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Subject: The CA Cement Industry's Comments on the CARB Cap-and-Invest Program Workshop

The Coalition for Sustainable Cement Manufacturing & Environment ("CSCME") offers these comments on the California Air Resources Board's ("CARB") October 29, 2025 workshop on the Cap-and-Invest ("C&I") program.

CSCME is a coalition of all five cement manufacturers in California.[1] The California cement industry has a long history of working cooperatively and constructively with legislators and regulators to develop policies that advance the state's climate goals and promote technologically feasible and cost-effective reductions of greenhouse gas ("GHG") emissions, while also minimizing the risk of economic and emissions leakage. Those efforts include working with CARB on the design and implementation of the C&I program, the passage of AB 398 to extend the program to 2030, the passage of SB 596 to develop a net zero emissions strategy for the cement industry, and the passage of AB 1207 to extend the C&I program to 2045.

The California cement industry is committed to achieving net carbon neutrality by 2045.[2] As noted in prior comments, it will be difficult if not impossible to achieve that goal without the widespread deployment of carbon capture, utilization, and storage ("CCUS") within the next two decades. At the same time, it is difficult if not impossible to envision the widespread deployment of CCUS throughout the cement industry without a supportive policy environment that includes:

(1) A politically durable C&I program that places a relatively predictable price on GHG emissions.

(2) An industrial allowance allocation system that minimizes the risk of leakage while providing consistent incentives to reduce GHG emissions.

(3) An incremental border carbon adjustment mechanism ("BCA") that holds imported cement to similar standards and prevents importers from undermining investments in deep decarbonization.

All three conditions must exist to achieve net carbon neutrality in the cement industry by 2045. The passage of AB 1207 was a critical first step, as it ensured the continuation of a C&I program that places a relatively predictable price on GHG emissions. CSCME looks forward to working with CARB in the coming

[1] The Coalition includes CalPortland Company; Cemex, Inc.; Mitsubishi Cement Corporation; National Cement Company of California, Inc.; and UNACEM North America. There are seven cement plants operating in California.

[2] See, for example, the California Cement Industry's Carbon Neutrality Roadmap (July 2023).

months to update the allowance allocation system and implement an incremental BCA in a manner that creates the conditions necessary to unlock large-scale investments in deep decarbonization.

As CARB noted during the workshop, the challenge of unlocking such investments has been complicated by the federal government's abrupt withdrawal of financial support. A textbook example is the National Cement Company's Net-Zero Project, which was awarded a $500 million grant by the U.S. Department of Energy in 2024 to implement CCUS at its cement plant in Kern County.[3] The grant was abruptly cancelled early this year, which placed the project on indefinite hold and forced all California cement manufacturers to reassess the long-term outlook for deep decarbonization investments.

CSCME strongly encourages California to step into this vacuum and demonstrate that the shift from a "cap-and-trade" program to a "cap-and-invest" program is not just a rebranding exercise, but a meaningful shift in policy priorities in light of recent developments. By recycling program revenues to actively invest in deep decarbonization projects within the industrial sector, California can transform recent setbacks at the federal level into opportunities to provide the rest of the world with a blueprint for achieving net carbon neutrality in difficult-to-decarbonize industries.

With that context in mind, CSCME offers these comments on the recent C&I program workshop, which covered the implications of recent legislation as well as four policy topics:

(1) Allowance budget scenarios from 2025 to 2030.

(2) Allowance removals for offset use.

(3) Mitigating emissions leakage.

(4) Utility allocation transition.

Our comments primarily focus on questions posed by CARB during the portion of the workshop focused on mitigating emissions leakage, though we look forward to working with CARB on any issue that materially affects the future of the cement industry and its ability to achieve net carbon neutrality by 2045.

Updated Leakage Assessments & Comparative Analysis with Other Jurisdictions

A significant portion of the workshop was dedicated to the issue of minimizing emissions leakage in both the electricity and industrial sectors. This aligns with requirements under AB 398 that CARB report to the legislature by the end of this year regarding the risk of emissions leakage and recommends statutory changes to the program to reduce leakage while maintaining the state's ability to reach its targets.

With respect to leakage in the industrial sector, CARB shared the high-level result of two different leakage assessments as well as data regarding how California's approach to industrial allocation compares and contrasts with other jurisdictions.

Industrial Leakage Assessment #1

CARB noted that a contractor analyzed leakage risk for emissions-intensive, trade-exposed ("EITE") industries under a range of scenarios through 2045 and shared the following high-level findings:

[3] See, for example, LA Times, "California decarbonization projects are among two dozen eliminated by Trump's Department of Energy" (June 18, 2025).

- Current output-based allocation is effective at addressing EITE leakage risk.
- Border carbon adjustments can mitigate leakage and reduce non-California EITE emissions.
- Targeted EITE electrification subsidies could be an effective tool for EITE sectors with electrification potential.
- Incentivizing research and development that lowers costs for advanced zero- or low-carbon technology could be particularly effective in mitigating leakage for hard-to-decarbonize sectors.

CSCME is unable to comment on the substance of the report in the absence of an opportunity to review the sources, methods, and results. That said, the key findings shared by CARB are generally consistent with existing literature and align with the cement industry's views regarding the range of options for effectively minimizing leakage.

Industrial Leakage Assessment #2

CARB indicated that staff updated its prior leakage assessment using more recent data (through 2022), and that the results left leakage classifications largely unchanged. CARB also noted that, consistent with prior CSCME critiques, this assessment has significant limitations, as it relies exclusively on historical data and market dynamics. CARB did not indicate whether it intends to update its framework or conduct additional leakage analysis to support the rulemaking process for post-2030 allowance allocations.

Again, CSCME is unable to comment on the substance of the analysis in the absence of an opportunity to review the sources, methods, and results. However, we are unsurprised that updating the data resulted in largely the same classifications, and we support the implicit finding that the cement industry remains a high leakage risk industry. We look forward to working with CARB to consider additional updates and modernizations to its leakage assessment framework in the context of designing the allowance allocation system for the 2030 to 2045 timeframe.

Comparative Analysis of Allowance Allocation Approaches

CARB presented slides comparing California's approach to industrial allocation with those used by other jurisdictions. The comparative analysis confirmed that other jurisdictions tend to have a "less stringent" approach to industrial allocations (e.g., they dedicate relatively more allowance value to leakage minimization). That finding is consistent with the experiences and perspectives of CSCME members.

CSCME encourages CARB to reassess its approach to leakage minimization and, at a minimum, calibrate it to other jurisdictions. That includes reevaluating the amount of allowance value dedicated to leakage minimization, as well as considering other measures such as an incremental BCA and mechanisms to invest allowance value in industrial decarbonization (such as programs established by the EU, Quebec, and several other jurisdictions with carbon pricing mechanisms).

Updating Industrial Allocation to Reflect Annual Allowance Budgets through 2030

Consistent with prior workshops, CARB outlined its intent to reduce annual allowance budgets through 2030. As noted in prior comment letters, CSCME is concerned about the precedent set by retroactively

increasing the stringency of the cap.[4] CARB's rulemaking decisions during the 2017 Scoping Plan process formed the basis of the California cement industry's regulatory assumptions for the 2021 to 2030 timeframe. Those assumptions underpinned the industry's investment models, analysis, and outlook. Dramatically changing those assumptions will not only undermine prior investment decisions, but it will also "move the goal posts" in a manner that creates unbounded uncertainty for future investment decisions amid existing uncertainty caused by the loss of federal funding. In short, it will be increasingly difficult to confidently model and analyze investment decisions if CARB chooses to reduce allowance allocations to high leakage risk industries unilaterally, retroactively, and midstream.

That said, CSCME understands the rationale of aligning allowance budgets with its GHG inventory, and we support CARB's decision to remove the minimum number of allowances needed to achieve that goal. However, given the concerns expressed above, we strongly recommend that CARB:

- Maintain the Cap Adjustment Factor ("CAF") and Alternate Cap Adjustment Factor ("Alt-CAF") schedule in the current regulation (i.e., "Concept 2"), which will avoid undermining past, present, and future investment decisions.[5]
- Establish the principle that future adjustments to allowance budgets will not reduce existing leakage prevention measures, including industrial allocations.

In addition, CSCME encourages CARB to reevaluate the concept of the CAF and its relation to minimizing leakage more generally. AB 32 and subsequent legislation require CARB to minimize leakage. For high-risk industries such as cement, minimizing leakage equates to providing maximum leakage protection. The CAF reduces leakage protection each year and, therefore, works directly against that objective.

Specifically, the annual allowance allocation rate ("AAR") for the cement industry is a product of three factors: (1) a product benchmark; (2) the assistance factor; and (3) the CAF. This approach results in several important fundamental incentives and outcomes:

- Cement manufacturers have clear and consistent financial incentives to reduce their GHG intensity over time due to the fixed benchmark.
- Any decrease in the AAR due to a decrease in the CAF does not increase or decrease that financial incentive — it merely changes the balance between "carrots and sticks."
- The CAF was originally designed to ensure that industrial entities bear a "fair share" of the financial pain of a declining cap, but it does not change the industry's financial incentive to reduce GHG emissions, and it exacerbates leakage in high-risk industries over time.

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[4] See, for example, CSCME's comment letter in response to CARB's October 5, 2023 workshop on Potential Amendments to the Cap-and-Trade Regulation. Although we recognize that CARB is proposing to remove allowances from future budget years, the proposed removal of allowances effectively represents a retroactive change that is simply being applied to future budget years, with the added negative effect of concentrating the overall impact in a fewer number of budget years.

[5] Note that even if CARB maintains the CAF and Alt-CAF schedule in the current regulation, it will still exacerbate leakage risk by removing allowance supply, which will increase allowance prices and thereby increase the carbon cost differential between domestic and imported products in high leakage risk industries, such as cement.

- In the absence of a BCA, any decrease in the AAR for high-risk industries represents a decrease in leakage protection that undermines the requirements of AB 32 and subsequent legislation.

From the cement industry's perspective, the decline in the CAF since 2012 has resulted in an AAR that is unsustainable. For instance, CARB initially established a fixed benchmark equal to 0.818 MT of cement output, which was equal to the "best performer" at the beginning of the program. In the absence of an incremental BCA, this decision alone reduced leakage prevention by at least 7% (i.e., the difference between the best performer and the industry average at the time).

Subsequent annual declines in the CAF have simply exacerbated this challenge. The industry's AAR in 2025 equaled 0.688 allowance per MT of cement output — at least 16% below the industry benchmark and more than 20% below the industry average at the beginning of the program. Although the C&I program has incentivized the industry to significantly decrease its average GHG intensity since the benchmark was established, the financial impact of those gains have been more than offset by the combination of declining CAFs and increasing allowance prices.[6] At the same time, cement manufacturers bear other costs as a result of the C&I program, including but not limited to administrative fees, the cost of compliance activities, and increases in costs unrelated to direct GHG emissions.

Meanwhile, cement imports remain unregulated and do not face any carbon costs due to the programs. As a result, the carbon cost differential between California producers and importers has reached an unsustainable level. An incremental BCA would level the playing field by closing the carbon loophole for imports by ensuring that similar carbon costs are imposed on all cement consumed in California, regardless of where it is produced.

CSCME continues to urge CARB to take actions to truly minimize the risk of emissions leakage in the cement industry. Such actions likely include a combination of increasing allowance allocations, holding imports to similar standards (including the introduction of a BCA), directly investing in decarbonization projects, and removing permitting barriers to deploying decarbonization technologies. We look forward to providing additional comments and ideas for the optimal configuration of policy measures in the context of the SB 596 strategy.

CSCME appreciates that it will take time to implement a comprehensive and effective approach to minimizing the risk of leakage in the cement industry. Unfortunately, under the current approach, the risk of emissions leakage increases with each passing year — potentially resulting in swift, severe, and irreversible results.

With that risk in mind, CSCME urges CARB to immediately suspend the decline in the CAF for the cement industry until a more robust approach to leakage minimization, including an incremental BCA, can be successfully implemented. A strategic pause in the CAF will create the space that CARB, the cement industry, and other stakeholders need to collaborate, design, and implement a thoughtful approach to leakage minimization that aligns with the industry's unique circumstances, the state and pace of technological progress, and California's long-term climate goals.

[6] While investments that significantly reduce a plant's GHG intensity will reduce its compliance obligations, they are unlikely to materially reduce its overall leakage risk in the absence of an incremental BCA. Such risk is driven by program-related cost differentials between in-state manufacturers and importers, regardless of whether those cost differentials are due to satisfying compliance obligations or capital investments to reduce compliance obligations.

Actively Investing in Industrial Decarbonization Projects

CARB presented slides on incentives to decarbonize manufacturing activities considering: (1) uncertain economic pressures; (2) the loss of federal funding for industrial decarbonization projects; and (3) the difficulty in decarbonizing certain industrial processes. CARB also highlighted that AB 1207 gives the agency enhanced flexibility to design industrial allocation methodologies that minimize leakage, including confirmation that CAFs do not need to decline proportionally with the overall cap.

CSCME encourages CARB to use all the tools at its disposal to support deep industrial decarbonization goals while minimizing leakage, including allowance allocation, border adjustment mechanisms, and a program to recycle revenues for direct investment in local decarbonization projects. The recent shift in the federal government's posture toward such investments is a setback, but California has an opportunity to fill the gap and provide essential financial support, consistent with AB 32's mandate to minimize leakage while achieving its overall climate goals. We look forward to working with CARB in the context of the SB 596 strategy to equip the agency with a portfolio of tools for minimizing leakage while achieving net carbon neutrality in the California cement industry.

Conclusion

The California cement industry continues to support the state's overarching climate goals in general and achieving carbon neutrality in the cement industry in particular. We were pleased to support the passage of AB 1207 and continue to believe in the possibility of a strong, viable, and decarbonized cement industry in California.

However, the clock is ticking, and current approaches to minimizing leakage are unsustainable. We encourage CARB to adopt sector-specific approaches that recognize each industry's unique set of challenges and opportunities, especially high-risk and difficult-to-decarbonize industries, such as cement. We hope that the regulatory development process of the post-2030 phase of the C&I program will provide an opportunity for CARB and other stakeholders to take stock, identify lessons learned over the past decade, and apply them in updating regulatory frameworks. Ultimately, the regulatory framework that CARB establishes for the 2030-2045 timeframe will dictate the long-term viability of the California cement industry, and we look forward to working with CARB and other stakeholders to shape that future using a considered, methodical, and evidence-based process.

Sincerely,

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