
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Blakespear, Chair

2025 - 2026 Regular

Bill No: AB 1704
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Version: 4/8/2026
Urgency: No
Consultant: Heather Walters

Hearing Date: 6/17/2026
Fiscal: Yes

SUBJECT: Greenhouse gases: embodied carbon building materials

DIGEST: This bill requires the California Air Resources Board to find that lower embodied carbon building materials have reached cost parity with conventional materials before implementing provisions of previous laws intended to achieve reductions in embodied carbon in building materials.

ANALYSIS:

Existing law:

- 1) Establishes the California Energy Resources Conservation and Development Commission (CEC) within the California Natural Resources Agency (CNRA), as the state's primary energy policy and planning agency. (Public Resources Code (PRC) § 25200 et seq.)
- 2) Establishes the Air Resources Board (CARB) as the air pollution control agency in California and requires CARB, among other things, to control emissions from a wide array of mobile sources and coordinate, encourage, and review the efforts of all levels of government as they affect greenhouse gases (GHG) emissions. (Health and Safety Code (HSC) § 39500 et seq.)
- 3) Requires, under the Buy Clean California Act (BCCA), the Department of General Services (DGS), in consultation with CARB, to establish and publish the maximum acceptable Global Warming Potential (GWP) limit for four eligible materials: structural steel, concrete reinforcing steel, flat glass, and mineral wool board insulation. Further states that when used in public works projects, these eligible materials must have a GWP that does not exceed the limit set by DGS. (Public Contract Code § 3500-3505)
- 4) Requires CARB to develop by July 1, 2023, a comprehensive strategy for the state's cement sector to achieve net-zero GHG emissions no later than December 31, 2045. (HSC § 38561.2)

- 5) Under AB 2446 (Holden, Chapter 352, Statutes of 2022), and AB 43 (Holden, Chapter 316, Statutes of 2023) among other things:
 - a) Authorized CARB to establish an embodied carbon trading system.
 - b) Requires CARB to develop, in consultation with specified stakeholders, a framework for measuring and then reducing the average CI of the materials used in the construction of specified new buildings, towards the interim goal of a 20% net reduction by December 31, 2030 and the goal of a 40% net reduction by December 31, 2035.
 - c) Defines the following terms:
 - i) Feasibility with regards to impacts on project timing, economics, environmental impacts, health, safety, equivalent functions, commercial availability, reliability, and useful life, among other considerations; and
 - ii) “Cost impact” to mean an increase of 5% or more in the operational or overall material cost of a project because of the use of lower carbon material.
 - d) Stipulates that if the entity undertaking the construction of a project finds that it is unable to achieve the applicable target due to unfeasibility or cost impacts, as defined, (and there are no alternative materials or methods that are feasible and without cost impact that would allow the project to achieve the target) then the project shall be deemed to comply with the applicable target. Directs CARB to form and maintain a technical advisory committee composed of representatives of building product manufacturers, builders, and design professionals.

This bill:

- 1) Requires CARB to delay implementation of specified elements of AB 2446/AB 43 until CARB determines that building materials with lower embodied carbon have reached cost parity with conventional building materials.
- 2) Stipulates that if CARB does not make the above finding, they must delay or suspend implementation for no less than five years, after which the same determination will still be required before implementation proceeds.

Background

- 1) *Embodied carbon*. The term “embodied carbon” refers to the GHG emissions arising from the manufacturing, transportation, installation, maintenance, and disposal of building materials. The majority of a building’s total embodied carbon is released upfront at the beginning of a building’s life. Unlike with “operational carbon” (the emissions associated with heating, cooling, and

otherwise operating a building), there is no chance to decrease embodied carbon with updates in efficiency after the building is constructed.

In order to determine the emissions associated with building materials, the entire life cycle of those products must be considered. Life cycle analysis (LCA) is a method of quantifying the environmental impacts associated with a given product. In LCA, researchers create an inventory of resources used and pollutants generated in product production and use. LCAs can vary depending on the assumptions made and the extent of the life cycle considered. Notably, for LCAs of building materials, assessments are usually either cradle-to-gate or cradle-to-grave. Cradle-to-gate LCAs consider the emissions associated from extraction up until arrival at the project site, while cradle-to-grave continue further to consider any emissions associated with the product's use within the project and building and, ultimately, its end of life.

The CEC is required (by SB 1389, Bowen and Sher, Chapter 568, Statutes of 2002) to regularly produce an Integrated Energy Policy Report (IEPR) to assess and forecast all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices.

The IEPR from 2021, within its volume on building decarbonization, had a section on embodied carbon, and a subsection on embodied carbon in building materials. It reported that in new building projects, on average, up to 50 percent of total GHG emissions, considered over a 30-year building life, are from the embodied carbon associated with the initial construction, and nearly 70 percent of that is from just six materials — concrete and steel (by far the most significant), flat glass, insulation, masonry, and wood products. There are, however, significant variations in estimations of the contribution of embodied carbon to the lifetime emissions from a building that warrant further analysis and contextualization for California.

Ultimately, the IEPR concluded that, "...there is enormous potential for innovation and use of low-carbon products in the built environment. Further research and development are needed, as well as collaboration with other jurisdictions, to develop best practices for reducing embodied carbon in buildings. Also, city planners, designers, and architects could benefit from greater clarity around low-carbon label claims and material-neutral embodied carbon standards."

- 2) *Buy Clean California Act*. A first in the nation and widely emulated, the Buy Clean California Act (BCCA) is an innovative program establishing limits on embodied carbon emissions and construction materials procured by the state

for public construction projects. The law requires the California Department of General Services (DGS) to publish, by January 1, 2022, acceptable maximum Global Warming Potential (GWP) limits for the following eligible materials: structural steel, concrete reinforcing steel (rebar), flat glass, and mineral wool board insulation. In order to determine and compare the GWPs of different products and materials, DGS relies on Environmental Product Declarations (EPDs).

An EPD tells the life cycle story of a product in a single, comprehensive report. The EPD provides information about a product's impact upon the environment, such as global warming potential, smog creation, ozone depletion and water pollution. With an EPD, manufacturers report comparable, objective, and third-party verified data that helps purchasers better understand a product's sustainable qualities and environmental repercussions so they can make more informed product selections. EPDs are typically cradle-to-gate analyses, which makes sense since they are used partly to determine which products to acquire for a given project.

- 3) *Reducing embodied carbon with the Inflation Reduction Act.* The Inflation Reduction Act (IRA) invests \$350 million for grants, technical assistance and tools, including carbon labeling, to help manufacturers, institutional buyers, real estate developers, builders, and others measure, report, and substantially lower the levels of embodied carbon and other GHG emissions associated with all relevant stages of production, use and disposal of construction materials and products including steel, concrete, asphalt and glass. The IRA was significantly curtailed by the Trump administration, so much—if not all—of the \$350 million intended for investments has not materialized.

Comments

- 1) *Purpose of Bill.* According to the author, “AB 1704 balances housing affordability while maintaining the sustainability standards of California. With the ongoing housing crisis, California must act strategically when implementing policies that could increase housing costs. My district has a 23% poverty rate, and nearly 90% of the residents are renters. Most are already rent burdened, paying more than 30% of their income for rent. AB 1704 will help us avoid any unintended consequences of enforcing embodied carbon standards on our most vulnerable communities. California can't just say ‘affordability,’ we have to execute it on every front.”
- 2) *Weighing priorities.* The existing laws regarding California's embodied carbon targets include an important off-ramp for compliance in the program.

Specifically, “significant cost impacts” are defined as an increase of 5% or more in the operational or material costs attributable to lower-carbon materials, and the law stipulates that if the cost would exceed that 5% limit, the project will be deemed to comply with the law.

The real-world effect of these cost impact provisions can be viewed in multiple ways. On one hand, it means compliance with AB 2446/AB 43 cannot—no matter the cost of lower-carbon materials—increase the cost of a project by more than 5%. On the other hand, if lower-carbon materials are consistently more expensive, every building project in California could cost 5% more across the board. This is not a question of what is the “correct” amount of costs to be added to meet our carbon reduction goals; it is a judgement call to be made by policymakers and is likely to be shaped by the current political reality. Although an up-to-5% increase in costs seemed worth it for the carbon reductions in 2022, that may no longer be the case. California’s international leadership in this space is noteworthy and means the decision to shelve the program should not be taken lightly. Nevertheless, if the Legislature no longer feels these goals and protections are desirable, it is the Legislature’s prerogative to change them.

However, the above scenarios all assume lower-carbon building materials are significantly more expensive. Recent and ongoing research suggests that, in some circumstances, lower-carbon building materials may in fact be equivalent or less expensive. Particularly given the fact that more detailed information is expected to be available from work currently underway at the UC Berkeley Center for the Built Environment, it may be hasty and shortsighted to have CARB make strict determinations just on the basis of “cost parity”.

Given the extent to which material costs are more complicated than simply determining “cost parity”, the committee may wish to amend AB 1704 to have CARB instead make their determination on the basis of whether using lower embodied carbon materials would be cost effective during the first two-year period of their use compared to using conventional building materials.

- 3) *Brick by brick.* As written today, AB 1704 applies equally across the entirety of materials covered by AB 2446/AB 43. As noted above, new information coming to light suggests that for some product categories, cost parity may have already been achieved. Although care should be taken so as to not overcomplicate the regulatory process, there may be benefits to providing CARB greater latitude in determining which (if any) categories should be delayed. Given the complexity of the program and the evolving market, such tweaks may be better addressed through the regulatory process rather than

enshrined in statute.

- 4) *Committee amendments. Committee staff recommends the bolded amendments in comment 2 above.*

Related/Prior Legislation

AB 2446 (Holden, Chapter 352, Statutes of 2022) required CARB to develop a framework for measuring and reducing carbon emissions associated with new building construction.

AB 43 (Holden, Chapter 316, Statutes of 2023) made a number of changes to the provisions created by AB 2446, and expanded the framework created therein by including authority for CARB to establish an Embodied Carbon Trading System.

SOURCE: Author

SUPPORT:

American Chemistry Council
American Concrete Pipe Association of California (ACPA-CA)
American Wood Council
Asphalt Roofing Manufacturers Association
Associated General Contractors, California Chapters
Association of California Water Agencies (ACWA)
California Building Industry Association (CBIA)
California Chamber of Commerce
California Construction & Industrial Materials Association
California Council for Affordable Housing
California Legislative Conference of Plumbing, Heating & Piping Industry
California Manufacturers & Technology Association (CMTA)
California Manufacturers and Technology Association
California Yimby
Gypsum Association
Housing Action Coalition
National Electrical Contractors Association (NECA)
North American Insulation Manufacturers Association
Northern California Allied Trades
Pci West
Polyisocyanurate Insulation Manufacturers Association
Resilient Floor Covering Institute (RFCI)

Southern California Glass Management Association (SCGMA)
Spray Foam Coalition
United Contractors (UCON)
Wall and Ceiling Alliance
Western Painting and Coating Contractors Association
Western Wood Preservers Institute

OPPOSITION:

American Council for an Energy-efficient Economy
Building Transparency
Center for the Built Environment (CBE), UC Berkley
E2
Fortera
Industrious Labs
Leilac U.s., INC.
Natural Resources Defense Council (NRDC)
Project 2030
Public Citizen
Sierra Club
Structural Engineers Association of California
U.s. Green Building Council
Usgbc California

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