings are:*
- Stove/cooktop
 - Oven
- Targeting any of these appliances for electrification would have a small effect on shifting fuel from natural gas to electricity in new buildings.*
- 11) Which target building categories are most prevalent in Culver City?
Low-rise residential buildings account for most existing and new buildings in Culver City. Low-rise buildings include single-family residential buildings and apartment buildings up to 4-stories in height. Reach codes that include new low-rise residential buildings would target the building category that is most likely to be constructed in Culver City.
- 12) Will my existing building be affected?
No. Local jurisdictions have not taken steps to mandate retrofit of existing buildings to comply with reach codes. Most existing building which rely upon a mixed source of fuel (ie., both electricity and natural gas) do not have sufficient electrical power capacity to manage the full energy demand of the structure. Significant effort and expense would be required to upgrade an existing electrical service panel and wiring throughout a building.

Results

The predominant outcome from the outreach meetings was general support for some level of outreach code for Culver City. There was a small degree of opposition to reach code adoption at any level. The three most common themes shared by participants are presented below:

- 1) **Support:** *A phased reach code strategy that initially focuses on electrified space heating and water heating should be applied to all new low-rise residential buildings.* These two appliances account for a significant portion of the natural gas consumed within residential buildings and are not likely to result in an adverse living experience within low-rise residential buildings. Subsequent electrification of laundry clothes dryers should follow when heat-pump clothes dryers become more affordable. Future reach code phases can focus on other appliances and other building categories.
- 2) **Opposition:** *Reach codes should not mandate electrification of any appliances; simply set an energy consumption goal and allow individuals to meet the goal using fuel sources of their choice.* Consumers should always have a choice. As long as they reduce overall energy consumption, consumers can make fuel choices that save energy in a manner that fits their financial budget.
- 3) **Concern:** Reach codes do not provide cost effective and application-specific solutions for commercial businesses such as restaurants and hotels. Additionally, certain aspects of residential occupancy should be left to the occupant (eg., cooking). Electricity is an expensive alternative to natural gas and widespread electrification could result in significantly higher utility bills.



Culver City Reach Code Outreach

Stakeholder Meetings - January 21, 2020; January 29, 2020;
February 4, 2020

Purpose of Today's Presentation

- ▶ Provide information regarding statewide energy efficiency efforts
- ▶ Describe how "Reach Codes" reduce energy consumption and build healthy communities
- ▶ Provide an overview of various reach code strategies and solicit input from stakeholders
- ▶ Discuss future steps to develop Reach Code Standards that will work best for Culver City





Statewide energy efficiency efforts

- ▶ California Title-24
 - » Energy Code
 - CaIGREEN
- ▶ Local Code Amendments
 - Reach Codes

"Reach Codes"

- ▶ What are they?
- ▶ How do they save energy?
- ▶ How do they build healthier communities?



Reach Code Strategies

- ▶ 100% mandatory electrification
- ▶ Incentivized voluntary electrification
- ▶ Targeted electrification
- ▶ Phased electrification



Target Building Categories

- ▶ Low-rise residential buildings
- ▶ High-rise residential buildings
- ▶ Retail and Office buildings
- ▶ Restaurant buildings
- ▶ Hotel buildings

What are your thoughts?

- ▶ Do you have ideas that will save energy?
- ▶ Are there actions we can take to make our community healthier?
- ▶ How can new buildings protect Culver City's future?
- ▶ How can we reduce our carbon footprint?



Next Steps

- ▶ How will Culver City determine the best Reach Codes for our community?
- ▶ What information will be used to determine the best strategy?
- ▶ Which target building categories will be included?
- ▶ ... Will my current home or business be affected?





Thank you !!

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