

CITY OF BURLINGAME REACH CODE **FREQUENTLY ASKED QUESTIONS**

1. Why does Burlingame want to adopt a reach code?

Reach codes extend beyond the state's building code to require new buildings to be more efficient than the requirements in the state's building code and to minimize greenhouse gas (GHG) emissions. Like many other Bay Area cities, Burlingame is considering a reach code for new buildings to limit the use of natural gas (which releases GHG), require solar energy systems to support renewable energy, and install electric vehicle (EV) infrastructure to meet growing EV charging demand.

Adoption of a reach code will implement measures from Burlingame's Climate Action Plan (CAP) and accelerate GHG reductions in the city. The reach code would reduce an additional 3,500 tons of greenhouse gas emissions by 2030 and implement CAP measures 6, 11, and 12.

2. Do buildings with all-electric appliances cost more to build than those that use natural gas?

No. Studies have shown that the costs to construct and maintain all-electric buildings are equal to or lower than those for buildings that use natural gas.

A reach code is considered a local amendment to the state's energy code, which means it must first be approved by the California Energy Commission (CEC). For the CEC to approve a reach code, the reach code must demonstrate that it is cost effective over the long term. The California Codes and Standards Programs created cost-effectiveness studies for jurisdictions seeking to adopt a reach code. Cities have been referring to these studies for their reach codes. The studies show that the largest savings in all-electric buildings are realized by avoiding the cost of installing natural gas infrastructure. Furthermore, all-electric buildings cost less to maintain and operate over the long term. The costs of all-electric appliances are comparable to the costs of gas appliances.

Based on lifetime equipment cost savings, the cost-effectiveness studies found all-electric single-family homes to have a cost savings of \$5,349; and the cost savings for a multifamily building equal \$2,337/unit.

- [New residential cost-effectiveness study](#)
- [New non-residential cost-effectiveness study](#)

3. Residents are used to natural gas cooking. How does it compare with cooking with electricity?

Many people are used to and comfortable with natural gas cooking and are most likely not aware of the benefits of cooking with electric stovetops. Cooking with natural gas burns fossil fuels inside homes, which has been connected to creating poor indoor air quality and health impacts. Electric cooking avoids the burning of fossil fuels and is considered a safer option over natural gas. Induction stovetops - high performance cooking using electromagnetic energy - are growing in popularity and deliver an equal or even improved cooking experience compared to

natural gas stoves. Induction stoves work best with cast iron and stainless steel cookware. Adapter plates are available when using copper and aluminum cookware. The adapter plate costs approximately \$30.

4. Do fireplaces and fire pits need to be electric?

The proposed reach code allows for single family homes to use non-electric indoor and outdoor cooking appliances and fireplaces which includes firepits and outdoor kitchens.

5. What is a good electric alternative to a natural gas furnace and water heater?

Heat pump heating and cooling systems offer an electric alternative to space heating and cooling. They can be wall mounted or ducted in a home and are especially cost effective when they are used for both heating and cooling homes.

Heat pump water heating systems use electricity instead of gas to heat water and are more efficient than gas boilers.

Additional Resources:

- Cost savings, https://peninsulareachcodes.org/wp-content/uploads/2019/10/Electrification-Cost-Story-Infographic_v8.1.pdf
- All-electric guide for multifamily buildings, , [ElectricMultifamilyConstructionGuide_RedwoodEnergy.pdf](#)
- Reach codes, <https://peninsulareachcodes.org/>

6. Does the reach code allow restaurants to use natural gas cooking?

Yes, new restaurants and commercial kitchens may use non-electric cooking appliances.

7. Does the reach code apply to home remodels?

The reach code applies only to substantial additions or remodels in homes where more than 50% of the valuation of the existing structure is being added or remodeled and provided the remodel includes a new heating, cooling, and ventilation (HVAC) system. A kitchen remodel, new roof, or other similar scale projects will not trigger the reach code.

The valuation for the additions/improvements is calculated utilizing the latest Burlingame average construction cost. The construction cost is continually adjusted based on data received from the Burlingame permit review process. Currently, the average construction cost in Burlingame is approximately \$350 a square foot for new construction (but could go as high as \$400 for a high-end or complicated project).

As an example, a 1,717 square foot home is being remodeled with an addition.

- 1,717 is multiplied by \$350 a square foot to equal \$600,950.
- Divide by 2 to equal the 50 percent valuation of \$300,475.
- If the value of the addition is \$300,475 or greater, the project would be considered a major remodel/new construction.

- However, the project would need to include the replacement of the HVAC system for the reach code to apply.

8. I already submitted my project to the Planning Division. Do I need to change it to comply with the reach code?

Projects that have been submitted to the Planning Division or have been granted planning entitlements prior to the date of the ordinance effective date would not be required to comply with the reach code. However, those projects should comply with the reach code pre-wiring provision to accommodate future electric appliance installations.

9. Can Peninsula Clean Energy keep up with the increased electricity demand of reach codes?

Peninsula Clean Energy (PCE) anticipates a modest impact from reach codes on their electricity load. PCE analyzed the outcomes of the countywide reach code efforts and found that by 2025, the amount of electrical load increase is a maximum of 7% above PCE's regular forecast. In addition, costs and technology for generation continue to improve and PCE is not anticipating any issues looking beyond 2025.

10. How will building electrification be impacted by power outages?

Power outages affect both mixed fuel and all-electric buildings similarly because most modern natural gas appliances, other than gas stovetops, rely on electricity to operate. PCE is exploring how to minimize risks from power outages and is collaborating with other Bay Area community choice energy programs on resiliency projects. For example, PCE and its community choice partners issued a joint solicitation for the installation of battery storage for their customers. The program will provide reliable power to about 6,000 homes through the use of backup battery storage during power outages.

11. Will shade trees need to be cut down to meet the solar requirements?

No. The City would allow for exceptions for new construction where solar is infeasible due to existing shading, roof slopes, and other limitations to rooftop solar zones.

12. What exceptions would be allowed for EV infrastructure?

Exceptions are allowed for the following cases:

- EV infrastructure costs exceed \$4,500/parking space;
- Spaces accessible only by an automated mechanical car parking-system;
- Accessory dwelling units and junior accessory dwelling units that do not have parking facilities; and
- Parking facilities that have no available commercial power supply.

13. Do the EV charging spaces have different size specifications?

No. Spaces must comply with Burlingame zoning code space specifications.

14. When would the reach code be in effect?

If adopted, the reach code ordinances will be submitted to the California Energy Commission (CEC) and would become effective upon approval by the CEC, which is estimated to occur in October 2020.

15. How will the reach code be implemented?

The reach code will be enforced as part of the City's building code requirements. Staff will integrate the reach code requirements into the Planning and Building Divisions' existing building checklist, which will inform applicants about the exact specifics of the reach code measures and be folded into the Building Division's review process.