



Date: September 24, 2021

To: Mia Marvelli, Executive Director
California Building Standards Commission
2525 Natomas Park Drive, Suite 130 Sacramento, CA 95833

RE: CALGreen 45-day public comment

Dear Ms. Marvelli,

On behalf of our member agencies, I would like to thank the BSC for the opportunity to provide comments on the proposed changes to the California Green Building Standards Code (CALGreen). StopWaste is a Joint Powers Agency (JPA) of local governments in Alameda County dedicated to helping residents, businesses, schools, and local governments prevent waste, increase energy and water efficiency, and transition energy use in buildings away from fossil fuels to clean electricity. StopWaste is governed by three Boards representing 14 cities, two sanitary districts, and the County of Alameda. We work closely with the local governments in our region to develop and adopt code amendments that push the building industry to improve its environmental performance. We have supported the green building movement through tools, funding, and policy for over two decades.

With this letter, we are providing our comments on the proposed 2022 CALGreen code changes. In addition, we are providing a preview of suggestions we plan to propose for future revisions to CALGreen for the 2023 interim and 2025 code cycles.

Comments on the proposed 2022 CALGreen code changes

- A. Electric Vehicles (EVs) for Multifamily: We are supportive of the proposed changes and would encourage even higher amounts of EV charging capability for multifamily buildings. Several of our member jurisdictions currently have requirements that match the proposed changes and are looking to increase the EV charging requirements in order to meet demand. We encourage the state to do the same and increase charging to the maximum amount possible.
 - I. Regarding section 5.106.5.3.2: We support public comments expressed at the CALGreen Code Advisory Committee meeting to require signage intended for residents that indicate where EV capable wiring and infrastructure are present in multifamily housing. This is an important visual indicator for residents and visitors of the building that EV charging is possible, even if EV Supply Equipment (EVSE) are not installed at time of construction. Providing signage is a low-cost, visible, and effective strategy that helps inform the public of EV infrastructure and furthers the statewide transition to EVs.
- B. Thermal Insulation (section 5.504.4.7 and 5.504.4.7.1): We support this code change to bring the Tier measure down into the mandatory code. We request that, as applicable, low-emitting insulation be required for all buildings covered by the code, including residential dwellings and multifamily buildings. As building codes require tighter building envelopes for energy savings and mechanical ventilation, the need for low-emitting materials is greatly increased. We urge the Commission to add low-emitting thermal insulation into CALGreen as a mandatory measure in section 4.504.

StopWaste is the Alameda County Waste Management Authority, the Alameda County Source Reduction and Recycling Board, and the Energy Council operating as one public agency.

Member Agencies:

- Alameda County
- Alameda
- Albany
- Berkeley
- Dublin
- Emeryville
- Fremont
- Hayward
- Livermore
- Newark
- Oakland
- Piedmont
- Pleasanton
- San Leandro
- Union City
- Castro Valley Sanitary District
- Oro Loma Sanitary District

- C. Acoustical Ceilings and Wall Panels (section 5.504.4.8 and 5.504.4.8.1): We support this code change and request that, as applicable, low-emitting acoustical ceiling and wall panels be required for all buildings covered by the code, including residential dwellings and multifamily buildings. For the same reasons as item B above (thermal insulation), we recommend making low-emitting acoustical ceilings and wall panels mandatory in CALGreen section 4.504 for all occupancies.

Suggestions for future revisions to CALGreen for the 2023 interim and 2025 code cycles

We understand that the comments received during the 45-day public comment period are limited to the code updates being proposed. However, we wish to express our support for a suite of code updates we would like to see in the next code update cycle. We intend to work with BSC, HCD, CEC, and other state agencies and advocates in bringing about significant code changes in the next cycle.

While our Agency and the jurisdictions we represent are generally supportive of the proposed 2022 CALGreen code revisions, our member agencies would like to see specific updates in the upcoming code cycle. Most of our jurisdictions have adopted a Climate Emergency declaration and all have adopted Climate Action Plans that rely on strong building code measures. We believe that for CALGreen, having been in existence as a mandatory code for over a decade, the time has come to update the building code to more aggressively address climate change mitigation and resilience.

The conditions that brought about the California Green Building Standards Code (including legislation such as AB 1058 in 2007-8) have only become more serious in recent years. In AB 1058, the state legislature stated: "...Transforming the building environment to be more energy efficient and climate friendly is a vital tool in the fight against global warming."

Since CALGreen was first made mandatory in 2010, drought, wildfire, heat events, mudslides, flooding and more have increased in frequency and intensity due in part to global climate change. While code updates in CALGreen have addressed some issues such as water conservation and energy efficiency, the building code needs to be strengthened to help protect occupants and residents from health, life, and safety consequences of a rapidly changing climate.

The following are a list of priorities we would like to see considered in the next building code update cycle:

1. Address "embodied carbon" of building materials: As the lifecycle climate emissions (aka "embodied carbon") of building materials are better understood, the building sector can play a role in selecting low-carbon products and materials. Many of the high-impact materials and low-carbon alternatives happen to be made in California and the West Coast. We suggest CALGreen consider updates that look at the lifecycle impacts of building materials through two mechanisms:
 - a. Whole Building LCA (CALGreen section A5.409): Bring the voluntary Tier 1 section A5.409 measure into the mandatory code for larger buildings. Look at LEED and the International Green Construction Code (IgCC) for ways to simplify the requirements for broader code application.
 - b. Low-Carbon Materials: Target building materials that have high global warming potential during their manufacturing and installation.
 - i. [Buy Clean California](#): We recommend the residential and nonresidential building code be amended to support the state's Buy Clean California legislation by adding a measure to require the selection of products and materials that have reduced carbon impacts via published Environmental Product Declarations (EPDs). By January 1, 2022, the Department of General Services is expected to publish the maximum acceptable Global Warming Potential (GWP) for eligible materials under

- Buy Clean California, making application of these materials in the building code a possibility for the next code cycle.
- ii. Low-Carbon Concrete: For example, bring section A5.405.5 Cement and Concrete into the mandatory code for both residential and nonresidential. The [Marin County Low Carbon Concrete code](#) also provides an alternative way to address material-specific embodied carbon. Other national and international standards including LEED and the IgCC have additional ways to address embodied carbon of materials that could be helpful for reference.
 - c. Carbon-storing materials: As new commercial products reach the market, adopt and expand the IRC appendices related to residential use of straw ([Appendix R](#) and [Appendix S](#)) to commercial code and additional carbon-storing building materials.
2. Refrigerants: The Bay Area Air Quality Management District has published guidelines for "lowest available GWP refrigerants." We recommend amending sections 4.508 and 5.508 to include low GWP refrigerants for covered equipment.
 3. Recycling/Reuse: While CALGreen has been updated to increase the diversion percentage of all project types from 50% originally to 65% currently (in sections 4.408 and 5.408), there are ways to strengthen and improve the waste prevention and diversion aspects of CALGreen:
 - a. Require more accurate reporting of waste diversion in the waste management plan by making sections A4.408 and A5.408 mandatory.
 - b. Emphasize building material reuse and deconstruction rather than demolition. Bring concepts that target waste prevention such as efficient framing (section A4.404) into the mandatory code.
 - c. Consider adding design requirements that allow for universal design, durability, and planning for adaptive reuse of buildings to increase the longevity of newly constructed buildings.
 4. Resilience: Our communities are facing compounding factors in climate change and our buildings are at the intersection. We need efficient, zero-energy buildings that operate without emitting greenhouse gasses. At the same time, our buildings must be built to withstand future climatic scenarios and avoid costly retrofits in the near future.
 - a. We recommend the code include resilience strategies such as measures that support passive cooling, increased filtration of outside air, increased ventilation for indoor spaces, fire-safe building exteriors, energy storage for power disruptions, and planning for sea level rise.
 5. Electrification: building and transportation electrification policies are a priority in many of our jurisdictions, including Oakland, Hayward and Fremont. Our recommendation for CALGreen includes two types of electrification strategies: transportation infrastructure (EVs) and electrifying building energy systems:
 - a. Electric Vehicles: We support bold updates to the mandatory minimum EV charging space requirements in all parts of the building code (residential, multifamily and nonresidential). To meet the state's goals, we believe at least 30% of all new parking spaces should be EV capable. Furthermore, we encourage the code to extend EV requirements to existing parking and building retrofits.
 - b. Electrification of Building Energy Systems & Appliances: Building electrification helps improve indoor air quality, reduce construction costs, and is the least polluting way to run our buildings. A majority of residents and businesses in California now have access to clean energy sources through Community Choice Energy districts, investor-owned utility green power options, and municipal utilities. To meet city, county and state Climate Action Plans and long-term climate goals, we must electrify homes and businesses and power them with clean renewable energy. While the energy efficiency, appliances and other aspects of electrification may fall within other parts of the building code, we recommend adding measures in CALGreen that support the full benefits of building electrification.

The recommendations above address the climate crisis facing California and the world through cost-effective and tested building code solutions. Importantly, these suggestions provide an opportunity to enhance climate equity for all Californians, who will benefit from measures in code that promote resilience, reduce climate emissions of building operations, address the embodied carbon of building materials, electrify the transportation sector, and improve indoor air quality.

StopWaste and our Alameda County member agencies represent 1.7 million residents and encompass a diversity of city scales, construction types, and communities. We are working every day to bring about equitable solutions to the climate challenge, and we look forward to partnering with the state agencies and the Building Standards Commission to bring about positive changes to the CALGreen code.

Sincerely,

A handwritten signature in black ink, reading "Timothy Burroughs". The signature is written in a cursive, flowing style.

Timothy Burroughs, Executive Director