


The following is CARB's recommended zero-emission building package for inclusion in the CALGreen Code. CARB is working with the California Department of Housing and Community Development (HCD) to pursue zero-emission residential new construction standards in a future CALGreen code cycle.

To: Amy Tong, Secretary, Government Operations Agency  
Kevin Day, Acting Executive Director, Building Standards Commission  
Lourdes M. Castro Ramírez, Secretary, Business, Consumer Services  
and Housing Agency  
Gustavo Velasquez, Director, California Department of Housing and  
Community Development

From: Steven S. Cliff, Ph.D., Executive Officer, California Air Resources Board 

Date: November 3, 2023

Subject: California Air Resources Board's (CARB) Suggested Changes for Zero-Emission  
Building Standards in the California Green Building Standards (CALGreen)  
Code

Thank you for your ongoing collaboration to advance building standards that help California meet its ambitious greenhouse gas (GHG) reduction goals. Building decarbonization must be accelerated in the near term to avoid the worst impacts of climate change. Therefore, the California Air Resources Board (CARB) is recommending mandatory zero-emission residential new construction standards in the 2024 triennial CALGreen code cycle. California's [2022 Scoping Plan](#) relies on zero-emitting new residential buildings beginning in 2026 to meet the State's climate goals. Eliminating GHG emissions from new residential building end-uses would ensure California's new building stock does not contribute to climate change and would provide co-benefits of reducing indoor and outdoor exposure to air pollutants while improving public health. Mandatory zero-emission building standards for new construction are also an essential part of a broader statewide strategy to reduce building emissions and put California on track to achieve carbon neutrality by mid-century. CARB urges the Department of Housing and Community Development (HCD) and the Building Standards Commission (BSC) to include zero-emission building standards for residential new construction as mandatory provisions in CALGreen in the current triennial code cycle.

Zero-emission new construction is one of the most cost-effective near-term building decarbonization strategies. Since the California Public Utilities Commission (CPUC) ended gas infrastructure extension subsidies for new construction earlier this year, the upfront costs of building homes with fossil gas infrastructure in investor-owned utility service territories, which represent nearly all of residential fossil gas customers in California, are now at least three times greater than the costs for building zero-emission homes. When factoring in energy bill costs, zero-emission buildings can also reduce costs over the lifetime of appliances when compared to fossil-fueled buildings. Zero-emission residential homes have also been shown to be technically feasible. In May 2023, New York became the first state to pass a law prohibiting natural gas hookups and other fossil fuels in most new residential homes. Since zero-emission new construction is cheaper to build than homes with gas

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infrastructure, CARB's proposed strategy will help alleviate California's housing affordability crisis. These proposed code changes represent a win-win strategy for all.

There is a wide range of support for this approach from local jurisdictions, state legislators, architects, and environmental groups. Twenty-five local jurisdictions submitted a joint [letter](#) to Governor Newsom on September 7, 2023, urging the development of mandatory zero-emission new construction requirements in the CALGreen code this code cycle. Several state legislators also submitted a [letter](#) requesting the state take bolder action to decarbonize buildings and adopt a zero-emission new construction building standard in CALGreen given the climate crisis. Both the American Institute of Architects and RMI submitted their own petitions to BSC for zero-emission new construction measures in this code cycle. CARB staff stand ready to support HCD in engaging with the various interested parties in this code update.

CARB looks forward to working with HCD and BSC to ensure equitable and cost-effective building decarbonization. Thank you in advance for your consideration of CARB's suggested code language in the mandatory provisions of CALGreen during the 2024 triennial code cycle. By adopting these building standards, your agency will support achievement of California's climate and air quality targets.

If you have any questions or need further information, please feel free to contact Jennifer Gress, Chief, Sustainable Transportation and Communities Division at (916) 764-0747 or [Jennifer.Gress@arb.ca.gov](mailto:Jennifer.Gress@arb.ca.gov).

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**INITIAL EXPRESS TERMS  
FOR PROPOSED BUILDING STANDARDS OF THE  
CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
REGARDING THE CALIFORNIA GREEN BUILDING STANDARDS CODE,  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11  
(HCD 11/23)**

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

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If using assistive technology, please adjust your settings to recognize underline, strikeout and ellipsis.

**LEGEND for EXPRESS TERMS (California only codes - Parts 1, 6, 8, 11, 12)**

- Existing California amendments appear upright
- Amended or new California amendments appear underlined
- Repealed California language appears ~~upright and in strikeout~~
- Ellipsis (...) indicate existing text remains unchanged

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**INITIAL EXPRESS TERMS**

**Item 1: HCD proposes to bring forward amendments in Chapter 2 – Definitions for adoption into the 2025 CALGreen.**

**CHAPTER 2  
DEFINITIONS**

**Section 202 Definitions**

**ZERO-EMISSION BUILDING** – A building that emits no more than 0 grams daily of on-site greenhouse gases (GHG), as defined in Health and Safety Code section 38505(g), to protect public health and safety by reducing exposure to pollutants that impact outdoor air quality and contribute to climate change. This limit does not include HFCs, as those are regulated separately (see California Code of Regulations, title 17, sections 95371-95398; California Health and Safety Code sections 39735-39736; Code of Federal Regulations, title 40, part 84).

**Item 2: Chapter 4 Residential Mandatory Measures,**

**Section 4.502.1 Definition**

**The following terms are defined in Chapter 2.**

**ZERO-EMISSION BUILDING**

**Section 4.508 OUTDOOR AIR QUALITY**

**ZERO-EMISSION BUILDING**

**4.508.1 Zero-Emission Building.** All newly constructed residential buildings, as defined in Title 24, Part 11, Chapter 2, including but not limited to one- and two-family dwellings, townhouses, and multifamily dwellings shall be designed and constructed as Zero-Emission Buildings.

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**INITIAL STATEMENT OF REASONS  
FOR PROPOSED BUILDING STANDARDS OF THE  
CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (HCD)  
REGARDING THE CALIFORNIA GREEN BUILDING STANDARDS CODE  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11  
(HCD 11/23)**

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

**STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE AND BENEFITS**

Government Code Section 11346.2(b)(1) requires a statement of specific purpose of each adoption, amendment, or repeal; the problem the agency intends to address; and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.

The specific purpose for each adoption, amendment, or repeal and the problem the agency intends to address and the rationale for the change is summarized below on a section-by-section basis.

**Background, Recommended Solutions and Statutory Requirements related to Zero-Emission Buildings**

The provisions related to Zero-Emission Buildings proposed by the California Department of Housing and Community Development (HCD), as requested by the California Air Resources Board (CARB), include mandatory green building standards for occupancies within its authority, building upon a framework of measures adopted by HCD in 2008. The intent of the CALGreen Code continues to be: (1) reduce greenhouse gas (GHG) emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; and (3) respond to the directives by the Governor in 2008 to develop a green building code.

HCD's proposed action will support the implementation of Assembly Bill (AB) 32, Senate Bill (SB) 32, and AB 1279 to reduce California's greenhouse gas (GHG) emissions and achieve carbon neutrality. AB 32 set California's first GHG target and called on the state to reduce emissions to 1990 levels by 2020. SB 32 extended the goals of AB 32 and set a 2030 goal of reducing GHG emissions 40 percent from 1990 levels. In 2018, Governor Newsom issued Executive Order B-55-18 establishing a new state goal for California to reach carbon neutrality by 2045 and maintain net negative emissions thereafter; the Legislature codified that goal in AB 1279, with at least 85 percent of actual statewide GHG emissions being reduced below 1990 levels by 2045. These actions keep California on target to achieve the level of reductions scientists say is necessary to meet the Paris Agreement goals to limit global temperature rise and avoid the worst consequences of climate change. Expanding construction of zero-emission buildings is one of several key actions to reduce GHG emissions from buildings (CARB, 2022a). HCD's proposed

amendments to the 2022 CALGreen Code will support California’s climate targets.

Statewide application of the proposed building standards will lead to substantial environmental, equity, climate, outdoor/ambient air, and health benefits through reduction in GHG emissions, criteria pollutants, and toxic air contaminants both indoors and outdoors. These benefits lead to improved public health, result in significant cost savings (avoided costs) associated with new construction of residential buildings, and prevent stranded assets and future maintenance costs associated with fossil gas infrastructure. By reducing costs of new construction, the proposed standards will help alleviate California’s housing affordability crisis, leading to a win-win situation for all.

### **Statutory References**

AB 1473 (Calderon, Statutes of 2008, Chapter 719) directed HCD to develop green building standards. Health and Safety Code Section 18930.5(b) as amended by AB 341 (Statutes of 2013, Chapter 585) requires HCD and other state agencies that propose building standards to allow for input by state agencies with expertise in green building subject areas. CARB has expertise in and obligations with respect to air quality, climate change, and public health (see, e.g., Health and Safety Code sections 38510, 38560, 39003, 39600, 39601, 39666).

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## **SPECIFIC PROPOSED REGULATORY ACTIONS**

### **Item 1: Chapter 2 DEFINITIONS, Section 202**

#### **ZERO-EMISSION BUILDING**

**Rationale:** HCD proposes to adopt the above referenced new definition for residential sections of CALGreen. The new definition clarifies the new term as used within section 4.508.1.

### **Item 2: Chapter 4 Residential Mandatory Measures, Section(s) 4.508 Zero-Emission Building.**

**Rationale:** HCD proposes this section for adoption, which includes a mandatory provision for all newly constructed residential buildings to be designed and constructed as zero-emission buildings. A zero-emission building would be defined as a newly constructed residential building that emits zero grams of on-site GHGs daily. Hydrofluorocarbons would be excluded from this limit, as those are already separately regulated by CARB and the U.S. Environmental Protection Agency.

HCD is moving forward with the CARB-suggested changes and proposes to include a mandatory provision for zero-emission buildings in new residential buildings. Analysis shows that fuel combustion within buildings emits criteria air pollutants, toxic air contaminants, and GHGs, and therefore deteriorates indoor and outdoor air quality and worsens climate change. Zero-emission buildings can reduce indoor and outdoor air pollution, protect public health, and put California on track to achieve carbon neutrality by 2045. While the term “zero-emission buildings” is broadly defined, one likely compliance



pathway involves the construction of all-electric homes as electric appliances are technically feasible and readily available today. The regulatory analysis and literature sources relied upon in this document investigate the impacts of an all-electric compliance pathway.

Unvented combustion of fossil gas can cause high levels of indoor air pollutants such as nitrogen dioxide (NO<sub>2</sub>),<sup>1</sup> carbon monoxide (CO),<sup>2</sup> fine particles (PM<sub>2.5</sub>, particles with diameters smaller than 2.5 micron), ultrafine particles (UFPs, particles with diameters smaller than 0.1 micron), and formaldehyde, which are harmful to human health and the environment. One study that monitored NO<sub>2</sub> within homes found that those with a conventional gas stove may have NO<sub>2</sub> levels 50 percent to 400 percent higher than those with an electric stove (Seals and Krasner, 2020). Another study estimated that 12 million Californians with conventional gas stoves are exposed routinely to NO<sub>2</sub> levels, exceeding the federal and State ambient air quality standards (Logue et al., 2014). Exposures to air pollutants from conventional gas appliances, such as NO<sub>2</sub>, have been linked to both acute and chronic health effects, such as reduced mental development in children and asthma exacerbation (Belanger et al., 2013; Lin et al., 2013; Devon et al., 2018; Morales et al. 2009). A 2013 analysis of multiple studies found that children in a home with a conventional gas stove have increased asthma symptoms, including 42 percent increased risk of current asthma and 24 percent of lifetime asthma (Lin et al., 2013).

Reducing exposure to gas combustion within homes might be more crucial for lower-income households. These households often already have increased exposure levels from local outdoor pollution sources, such as traffic and industry, and they also tend to be exposed to higher levels of indoor air pollution from unvented gas combustion from cooking due to their smaller unit size and higher occupant density (Adamkiewicz et al., 2011). Households in under-resourced communities often also have insufficient ventilation, and residents more often may use gas ovens as heating sources (Seals and Krasner, 2020). A study in new and renovated low-income apartments in California showed that, compared to houses with similar cooking frequency, mean NO<sub>2</sub> levels in these apartments were 165% higher, indicating a higher risk from gas cooking burners in these smaller spaces (Zhao et al., 2021). Three of the sites (apartment complexes) from this research study had buildings that were three stories or less; and the fourth site was a five-story building.

While mechanical ventilation can improve indoor air quality and reduce the impacts of combustion pollutants released indoors, such ventilation only moves these pollutants outdoors; instead, building decarbonization provides a more comprehensive solution. A Healthy, Efficient, New Gas Homes (HENGH) study funded by CEC showed homes built after 2011 that met the mechanical ventilation requirements, when the mechanical ventilation systems were running, had 44 percent lower PM<sub>2.5</sub> and formaldehyde indoors than those constructed in 2002-2005 and tested in the California New Homes Study (CNHS) (Singer et al., 2020). However, ventilation alone is insufficient to address health risks of gas combustion in homes, as it only works when people turn the systems on and

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<sup>1</sup> NO<sub>2</sub> is one of a group of highly reactive gases known as oxides of nitrogen or nitrogen oxides (NO<sub>x</sub>). NO<sub>2</sub> is used as the indicator for the larger group of nitrogen oxides.

<sup>2</sup> Carbon monoxide is a colorless, odorless gas caused by incomplete combustion.

when the systems are functioning well. The HENGH study found ventilation fans were operating in only 26 percent of homes when first visited (Singer et al., 2020). A recent study in California houses and low-income apartments reported that kitchen range hoods were only used for 36% of cooking events in houses and 28 percent in apartments (Zhao et al., 2020). This study in low-income apartments found that, although all 23 studied apartments had mechanical ventilation equipment with specifications that met state requirements, only 8 had on-site performance that operationally met all code requirements; therefore, it was not surprising to find two apartments had weekly NO<sub>2</sub> higher than the California ambient air quality standards for annual average NO<sub>2</sub> of 30 ppb (Zhao et al., 2021). On the other hand, building decarbonization can reduce or eliminate these pollutant exposures without relying on occupant behavior and equipment performance; combined with improved ventilation, it will provide more effective protection and wider coverage for public health.

Combustion of fossil gas in residential buildings emits about 46 tons/day NO<sub>x</sub> to the ambient air, nearly 3 times the emissions from power plants and about one-half of those from light-duty vehicles (CARB, 2022b). Additionally, fossil gas combustion in residential buildings accounts for nearly 23 million tons of carbon dioxide equivalents annually (CARB, 2022d). For the impact on climate change, about 7 percent of California's GHG emissions come from residential buildings (CARB, 2022c). However, a recent study by Lebel et al. found the contribution from conventional gas stoves on GHG emissions may be far larger than estimated in the current emission inventory. While methane<sup>3</sup> emissions from combustion are part of the inventory, methane leaks during steady-state-off (no combustion) period were not included in the inventory. Steady-state-off leakage could account for over 75% of methane emissions from conventional gas stoves (Lebel et al., 2021). The large contribution of conventional gas combustion appliances to indoor and outdoor air pollution and GHG levels demonstrates the need for near-term action on zero-emission buildings.

HCD proposes to include a mandatory provision for zero-emission buildings in new residential buildings. This change will help improve air quality, reduce GHG emissions, protect public health, and achieve cost savings associated with building construction, operation, and health care:

(1). Cost Savings: Several studies estimate that all-electric new construction is lower cost than building mixed-fuel<sup>4</sup> new homes, primarily due to the avoided costs of gas infrastructure, with cost savings in the range of \$2,000 to \$10,000 per unit (Mahone, et al., 2019) (Frontier Energy, 2019) (Billimoria, et al., 2018) (TRC, 2018) (TRC, 2016). When factoring in energy costs, all-electric new home construction also reduces costs over the lifetime of appliances when compared to fossil fueled homes (Billimoria, et al., 2018). The benefit would be greater when considering the health costs associated with exposures to air pollution. A recent study by Zhu et al. predicted that if all residential conventional gas appliances in California (in 2018) were replaced with electric ones instantaneously, the emission benefits would result in 354 fewer premature deaths, 596 fewer cases of acute

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<sup>3</sup> Methane is one of several greenhouse gases that is considered a short-lived climate pollutant (SLCP); it is a powerful climate forcer with a relatively short atmospheric lifetime.

<sup>4</sup> Mixed-fuel refers to a building that typically uses natural gas or propane and electricity.

bronchitis and 304 fewer cases of chronic bronchitis. These health benefits are equivalent to approximately \$3.5 billion in monetized savings over the course of one year (Zhu et al., 2020). This study demonstrated the relative magnitude of health benefits for zero-emission residential buildings.

(2). Climate Benefits: Near-term action to decarbonize buildings is essential to put California on track for climate neutrality by 2045 (CARB, 2022a) (Mahone, et al., 2020).

(3). Outdoor Air Quality: Zero-emission new construction of residential buildings will cut the emissions of GHGs to help meet California’s climate targets as well as criteria air pollutants such as NO<sub>2</sub>, CO, and PM<sub>2.5</sub> released from fuel combustion and vented into the ambient air.

(4). Indoor Air Quality: Construction of new zero-emission residential buildings will eliminate air pollutant emissions from fuel combustion and greatly improve air quality in indoor environments where on average Californians spend over 87 percent of time. As studies have shown, replacing an emissive gas stove with a non-emitting one, such as an electric stove, can decrease NO<sub>2</sub> concentrations by 42 to 51% in a home (Seals and Krasner, 2020). Additionally, benzene emissions from gas burners and ovens are 10 to 25 times higher than from electric alternatives (Kashtan et al., 2023).

## **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS**

Government Code Section 11346.2(b)(3) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

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Kashtan, Y., Nicholson, M., Finnegan, C., Ouyang, Z. Lebel, E., Michanowicz, D., Shonkoff, S., and Jackson, R. (2023) Gas and Propane Combustion from Stoves Emits Benzene and Increases Indoor Air Pollution. *Environmental Science & Technology*, 57 (4), 9653-9663. <https://pubs.acs.org/doi/10.1021/acs.est.2c09289>.

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## STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS

Government Code Section 11346.2(b)(1) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or otherwise

prescriptive standards are required. This proposal for a mandatory zero-emission requirement for newly constructed residential buildings is not a prescriptive standard. It does not mandate specific technologies or equipment but rather establishes a requirement for new residential buildings to emit no GHGs in their normal course of functioning; the building developer or owner must determine how to best ensure that requirement is met (e.g., by electrifying, by using emission capture and control technologies, etc.).

Even if this proposal were a prescriptive standard, it would be necessary and preferable to a performance standard. HCD is statutorily required to adopt by reference model building codes for other parts of the California Building Standards Code which contain prescriptive standards. Although CALGreen is not based on a model code, prescriptive standards provide the following: explicit guidance for certain mandated requirements; consistent application and enforcement of building standards while also establishing clear design parameters; and assurance of compliance with minimum health, safety, and welfare standards for owners, occupants, and guests.

### **CONSIDERATION OF REASONABLE ALTERNATIVES**

Government Code Section 11346.2(b)(4)(A) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. Agencies need not artificially construct alternatives or describe unreasonable alternatives.

HCD's proposals during this triennial code cycle are intended to add mandatory provisions in CALGreen to meet climate targets as set forth by AB 32, SB 32, and AB 1279 to reduce California's GHG emissions to at least 85 percent below 1990 levels and achieve carbon neutrality by 2045. Two alternatives were considered. The first alternative considered was less burdensome and would apply to new low-rise single family home buildings and townhomes (2-4 unit multifamily housing) only. The second alternative considered was to adopt a mandatory requirement for zero-emission buildings for newly constructed residential buildings and alterations to existing residential buildings. Alternative 2 assumes a certain percentage of existing buildings would undergo alterations annually based on remodel rates found in the California Residential Remodeling/Renovation Market Study (Primen, 2001). The first alternative was rejected at this time because it results in notably less GHG emission reductions and thus is insufficient to achieve the State's long-term climate goal to achieve carbon neutrality by mid-century and protect public health. The second alternative was rejected because it is over 40 times more costly to implement.

### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS**

Government Code Section 11346.2(b)(4)(B) requires a description of any reasonable alternatives that have been identified or brought to the attention of the agency that would lessen any adverse impact on small business.

Small businesses would not be impacted by this proposal. No alternatives were identified to lessen the adverse impact on small business.

## **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS**

Government Code Section 11346.2(b)(5)(A) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business.

HCD has determined that this regulatory action would increase costs marginally to California business enterprises representing less than 0.18 percent of the total new construction costs of residential buildings with significant benefits to Californians due to improved air quality and reduced impacts of climate change.

## **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

Government Code Section 11346.3(b)(1) requires agencies to assess the extent this proposal will affect the following:

- A. The creation or elimination of jobs within the State of California.**  
Some jobs may be created for installation, maintenance, and manufacturing of zero-emission appliances. Some jobs for gas pipefitters may be eliminated.
- B. The creation of new businesses or the elimination of existing businesses within the State of California.**  
Some special trade construction businesses may be created. No business is expected to be eliminated.
- C. The expansion of businesses currently doing business within the State of California.**  
The proposal is likely to promote the expansion of businesses currently involved in zero-emission appliance manufacturing, installation, maintenance, use and technology development.
- D. The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.**  
The proposal will increase the sustainability of California's natural resources and promote public health by reducing GHG emissions, criteria pollutants, and toxic air contaminants.

## **ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS**

Government Code Section 11346.2(b)(5)(B)(i) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.

When accounting for the avoided construction costs of installing gas infrastructure, an estimated \$1.20 billion could be saved over a 25-year lifetime of this regulation. Statewide costs are estimated to total \$502 million over a 25-year lifetime of this regulation. Five residential end-uses were analyzed: space heating, water heating, cooking, clothes drying, and pool heating. Staff estimates cumulative GHG emissions reductions of 22.4 million metric tons CO<sub>2</sub> equivalents over a 25-year lifetime of this regulation. Greenhouse gas reductions were estimated as the net impact from four categories: reduced emissions from avoided gas combustion, reduced emissions from avoided behind-the-meter gas leakage,

increased emissions from refrigerants used in zero-emission appliances, and increased upstream emissions for electricity generation.

### **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

Government Code Section 11346.2(b)(6) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues.

Staff have analyzed both this proposal and relevant law and concluded that these regulations do not duplicate or conflict with federal law or regulations.