

May 31, 2026

Submitted via the CARB Rulemaking Portal at ca.gov.

California Air Resources Board
1001 I Street
Sacramento, CA 95814

On behalf of SEMI¹, I write to provide comments in response to CARB's March 23rd, 2026 workshop regarding the development of emissions factor (EF) guidance under California's greenhouse gas reporting programs. SEMI appreciates CARB's continued stakeholder engagement and its focus on ensuring that emissions data are both credible and decision useful.

SEMI members that have operations in California reflect the full range of the semiconductor industry, including design automation and semiconductor intellectual property suppliers, device manufacturers, equipment makers, materials producers, and subcomponent suppliers. Many of these members maintain comprehensive greenhouse gas (GHG) reporting practices aligned with the GHG Protocol and their reporting practices include annual disclosure with limited third-party assurance. Based on their experience, SEMI offers the following recommendations on the appropriate use and documentation of emissions factors.

Criteria for Acceptable Emissions Factors

Emissions factors used for reporting should meet the following criteria:

- **Alignment with the GHG Protocol:** Reporters should be permitted to use public, custom or industry-specific emissions factors, consistent with the GHG Protocol's framework, which provides globally recognized standards for measuring and reporting emissions and supports multiple calculation approaches tailored to company-specific circumstances.²
- **Representativeness and accuracy:** Emissions factors should reflect the characteristics of the activity, geography, or technology to ensure a reliable GHG inventory. The GHG Protocol emphasizes that emissions inventories must be "comprehensive and reliable" and based on appropriate activity data and methodologies.³
- **Transparency, traceability and consistency:** The methodology and assumptions underlying emissions factors should be documented to support credible emissions

¹ SEMI represents more than 4,000 companies globally. SEMI member companies are the foundation of the \$3 trillion global electronics industry, and this vital supply chain supports 1.5 million high-skill and high-wage jobs across the world. SEMI maintains offices in Bangalore, Berlin, Brussels, Hsinchu, Seoul, Shanghai, Silicon Valley (Milpitas, Calif.), Singapore, Tokyo, and Washington, D.C. For more information, visit <http://www.semi.org/>

² See [GHG Protocol Standards & Guidance](#).

³ See GHG Protocol [Calculation Tools and Guidance](#).

accounting, consistent with the GHG Protocol's role as a standardized framework for monitoring and reporting emissions.

- **Consistency with established methodologies:** Emissions factors should be derived from recognized standards, datasets, or well-documented internal models grounded in accepted GHG accounting practices, which are widely adopted globally through the GHG Protocol framework.

Allowing the use of custom or industry-specific emissions factors—when supported by robust methodology—will improve the accuracy of reported emissions and better reflect underlying operational realities of reporters, particularly in specialized manufacturing sectors.

Documentation and Explanation of Emissions Factor Use

Reporters should provide clear, structured documentation supporting their selection and application of emissions factors, including when using custom or industry-specific models. This documentation should include:

- **Methodological transparency:** Description of calculation methodologies, including how emissions factors are derived, applied, and validated.
- **Scope and boundary definitions:** Clarification of organizational and operational boundaries and how emissions factors align to those boundaries.
- **Use of estimates or modeled data:** Disclosure of where modeled or estimated emissions factors are used, including rationale and limitations.

This approach provides transparency into emissions calculation methodologies, assumptions, and boundaries to support consistency and auditability. This level of documentation ensures that emissions data is credible while allowing flexibility for company-specific approaches.

Documentation of Changes to Emissions Factors

When emissions factors are updated or changed from prior reporting years, reporters should:

- **Provide clear explanatory disclosures** describing the nature of the methodological change and the rationale (e.g., improved data quality, updated supplier information, or refined modeling approaches).
- **Assess and disclose significant impacts** of the change on reported emissions, including whether prior years have been restated or recalculated.
- **Maintain consistency over time**, while allowing for improvements in methodology consistent with GHG Protocol guidance on recalculations.
- **Highlight comparability considerations**, including any limitations in comparing emissions across reporting years due to methodological updates.

Transparency regarding methodological updates is critical to maintaining the integrity and comparability of emissions disclosures over time while enabling continuous improvement in data quality.

SEMI supports the objectives of SB 253. Allowing the use of high-quality, representative emissions factors—including custom and industry-specific approaches—combined with strong documentation and transparency requirements, will result in more accurate and decision-useful emissions disclosures.

SEMI is grateful for the opportunity to engage on this matter, and we are available to meet at your convenience to further elaborate on the issues discussed in these comments.

Regards,

James Amano
Senior Director, EHS
SEMI