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April 14, 2025

Liane M. Randolph
Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: CMTA Comments to the March 13, 2025, Workshop on Building Embodied Carbon

Dear Chair Randolph:

The California Manufacturers & Technology Association (CMTA) offers the following comments and insights in response to the information shared and the questions raised during the March 13 workshop on AB 2446, which was centered on baseline concepts and reporting requirements for building embodied carbon. CMTA is a trade association dedicated to supporting and enhancing a strong business climate for California's 30,000 manufacturing, processing, and technology-based companies.

1. Staff are requesting feedback on the definitions staff have presented for “building material,” “building sector,” and “baseline.”

No comment.

2. Staff are requesting feedback on the LCA scope and system boundary for the baseline. Are there additional considerations?

If a top-down method using Life Cycle Assessment (LCA) and / or Environmental Product Declaration (EPD) data is leveraged to develop the baseline, manufacturers and industry associations should only be required to provide cradle-to-gate (A1 – A3) data.

3. What is an acceptable cutoff year for historic data that should be used to estimate the 2026 baseline?

If a top-down method using Life Cycle Assessment (LCA) and / or Environmental Product Declaration (EPD) data is leveraged to develop the baseline, manufacturers and industry associations should be able to provide their readily available LCA / EPD data.

Product-specific EPDs and / or industry-wide EPDs should both be accepted, depending on availability by sector. Furthermore, as EPDs are typically valid for 5 years and often use data that's a year or two old, the baseline should be developed in a way that allows for data from as far back as 2019 to be used. Manufacturers and industry associations should not be required to generate new data to support the development of a baseline.

4. Are there other models or platforms that CARB should consider using for estimating a top-down baseline other than USEEIO?

If a top-down method using USEEIO data is leveraged to develop the baseline, it is unclear 1) how this data correlates to Life Cycle Assessment (LCA) and / or Environmental Product Declaration (EPD) data; 2) whether manufacturers would be able to review the baseline data prior to finalization to ensure it's realistic; and 3) whether manufacturers would be required to submit facility-specific EPD data or the alternative compliance option of providing facility level production data to comply with the WBLCA requirements.

5. How should the agency approach data collection for manufacturers and downstream supply chain entities (e.g., resale, retail, wholesale) to enable chain-of-custody tracking?

Building projects source materials from a large number of vendors / suppliers, sometimes leveraging multiple suppliers for the same product (e.g., base float glass). These downstream suppliers do not have control over the chain-of-custody tracking to the end user (e.g., building developer or delegated entity) and should not be considered responsible.

6. What annual revenue thresholds should be considered for exemption?

If CARB moves forward with implementing WBLCA requirements, all manufacturers/vendors should be treated equally under the regulation to ensure there's a level playing field. Small businesses should not be exempted from the reporting requirements.

7. Staff is seeking feedback on the concepts presented for the data reporting regulations. How might any concerns be addressed?

We strongly advise that the requirement to provide data that is less than 2-years old on a quarterly basis – either via facility-specific Environmental Product Declarations (EPDs) or the alternative compliance option of providing facility level production data – is revised. CARB should allow manufacturers to submit regional data that is less than 6 years old as long as it complies with the relevant standards.

Because of the unique aspects of the flat glass industry, we strongly advise that the requirement for facility-specific EPDs be removed for flat glass. The flat glass industry in the U.S. consists of a small number of large manufacturers who then supply the

diverse chain of fabricators that make processed glass and glazing assemblies. Each flat glass manufacturer has several float plant facilities, at which different products (regular clear, low-iron clear, tints, coated, specialty) are made. Some plants may manufacture many products; others may be dedicated to one. Because of the small number of companies and nature of float plants, revealing facility-specific data (as opposed to overall manufacturer data) will reveal proprietary information that can be used by competitors, such information about specific products is normally considered confidential business information and protected from such disclosure. This raises very real proprietary, anticompetitive, and antitrust concerns. Furthermore, regional EPDs can cost anywhere from \$20k to \$75k, depending on the size and capacity of the member company. The cost will increase significantly if CARB requires manufacturers to provide facility-specific EPDs, submitted on a quarterly basis.

Even if these competitive, legal and cost concerns can be overcome, there will still lead to practical concerns and confusion in the building design and procurement process. Design teams are not aware of the nuances of the complex glazing industry supply chain and will understandably be confused and frustrated in specifying products. They will not understand why they can use product A because it is made here, but not product B because it is made at a facility that does not make that coating or substrate – even if they are both from the same company.

Furthermore, providing facility-specific EPDs or the alternative compliance option of providing facility level production data is currently an impossible task considering the infinite combinations of annealed glass, heat strengthened glass, tempered glass, safety tempered glass, laminated glass with different thicknesses and interlayers, coated glass with hundreds of different coating products, fire-rated glazing, ballistic / blast resistant / security glass with different configurations, bird-friendly glass, acoustic glass, patterned / fritted / etched glass, decorative glass, dynamic glass, vacuum insulating glass, and IGU configurations with different numbers of panes, glass types, glass thicknesses, spacers, sealants, and desiccants. See “NGA Glass Technical Paper Describing Architectural Glass” to see some of the complexities of processed glass.

EPDs for this infinite range of processed glass and glazing assemblies do not exist currently. Moreover, the Flat Glass Product Category Rule (PCR) is set to expire on September 30, 2025, and the Processed Glass PCR has technically expired. The program administrator has granted a temporary extension for the Processed Glass PCR, but there is no guarantee when the PCR will be reactivated or with what changes. This could severely limit the ability of new flat glass and processed glass products to get EPDs.

Please see [NGA's FAQ](#) on the concerns on facility specific data, which was previously published in response to CARB's AB 262.

8. How long do manufacturers expect it to take to meet any or all proposed EPD data submittal requirements discussed today?

Environmental Product Declarations (EPDs) can take upwards of 12 – 16 months for manufacturers to publish, depending on availability of internal resources, data, complexity of the process, consultants and verifiers. Many manufacturers have not published EPDs, and of those who have published EPDs, many have not published facility-specific EPDs due to supply chain complexities and concerns with revealing proprietary information, creating real competitive and antitrust concerns. Furthermore, with the amount of time it takes to create, update and verify EPDs, it is an unrealistic expectation to have manufacturers provide data that is less than 2-years old, updated on a quarterly basis. We strongly advise against the requirement for facility-specific EPDs. If CARB moves forward with requiring facility-specific EPDs, manufacturers will need at least three or more years from the time the requirements are published to comply with the requirements.

For additional information, see the response to Question 7.

9. Is an alternative-reporting pathway to EPD data submission desirable?

The alternative reporting pathway to EPD data submission is only desirable if the following requirements are removed:

- A facility-level material and energy balance that clearly delineates commodity inputs, outputs, and quantities.
- Product-specific revenue totals.

10. Do manufacturers have concerns about reporting timelines and phase-in approaches outlined in the presentation?

The current timeline which requires some manufacturing sectors to report starting in 2026 and others to report starting in 2028 is unrealistic, regardless of whether the facility-specific EPD approach or facility-level product approach is used.

As discussed under Question 8, Environmental Product Declarations (EPDs) can take upwards of 12 – 16 months for manufacturers to publish, depending on availability of internal resources, data, consultants and verifiers. Many manufacturers have not published EPDs, and of those who have published EPDs, many have not published facility-specific EPDs due to supply chain complexities and concerns with revealing proprietary information, creating real competitive and antitrust concerns. Furthermore, with the amount of time it takes to create, update and verify EPDs, it is an unrealistic expectation to have manufacturers provide data that is less than 2 years old, updated on a quarterly basis. We strongly advise against the requirement for facility-specific EPDs. If CARB moves forward with requiring facility-specific EPDs, manufacturers will need at least three or more years from the time the requirements are published to comply with the requirements.

Regarding the alternative compliance option of providing facility level production data, this could take manufacturers 1 – 2 years to complete depending on the availability of

data, material and energy balances and the number of facilities. Furthermore, providing this data along with product-specific revenue totals, raises concerns with revealing proprietary information, creating real competitive and antitrust concerns. With facility-specific EPDs, we strongly advise against the requirement for manufacturers to provide facility-specific information on material and energy quantities and product-specific revenue totals. If CARB moves forward with requiring facility-specific data, manufacturers will need at least two years from the time the requirements are published to comply with the requirements.

11. What other data sources and programs administered by the state should be leveraged for reporting needs under this program (MRR, SB 253, other)?

No comment.

12. Staff are requesting feedback on the initial concept for delegating reporting responsibility.

No comment.

13. What concerns are there with the initial concept presented for inclusion considerations for residential and non-residential projects?

No comment.

14. What are the barriers to producing WBLCAs for more projects?

Per CARB's March 13th presentation on "Reporting and Baseline Options for Building Embodied Carbon", the WBLCAs must "Include all elements of the project's structure, enclosure, interior construction and finishes, site hardscape and walls in the scope of the LCA." It is unrealistic to expect that all of these elements will have readily available facility-specific EPDs or facility level production data as defined by CARB, by the specified dates of 2026 (cement and concrete, iron, steel, and ferroalloy products, glass and glass products, asphalt pavement and shingles, insulation, and wood and wood products) and 2028 (aluminum, clay and ceramics, lime and gypsum products, and additional sectors not currently part of state or federal buy clean programs). Manufacturers require a transition period of at least 2 years to comply with any new requirements.

For additional information, see responses to Questions 7, 8 and 10.

15. How could the proposed reporting requirements impact the cost, timeline, or feasibility of projects you conduct?

From a manufacturer perspective, EPDs can cost anywhere from \$20k to \$75k, depending on the size and capacity of the member company. The cost will increase

significantly if CARB requires manufacturers to submit facility-specific EPDs using data less than 2 years old on a quarterly basis.

For details on timeline and feasibility from a manufacturer's perspective, see responses to Questions 7, 8 and 10.

16. Are there specific occupancy types that face unique reporting challenges?

No comment.

17. At what stage of the project schedule should covered projects report? a) Planning permit? Building Permit Issuance? Obtaining certificate of occupancy? Other milestones?

Project WLBCA Reporting should be required after products have been specified, to avoid burdening manufacturers with unnecessary reporting.

18. Are there specific WBLCA standards and methodologies staff should review?

No comment.

CMTA appreciates the opportunity to provide these comments and feedback. If you would like to discuss these issues further, please feel free to reach out to me at (916) 498-3320 or eesquivel@cmta.net. Thank you.

Sincerely,



Elizabeth Esquivel

Vice President, Government Relations
California Manufacturers and Technology Association