



PUBLIC WORKS DEPARTMENT

CITY HALL
10300 TORRE AVENUE • CUPERTINO, CA 95014-3255
TELEPHONE: (408) 777-3354 • FAX: (408) 777-3333
CUPERTINO.ORG

SUSTAINABILITY COMMISSION STAFF REPORT

Meeting: July 18, 2024

Subject

New Construction Building Reach Code Alternatives

Recommended Action

That the Sustainability Commission take the following actions:

- 1) Receive report on alternative approaches for building decarbonization policy.
- 2) Recommend that the City replace its current electrification reach code for new construction with an alternative regulatory approach.

Reasons for Recommendation

In April 2023, the Ninth Circuit Court of Appeals found the City of Berkeley's natural gas ban ordinance was preempted by the federal Energy Policy and Conservation Act (EPCA). On January 2, 2024, the Ninth Circuit affirmed the April 2023 decision and denied a petition for rehearing en banc. In response to the decision, the Court has determined that cities may not prevent natural gas connections or gas appliances.

Given that ruling and the potential legal challenge to Cupertino Municipal Code Chapter 16.32: Local Sustainability Requirements for Newly Construction Buildings¹ (aka "reach code"), Cupertino has suspended enforcement of Chapter 16.32, and all new construction projects are now able to use natural gas appliances. There are options to continue working toward Cupertino's climate action goals, which include the repeal and replacement of the City's adopted reach code with an alternative approach.

Background

Cupertino's Previous Reach Code Initiative

On December 17, 2019, the City Council voted unanimously to approve an electrification reach code, which became effective January 1, 2020, and was approved again for the 2022 Building Code cycle (Ord. 22-2245, 2022). The reach code applied to new construction and major remodels for residential buildings defined as new construction. with exemptions for commercial cooking, cases where there is not an all-electric compliance pathway for the building under the Energy Code, emergency facilities, and

¹ Text of [CMC 16.32 online](#).

hotels and motels with eighty or more units for commercial clothes drying equipment. The following table summarizes the key differences between the 2022 State Building Code and Cupertino’s reach code:

Appliance	2022 State Code	Cupertino Reach Code
Water Heating	Gas or Electric	Electric Required (All Buildings)
Space Heating	Encourages Electric	Electric Required (All Buildings)
Cooking	Gas or Electric	Electric (Exemptions for Restaurants)
Outdoor kitchens and fireplaces	N/A	Electric Required
Clothing Drying	Gas or Electric	Electric (Exemptions for Hotels)

Ninth Circuit Ruling on Berkeley’s Gas Ban and Electrification Reach Codes

In April of 2023, a three-judge panel of the U.S. Court of Appeals for the Ninth Circuit held that the plain text and structure of the Energy Policy and Conservation Act (EPCA) preempts local ordinances “concerning the energy use” of natural gas appliances, including Berkeley’s ordinance prohibiting natural gas piping into new buildings and thereby preventing those appliances from using natural gas. On January 2, 2024, the U.S. Court of Appeals for the Ninth Circuit denied Berkeley’s request for review by the full Ninth Circuit, and the panel’s decision was reaffirmed.

On May 2, 2024, the City received a letter from the attorneys representing the California Restaurant Association (CRA) offering the opinion that Cupertino’s reach code is functionally indistinguishable from Berkeley’s Ordinance and is therefore not enforceable. Even though Cupertino’s reach code offers an exemption for commercial kitchens, the City Manager, on the advice of the City Attorney, determined that it was in its best interest to suspend enforcement of the electrification requirements of the reach code. The suspension went into effect on May 15, 2024, and the City responded to the CRA with that information, but also stated that the City continues to be concerned about the adverse health and environmental impacts of natural gas in homes and other buildings and intends to develop a new ordinance that advances the City’s adopted policy of pursuing building electrification.

Discussion

The City is researching regulatory approaches that would maximize environmental gains and continue to work toward climate action plan goals while remaining legally defensible. Staff requests the Sustainability Commission’s approval of the plan to bring a workable alternative to the reach code to Cupertino City Council, as opposed to repealing the current code. The option to repeal, as well as two possible regulatory approaches currently under consideration are presented here.

Option 1: Repeal Existing Reach Code, Take No Further Action

The Commission may advise repealing Cupertino's reach code that prohibits gas appliances and taking no further action at this time. Allowing gas appliances would satisfy the ruling of the Berkley decision; however, it would not advance the City's sustainability goal of reducing greenhouse gas emissions and protecting indoor air quality for the health of residents and workers.

Option 2: Energy Performance Standards Approach

An alternative approach to a reach code is the implementation of more stringent energy efficiency criteria, leveraging Title 24, Part 6, of the California Building Standards Code. By setting high performance standards for energy use in new construction and major remodels, buildings are encouraged to adopt all-electric designs to meet the required benchmarks. This approach thus encourages electrification, reducing greenhouse gas emissions and improving overall energy efficiency; however, it does not require electrification.

Energy Performance Standards can apply only to water heaters and space heating and/or space cooling systems, as those are already regulated by the California Energy Commission, but cannot regulate other appliances (e.g. stoves, ovens, and gas fireplaces). This approach mitigates legal risk by allowing the use of natural gas, as long as the overall energy efficiency of the building meets the compliance margin.

This approach requires extensive energy efficiency analysis and will make the building permit review process more complex, requiring additional energy efficiency calculations and reviews. In addition, this approach requires the preparation of a cost effectiveness study by the City and review and approval by the California Energy Commission (CEC).

This approach has been taken by other cities including San Jose, Santa Cruz, Los Altos, Piedmont, Santa Clara, and South San Francisco.

Option 3: Air Quality Approach

Another alternative approach to requiring building electrification is to incorporate a ban on nitrogen oxides (NOx)-emitting equipment inside new buildings. Zero NOx-emitting equipment is defined as any equipment or appliance that emits 0.0 nanograms of nitrogen oxides. Currently, there are no gas appliances that meet this standard.

Emissions from natural gas building appliances account for a similar amount of NOx pollution as passenger vehicles in the Bay Area. As a group, building appliances are one of the largest emitters of NOx and are known to contribute significantly to the formation of ground-level ozone and particulate matter (PM2.5) in buildings. Exposure to NOx has been linked to coughing, wheezing, difficulty breathing, asthma, and increased susceptibility to respiratory infections. Exposure to particulate matter has been linked to asthma and other respiratory conditions, neurological disease, heart attack, stroke, lung cancer, and premature death.

By focusing on air quality improvements, the City could mandate that all new construction and major remodels utilize only NOx-free appliances and heating systems, thereby eliminating a significant source of indoor air pollution. Zero NOx-emitting equipment can apply to all appliances (e.g. space heating, water heating, cooking, clothes drying).

This air quality-based approach has been pursued by cities of Campbell and Los Altos Hills, as well as the Bay Area Air Quality Management District (BAAQMD). BAAQMD's regulations state that only zero-NOx electric water heaters can be sold or installed in Bay Area homes or businesses starting in 2027, and furnaces starting in 2029. Large commercial water heaters will need to be zero-emissions by 2031. BAAQMD estimates that these amendments could prevent up to 85 premature deaths per year, avoid up to \$890 million per year in health impacts, and decrease exposure to PM2.5, especially in communities of color.

A summary of the options going forward, and the pros and cons of each, is summarized below for ease of reference and comparison.

Option	Pros	Cons
1. Repeal parts of the existing reach code and allow natural gas in new buildings and major remodels.	<ul style="list-style-type: none"> • Avoids legal risk 	<ul style="list-style-type: none"> • Allows for continued use of natural gas, contributing to greenhouse gas emissions and poor air quality.
2. Repeal parts of the existing reach code and replace with an alternative Reach Code using Energy Performance Standards.	<ul style="list-style-type: none"> • Uses established processes through Title 24 of the California Building Standards Code. 	<ul style="list-style-type: none"> • Requires cost effectiveness study and California Energy Commission approval. • Requires additional resources and adds complexity during implementation. • Doesn't address stoves, dryers, fireplaces, pool heating, etc. Only addresses space and water heating. • Doesn't prohibit new gas infrastructure.

<p>3. Repeal the existing reach code and adopt an ordinance to regulate air quality by requiring zero NOx-emitting appliances.</p>	<ul style="list-style-type: none"> • Covers any appliance that uses gas and emits NOx. • Simple to enforce and conforms with upcoming BAAQMD regulations. • Does not require a cost effectiveness study or California Energy Commission approval. • Can be an amendment to the City's Title 6, meaning this would not be a reach code. 	<ul style="list-style-type: none"> • Novel approach. • Doesn't prohibit new gas infrastructure.
------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------

Staff Recommendation and Next Steps

Staff recommends moving forward with development of an alternative regulatory approach to building electrification to continue working toward the City's climate action plan goals and for the protection of public health. There is still research to be done about which approach will best achieve those goals, and staff plans to explore the options described above or other options that may be developed that will provide the desired outcomes. The next planned steps are to conduct the necessary consultation and research, develop regulatory language, and bring a draft ordinance to City Council in the fall.

Sustainability Impact

Pursuing a regulatory alternative to the City's current suspended reach code would align with our City's Climate Action Plan (CAP) 2.0 and sustainability initiative to reduce greenhouse gas emissions. The CAP 2.0 does not specifically address a new construction building code as an action item because the reach code was adopted before CAP 2.0 was developed.

Reducing NOx emissions aligns with the CAP's target to decrease local air pollutants that affect respiratory health. Additionally, transitioning to electric appliances helps decrease reliance on fossil fuels, further reducing the city's greenhouse gas emissions. Finding an alternative to the current code that achieves desired outcomes not only contributes to achieving the CAP's sustainability objectives but also sets a standard for progressive environmental practices in the region.

Fiscal Impact

No fiscal impact.

California Environmental Quality Act
Not applicable.

Prepared by: Victoria Morin, Sustainability Specialist
Reviewed by: Ursula Syrova, Environmental Programs and Sustainability Manager
Approved for Submission by: Chad Mosley, Director of Public Works