

To: Dana Papke Waters

California Air Resources Board

December 13th 2021 Workshop on Building Decarbonization

From: American Institute of Architects California (AIA CA)

The 11,000 architect and design professional members of AIACA design California's new and existing buildings. We agree with the framework CARB outlined for decarbonization progress which includes

Energy Conservation, Electrification, Renewables and Equity and Inclusion

Importance of Embodied Carbon

To move forward, it is important to include in our code framework embodied carbon considerations as they are critical to achieve decarbonization objectives within a time frame consistent with the urgency for climate action that has been well documented. (<https://www.weforum.org/agenda/2021/08/ipcc-report-on-climate-change/>).

Studies show that even the most highly efficient new buildings can take from 10 to 80 years to recoup in operational savings the embodied carbon emissions associated with their construction ([https://living-future.org/wp-content/uploads/2016/11/The Greenest Building.pdf](https://living-future.org/wp-content/uploads/2016/11/The_Greenest_Building.pdf))

AIA CA in our own discussions about how to get Carbon integrated into the code have tentatively identified a few key considerations summarized as follows:

1. ***Start with straightforward big buildings.*** The topic is both vast and complex, and the timeline, budgets and professional bandwidth to consider embodied carbon is more likely to be found when new buildings above some area threshold are being designed. The numerical threshold could be 50,000 sq. ft as one example, open to discussion. Large new buildings of fairly simple occupancy types would likely be the easiest place to get started, and they would have potential of significant impact.
2. ***Focus on a small number of key materials.*** This could range from just concrete; or include a few more high carbon intensity and high use materials for which there is a large infrastructure in place in terms of production, analysis, and sales volume.
3. ***Use simple non-proprietary performance-based metrics.*** An example of this might be the 20% carbon reduction basis of existing low carbon concrete. The tools to show compliance should be openly available, and accommodate flexibility so that best practices can evolve and the marketplace can function efficiently to match supply with increasing demand.

We support and encourage launching the topic of embodied carbon for inclusion in CalGreen in the upcoming midcycle code update process, and plan to continue working with key stakeholder agencies including for example CBSC, CEC, DSA, HCD and CARB on this topic in the upcoming months. While the challenge of taking this complex and multidimensional topic and putting it into useable and actionable code framework is daunting, we believe CalGreen is a logical place for these kinds of measures, and note

that there are precedents that can help guide progress forward in the near term. Action in the next code cycle is imperative.

CalGreen Leadership

We also recognize that there is a need to have broader conversations about the potential for reimagining leadership for CalGreen itself. Since it's foundation in 2008 as a groundbreaking and forward-looking new approach to integrating environmental considerations into our building code framework, CalGreen has not been able to keep up with the fast pace of change and urgent timeline for decarbonization and climate action that face us today. We believe it is time to launch conversations on how the leadership of CalGreen might be adjusted so that it can once again serve as a forward-looking beacon and roadmap for positive change. The innovative CalGreen tier system can become a means of 'predicting the future', if it can be more directly aligned with our aspirations. The fact that 50+ California jurisdictions that have not found the current framework helpful for them to meet their reach code needs is stark evidence that CalGreen is not serving us as well as it should.

Support for Retrofit and Repurpose Existing Buildings for Housing and other pressing needs

Finally, AIA CA believes there is a need for greater support in our California building code for retrofit and repurpose of our vast existing building stock. In particular we see a tremendous unrealized potential in urban areas for repurposed obsolete commercial infrastructure as new innovative urban housing; this was recently well documented by two studies from the Turner Center for Housing Innovation.

<https://turnercenter.berkeley.edu/blog/two-new-papers-explore-the-potential-of-commercial-to-residential-conversions/>

Retrofit and repurpose of existing buildings can be win win win: addressing California urgent need for more housing, while at the same time addressing climate action, urban revitalization, equity and inclusion, and embodied carbon reduction. Design professionals are hampered in pursuing these opportunities by the large gap between the California Existing Building Code and the innovations that already exist in the International Existing Building Code. We encourage the support of CARB and other state agency stakeholders as we move forward with the AIA CA petition launched in the last code cycle to amend the CEBC to mirror the full compliance path framework of the IEBC.

Respectfully Submitted

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