



California Air Resources Board – Embodied Carbon
1001 I Street
Sacramento, CA 95814

To Whom It May Concern,

On behalf of the Cellulose Insulation Manufacturers Association (CIMA), the trade association representing the North American cellulose insulation industry, we would like to submit the following comments on the information presented at the California Air Resources Board's (CARB) "Building Embodied Carbon Reporting Technical Meeting" held on October 30, 2025.

Overview

Cellulose insulation is one of the lowest embodied carbon building materials commercially available. It is also the only form of widely-available insulation that stores carbon in the product itself.¹ Of our 16 members, 12 of them manufacture all or most of their insulation at 28 plants in the United States and source the majority of their raw materials from the United States; the other members and manufacturing facilities are located in Canada. Our insulation is composed of up to 85% recycled paper and cardboard products, higher than almost any other commonly used building material available on the market.

Insulation plays a critical role in reducing demand of the electrical grid. The movement for electrification of homes has skyrocketed through products like heat pumps, creating the demand for more production of transformers and grid components. As noted in Energy Conservation and Management, poorly insulated buildings with heat pumps can double power peak demand.² While a number of innovations are improving the performance of heat pumps, that strain on the electricity grid would be lowered with adequate weatherization products like insulation and other materials which play a role in a building's thermal envelope.^{3,4} Lastly, fewer fossil fuels are consumed in well-insulated buildings.

CIMA commends CARB for focusing on embodied carbon requirements of building materials manufactured and imported into the state. Insulation has the second-highest net material carbon emissions (after concrete).⁵ While all insulation is critical to reducing operating emissions associated with buildings, CARB should be aware of the benefits of carbon-storing insulation like cellulose. Our industry is ready to meet the requirements for the 2026 Reporting Year.

EPD History

CIMA's first EPD for conventional loose-fill cellulose insulation was published in December 2019 and featured 12 participating manufacturers.⁶ Our second EPD will be published by mid-December 2025

¹ Builders for Climate Action - Low-Rise Buildings as a Climate Change Solution. <https://www.buildersforclimateaction.org/>

² Decarbonizing heat with PV-coupled heat pumps supported by electricity and heat storage: Impacts and trade-offs for prosumers and the grid <https://www.sciencedirect.com/science/article/pii/S0196890421003964>

³ <https://www.energy.gov/energysaver/heat-pump-systems>

⁴ <https://www.energy.gov/energysaver/insulation>

⁵ Builders for Climate Action - City of Vancouver Material Emissions Benchmark Study for Part 9 Homes. <https://www.buildersforclimateaction.org/>

⁶ CIMA EPD. <https://cellulose.org/wp-content/uploads/2022/09/CIMA-Environmental-Product-Declaration-Conventional-Loose-Fill-Cellulose-Insulation.pdf>

following the recent update to the Product Category Rules (PCR) for Building Thermal Envelope Insulation that was published in early November 2025. These new EPDs – one for loose-fill cellulose and one for dense-pack cellulose – will include data from all of our industry's manufacturers and plants. Furthermore, 10 manufacturers have requested product-specific EPDs that conform to the new PCR guidelines.

EPD Concerns

The material presented on October 30 raised a few red flags for us as it pertains to the EPD requirements to sell cellulose insulation in California.

1. **"EPD must be facility- and product-specific."** Our new industry-average EPD will include every manufacturer of cellulose insulation, including those who sell into the state of California. Those with direct ties to California have already requested product-specific EPDs for their plant(s), however this rule would essentially prohibit sales into California from current manufacturers who partook in the industry-average EPD but have not requested a product-specific EPD. This is an unnecessary burden imposed by the state of California that interferes with interstate commerce. CIMA encourages CARB to recognize industry-average EPDs with equal regard as product-specific EPDs.
2. **"Primary data must be <2 years old."** The insulation PCR requires EPDs to be revised when the impacts from primary data change by more than 10 percent. Additionally, EPDs are valid for only 5 years. At that time, manufacturers provide recent data and report any changes to the manufacturing process which may impact embodied carbon GWP figures. These existing guardrails ensure that EPDs accurately reflect current environmental impacts without creating undue burden on the parties involved in EPD development. CIMA echoes our insulation industry counterparts in suggesting that CARB eliminate the requirement that all primary data be no more than 2 years old at the time an EPD is submitted and replaced with an attestation requirement that primary data has not changed by more than 10 percent.

CIMA is in favor of aligning reporting and data quality requirements for EPDs with recognized PCR and industry standards/practices. Should you have any questions about these comments, please contact me at rachel@cellulose.org or call (202) 953-4500.

Thank you for your time and consideration.

Sincerely,



Rachel Stern, Executive Director