

# Coalition for Sustainable Cement Manufacturing & Environment

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November 30, 2022

Ms. Liane M. Randolph  
Chair  
California Air Resources Board  
1001 "I" Street  
Post Office Box 2815  
Sacramento, California 95812

Subject: **The California Cement Industry's Comments on the Kick-Off Workshop for SB 596 Cement Sector Net-Zero Emissions Strategy**

Dear Ms. Randolph:

The Coalition for Sustainable Cement Manufacturing and Environment ("CSCME") provides these comments on the California Air Resources Board ("CARB") October 20, 2022 Kick-Off Workshop for SB 596 Cement Sector Net-Zero Emissions Strategy (the "Strategy"). CSCME is a coalition of all five cement manufacturers in California.<sup>1</sup>

As reflected in its June 24, 2022 comments on the Draft 2022 Scoping Plan Update (see attached), CSCME has been constructively engaged with policymakers and regulators since the passage of AB 32 in 2006. Last year, CSCME worked collaboratively with legislators and other stakeholders in developing SB 596 to support the California cement industry achieving net carbon neutrality by 2045. In September 2021, Governor Newsom signed SB 596, which requires CARB to develop by July 1, 2023 "a comprehensive strategy for the state's cement sector to achieve net-zero emissions of greenhouse gases ("GHGs") associated with cement used within the state as soon as possible, but no later than December 31, 2045."<sup>2</sup>

CSCME has developed its own plan for realizing the shared goal of achieving net carbon neutrality by 2045.<sup>3</sup> CSCME's plan details nine pathways for reducing GHG emissions in the California cement industry in the short, medium, and long terms, as well as the technological, economic, social, regulatory, statutory, and policy barriers that need to be removed to fully unlock each pathway.

These comments highlight the key principles that should guide CARB's Strategy, the important foundational aspects of the Strategy, the areas where CARB can take a leadership role in removing barriers to the reduction of GHG emissions in the cement industry, and how to measure progress over time in achieving the goals of SB 596.

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<sup>1</sup> The Coalition includes CalPortland Company, Cemex, Inc., Martin Marietta Materials, Mitsubishi Cement Corporation, and National Cement Company of California Inc. There are seven cement plants currently in operation in California.

<sup>2</sup> California Health and Safety Code, section 38561.2(a)(1).

<sup>3</sup> For more details regarding the industry's plan, see [cncement.org/attaining-carbon-neutrality](http://cncement.org/attaining-carbon-neutrality).

## I. KEY PRINCIPLES SHOULD GUIDE CARB'S SB 596 CEMENT SECTOR NET-ZERO STRATEGY

To achieve the objective of net neutrality by 2045 and to make the necessary steps toward the interim target of 40 percent below 2019 average greenhouse gas intensity by 2035, CARB should adopt several guiding principles in its development of the SB 596 Strategy, including:

- Impartial: The Strategy should apply similar treatment to both in-state and imported cement.
- Adaptable: The Strategy should be contingent on and adjust in lock step with key technological developments, particularly commercially available carbon capture, utilization, and storage (“CCUS”) and electrification options.
- Efficient: The Strategy should incentivize GHG reductions that are cost effective in light of prevailing and anticipated carbon prices.
- Science-Driven: The Strategy should formally recognize the role of recarbonation as a carbon sink and avoid relying on solutions that are not grounded in science and/or are not sufficiently scalable.
- Integrated: The Strategy should promote a “whole of government” approach and inter-agency processes, especially with respect to removing complex barriers and potentially contradictory objectives and guidance.
- Cooperative: The Strategy should promote and leverage cooperation across the federal government, state government, local governments, and industry, especially with respect to public investments.
- Streamlined: The Strategy should focus on reducing or removing regulatory barriers (especially permitting) that can deter or delay investment in GHG reductions and the rapid deployment of solutions.
- Locally Focused: The Strategy should emphasize the importance of a thriving local cement industry as well as actively supporting the industry through a challenging transition to carbon neutrality.
- Predictable: The Strategy should clarify the role of existing policies (cap-and-trade) and the interaction between these policies and the Strategy to create a regulatory environment in which the industry can confidently make large, long-term investment decisions.
- Administratively Feasible: The Strategy should avoid solutions that rely on complex administrative mechanisms or create new reporting or compliance burdens as much as possible.

By following these guiding principles, CARB will increase the odds that the Strategy will provide a realistic and practical roadmap to achieving GHG emissions reduction objectives in the California cement industry.

## **II. CARB SHOULD ESTABLISH FOUNDATIONAL OBJECTIVES OF THE STRATEGY THAT ALIGN WITH SB 596 REQUIREMENTS AND MARKET REALITIES**

The Strategy should be based on certain foundational objectives, which create the starting point for building the detailed strategic measures reflected in SB 596. Such foundational objectives include (1) creating a level playing field in California, which will incentivize the significant public and private investment necessary to achieve the net neutrality goals, (2) defining a GHG emissions intensity baseline that reflects how cement is produced, sold, purchased, and used in California, (3) clarifying the accounting methodologies for the calculation of reductions, and (4) implementing the necessary policy-making infrastructure.

### **A. Creating the Level Playing Field Necessary to Protect Public and Private Investment**

In calling for a Strategy for cement “used within the state,” SB 596 highlights the importance of maintaining a level playing field for both cement produced in California and cement imported from other jurisdictions. The annual volume of cement imported into the state has been on a steady upward trajectory for the past few years, comprising roughly a quarter of all cement consumed in California in 2021.<sup>4</sup> In the case of California, local cement is almost always the least GHG intense cement available to customers in the state, especially after accounting for the GHG emissions associated with transportation and electricity generation, as well as adverse local air quality effects in communities near port facilities.

The difference in the GHG emissions profile of local versus imported cement will be even more important in the context of a net zero strategy for the California cement industry. Getting to net zero will require massive investment in the technologies and raw materials required to implement GHG mitigation measures – in particular, CCUS. As a result, the Strategy should prioritize provisions to equalize the cost of imported cement produced by more GHG intensive manufacturers transported long distances relative to local product to manage the risk of emissions leakage that would result in higher global GHG emissions. Such provisions will provide the California cement industry with the predictability and confidence required to make substantial, long-lived investments in their facilities that will reduce GHG emissions over the long term.

SB 596, as written, recognizes the imperative to address the extremely high leakage risk facing the cement industry and describes a border carbon adjustment mechanism that would adjust the price of imported cement to match its GHG impact relative to California standards.<sup>5</sup> Regardless of the specific policy measure that can achieve this goal, the Strategy should be designed to make sure foreign competitors face regulatory burdens similar to local producers – for example, requiring any entity selling cement that

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<sup>4</sup> Calculated using USGS Mineral Industry Survey monthly data for shipments of “Portland and Blended Cement” (State of Destination) in 2021 (Table 2A & 2B) and US International Trade Commission data (Imports for Consumption, CIF Value, HS code 2523) for the same time period.

<sup>5</sup> SB 596 (Section 38561.2(b)(4)): “Include provisions to minimize and mitigate potential leakage and account for embedded emissions of greenhouse gases in imported cement in a similar manner to emissions of greenhouse gases for cement produced in the state, such as through a border carbon adjustment mechanism.”

is not subject to California’s Cap-and-Trade program to comply with the equivalent performance standard set at the Cap-and-Trade benchmark.

## **B. Defining the Greenhouse Gas Intensity Baseline from Which to Measure Reductions**

SB 596 requires CARB to “define a metric for greenhouse gas intensity and evaluate the data submitted by cement manufacturing plants to the state board for the 2019 calendar year and other relevant data about emissions of greenhouse gases for cement that was imported into the state to establish a baseline from which to measure greenhouse gas intensity reductions.”<sup>6</sup> Developing a comprehensive GHG intensity baseline for all cement consumed in California is a challenging task that should carefully consider the following characteristics and conditions.

1. The California cement industry does things differently. In contrast with most global cement producers, supplementary cementitious materials – materials that can replace a share of cement in concrete and substantially reduce its overall emissions profile – are typically added at concrete batch plants rather than at cement facilities. Developing an accurate “apples-to-apples” comparison between local and imported cement requires consideration of this meaningful operational difference and establishing baselines that rely on common denominators.
2. Emissions intensity is a function of more than just raw materials and fuels. In comparison to California produced cement, the true GHG intensity of imported cement includes transportation emissions – which may be significant. Any baseline metric that does not reflect this reality will unfairly penalize local producers.
3. The full lifecycle matters. Although California’s GHG inventory reflects the emissions associated with manufacturing cement, the full cement-concrete-construction value chain offers opportunities to reduce GHG emissions (e.g., through reduced vehicle fuel consumption, reduced building heating and cooling requirements relative to alternative materials, and recycling demolished concrete) that, under the current accounting system, will not be reflected and recognized in regulatory data sources.

Expanding the universe of cement and emissions data and measurement is a daunting task. However, it is also a necessary precondition to ensure that the California cement industry is not penalized for outperforming other materials on a GHG basis, whether it be imported cement or alternative construction materials.

## **C. Establishing the General Principles for What Counts for Reductions**

Achieving net zero cement in California by 2045 requires a “whole of government” and full value chain approach that cannot be appropriately measured by current GHG accounting principles. Specifically, the Cap-and-Trade program only reflects GHG reductions at the cement plant, such as fuel switching and

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<sup>6</sup> SB 596 (Section 38561.2(b)(1))

process emissions reductions. Facilitating investment across the full value chain requires a consistent framework to measure and account for GHG reductions with a holistic view.

Accordingly, any reductions to GHG intensity – including lower combustion and process emissions at cement plants and carbon captured and safely sequestered – should be fully reflected and rewarded within the boundaries of the SB 596 Strategy. Since the Cap-and-Trade program currently does not reflect any emissions captured and sequestered, this represents a significant modernization and expansion of emissions measuring, modeling, and accounting. At a minimum, the Strategy should outline a revised GHG accounting framework that expressly recognizes GHG mitigation – including CO<sub>2</sub> safely sequestered through recarbonation.

#### **D. Establish the Necessary Policy-Making Infrastructure**

As previously mentioned, getting to net zero cement in California requires a focused, “whole-of-government” approach. SB 596 recognizes the importance of bringing a diffuse network of relevant public, private, and academic stakeholders to the table to craft an actionable strategy for cement industry decarbonization.<sup>7</sup> Fortunately, CARB may be the only agency with the necessary convening authority and flexibility to turn this goal into reality. The California cement industry believes that the best use of CARB’s convening authority is to lead efforts to create an interagency coordinating group that can effectively implement strategies, deconflict oversight, and facilitate collaboration among relevant state agencies.

### **III. CARB SHOULD TAKE A LEADERSHIP ROLE IN REMOVING BARRIERS TO GHG REDUCTION IN THE CALIFORNIA CEMENT INDUSTRY**

With SB 596, California can become the world’s first carbon neutral cement market. However, in the current environment, California cement industry decarbonization efforts are stymied by a range of market, statutory, and regulatory barriers. And, as such, achieving the GHG mitigation targets outlined in SB 596 within the prescribed timeframe largely depends on the methodical, coordinated removal of these barriers to create an environment that enables cement industry investment. The California cement industry cannot translate its bold goal of reaching carbon neutrality into a reality without CARB assuming a leadership role to convene the relevant stakeholders and craft sound public policy to systematically clear barriers to industry decarbonization.

The following section describes the most pressing challenges delaying the implementation of the most impactful decarbonization levers. Chief among these barriers is the permitting process, which is a cross-cutting barrier that affects the full universe of GHG mitigation efforts and has created an unfavorable environment for investment. Devoting capital to equipment upgrades and alternative fuels requires predictable timelines for project development and predictable returns on investment. Numerous overlapping and lengthy permitting requirements have been used by certain stakeholders to create an

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<sup>7</sup> SB 596 (Section 38561.2(b)(5)): “Coordinate and consult with other state agencies, districts, and experts in academia, industry, and public health, and with local communities.”

unfavorable environment for industry investment in GHG reductions in California. Specifically, state-level California Environmental Quality Act and federal-level National Environmental Policy Act environmental reviews – in addition to other federal-state-local situation-dependent permits – can span several years and expose the cement industry to costly litigation due to public opposition.<sup>8</sup> Without substantial efforts to improve and streamline the permitting process for these types of investments, cement industry investment in decarbonization will continue to be deterred and delayed by financial uncertainty, unpredictable timelines, and the risk of litigation.

#### **A. Process Emissions: CCUS<sup>9</sup>**

Roughly two-thirds of the emissions stemming from cement manufacturing are the result of the chemical reaction that converts limestone to calcium oxide and not from fossil fuel combustion. As a result, carbon neutrality cannot be achieved by 2045 without the substantial and widespread deployment of CCUS technology throughout the cement industry.

Although CCUS technology is well developed, the global cement industry remains in the early stages of developing options for how to deploy CCUS at commercial scale in the industry. There are a handful of global projects in the pipeline that will provide hugely influential case studies to inform how the California cement industry proceeds with CCUS deployment. While there are promising developments on the horizon, it remains unlikely that the industry can deploy CCUS in the mid-term – even if significant progress is made to clear barriers. As a result, it will be impossible for the California cement industry to reach the interim GHG intensity targets included in SB 596 without intense policy focus and major public and private investment in CCUS technology.

SB 596 requires CARB to develop a plan that reduces the GHG intensity of cement by 40% by 2035. Given that combustion emissions currently represent far less than 40% of the industry’s GHG footprint, this goal is only likely to be achieved if CCUS technology is developed, approved, installed, and operational on at least one California cement plant within the next 13 years. Additionally, given traditional regulatory processes, this ambitious timeline is unlikely to be met in the absence of an unprecedented push to streamline and accelerate the regulatory process regarding the deployment of CCUS.

Deploying CCUS technology throughout the cement industry and safely sequestering emissions requires addressing many barriers – chief among them financial and infrastructure concerns. Despite the necessity of CCUS to cement industry decarbonization, the technology is extremely costly and still in the early stages of commercial development. As a result, the California cement industry requires substantial policy and financial support in order to flip the economics of CCUS investment in favor of deployment. Additionally,

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<sup>8</sup> “An Action Plan for Carbon Capture and Storage in California: Opportunities, Challenges, and Solutions.” Joint study by Energy Futures Initiative, Stanford University Precourt Institute for Energy, and Stanford Earth Center for Carbon Storage. 90 – 91.

<sup>9</sup> SB 596 (Section 38561.2(b)(7)(B)): “Measures to provide financial support and incentives for research, development, and demonstration of technologies to mitigate emissions of greenhouse gases from the production of cement with the objective of accelerating industry deployment of those technologies.”

getting millions of tons of GHG emissions underground requires massive carbon transport and geological sequestration infrastructure development at the state level. Without extensive support for these issues, it is unlikely that the cement industry can reach carbon neutrality by 2045.

The California cement industry views SB 596 and an associated CARB-led net zero strategy as the primary opportunity to enable CCUS deployment. With that in mind, we feel that CARB can take the lead on the issue and directly contribute to net zero cement by:

- **Collaboration on Applying CCUS to Cement:** Consistent with the goals of SB 596, convene and coordinate among key stakeholders with respect to deploying CCUS in the California cement industry without any undue delay.
- **Regulatory Certainty:** At present, if the California cement industry were to deploy CCUS technology, cement producers would not receive cap-and-trade credits relative to the size of the emissions impact. Developing a regulatory framework that codifies the importance of CCUS, rewards industry investment, and clarifies the entities and programs responsible for managing carbon transport and storage is a necessary first step towards industry investment.
- **Public Support for CCUS in the Cement Industry:** Current public financial incentives are insufficient to support the cement industry's investment in CCUS. To shift the risk-reward profile for investment in a positive direction, we need CARB's assistance to direct public investment toward CCUS deployment, whether it be through credits, grants, financing, or price guarantees.
- **Level the Playing Field:** Competition from cement producers located outside California is steadily increasing due to a mix of macroeconomic factors and regulatory costs. At the same time, such cement often entails substantially higher lifecycle emissions relative to California cement, especially when accounting for the GHG emission associated with transportation. Abating economic and emissions leakage risk requires crafting sound policy that recognizes and rewards the climate benefits of local cement production while ensuring that imported cement faces similar GHG compliance costs and burdens.

## **B. Combustion Emissions: Alternative Fuels<sup>10</sup>**

Although combustion emissions comprise roughly one-third of total cement industry emissions, switching from fossil fuels to alternative lower carbon fuels is necessary to provide the process heat needed to produce cement. As with process emissions, decarbonizing combustion emissions in the cement industry is difficult due to a lack of viable alternatives. As noted in the 2022 Scoping Plan for Achieving Carbon Neutrality, “{h}igh technological and economic barriers exist to electrifying kiln process heat at cement plants, as clinker production requires temperatures in excess of 1,500°C.”<sup>11</sup> As a result, the California

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<sup>10</sup> SB 596 (Section 38561.2(b)(7)(C)): “Measures to facilitate fuel switching.”

<sup>11</sup> California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality, November 16, 2022, at 209.

cement industry needs all the assistance possible to replace fossil fuels with other viable alternatives to reach the industry emissions targets codified in SB 596.

Substantially reducing the California cement industry's combustion emissions requires rapid fuel switching to lower carbon alternatives that can meet the high heat requirements of cement manufacturing. In the near-term, these preconditions limit the universe of appropriate alternative fuels to a short list of feedstocks with high biogenic shares of emissions — namely, renewable natural gas (e.g., landfill or dairy gas), biomass-derived fuels (e.g., nut shells or charred wood), and refuse-derived fuels (e.g., engineered municipal solid waste or tire-derived fuel). It is possible that in the long-term other non-biogenic fuel sources emerge as viable alternatives for the cement industry, including but not limited to green hydrogen produced from renewable sources.

In addition to fundamental barriers to implementation, the primary factors holding back greater substitution of fossil fuels in the cement industry are availability and cost. As of yet, viable alternative fuel sources are consistently not cost competitive with fossil fuels and are not available on a consistent basis. Without a predictable, cost neutral (when considering various state and federal incentives) source of fuel, cement plant managers are unlikely to invest in large scale replacement. Furthermore, compounding cost issues, most sources of alternative fuel require some degree of processing to be “kiln ready.” Unlocking this capability will require greater action by the state to develop a reliable market for lower carbon alternative fuels.

The California cement industry believes that, with CARB's help, SB 596 can help jumpstart cement industry decarbonization by clearing barriers that are preventing cost effective fossil fuel substitution. In addition to assistance with fundamental barriers, we feel that CARB can help the industry chart to a path to net zero by:

- **Establishing Policies that Direct Alternative Fuels to the Cement Industry:** For instance, the higher per ton carbon price of the Low Carbon Fuel Standard program means that fossil fuel substitution is much more economically feasible for the transportation sector than the California cement industry. However, the transportation sector has a much greater range of options to decarbonize (e.g., electrification and novel renewable fuels) than the cement industry. To address this mismatch, CARB should craft policy measures that incentivize directing a broader universe of low carbon fuels to the cement industry — including but not limited to renewable natural gas.
- **Support the Development of More Robust Alternative Fuel Markets:** While policy incentives can help direct the right alternative fuels to the right industry, there are substantial supply challenges that will need to be addressed before the cement industry can fully capitalize on fuel substitution. To this end, CARB should convene relevant stakeholders and direct public funding and incentives to support the creation of a more robust market for alternative fuels that provides cement plant managers with an ample, consistent supply of alternative fuels.
- **Address Disincentives to Landfill Diversion:** The diversion of refuse (both biomass and solid refuse) from landfills is not economically attractive in California. Although various policy measures have attempted to address the challenging economics of refuse diversion in recent years, more needs to



be done to ensure that viable alternative fuels do not end up in landfills decomposing and emitting methane that further exacerbates climate change. CARB should convene relevant stakeholders to address barriers preventing the cement industry from fully capitalizing on waste-to-energy landfill diversion opportunities.

### C. Electricity Generation: Waste Heat Recovery<sup>12</sup>

Indirect emissions associated with cement manufacturing (e.g., emissions associated with generating the electricity consumed by the California cement industry) account for a small share of industry emissions (typically less than 10%). However, improving industry electricity efficiency can both reduce overall emissions and free up California's limited supply of clean electricity to support decarbonization of other industries in which electrification can yield greater relative GHG benefits. Although the California cement industry already uses the most energy efficient equipment available, energy efficiency can be improved through additional investment in waste heat recovery (i.e., using excess process heat to generate electricity) to make progress towards SB 596 goals in the medium-term.

With SB 100, California is on clear path towards 100% carbon neutral electricity, which will therefore result in the complete mitigation of cement industry indirect emissions by 2045. That being said, waste heat recovery offers an additional channel to reduce the industry's electricity demand and associated GHG emissions. While waste heat recovery has not, as of yet, emerged as a popular investment for the California cement industry, the technology is widely used throughout the global cement industry. With support from CARB and assorted stakeholders and policymakers, waste heat recovery potentially offers a feasible avenue to realize medium-term progress towards carbon neutrality.

In addition to the cross-cutting permitting issues described earlier, cost is the primary barrier to waste heat recovery system deployment. Widespread deployment in California cement plants is currently infeasible, primarily due to the overall cost of purchasing and installing waste heat recovery infrastructure. Departing load charges (i.e., fees charged by utilities that effectively penalize onsite generation for industrial customers) exacerbate the cost barriers preventing deployment of the technology. Realizing the full benefits of waste heat recovery will require public investment support to de-risk industry investment and address unfavorable economics.

The California cement industry is optimistic that CARB's convening authority can help bring relevant stakeholders to the table and implement solutions that enable industry investment in waste heat recovery. We believe that CARB can best help the industry invest in the technology by:

- **Public Support for Waste Heat Recovery in the Cement Industry:** Deploying waste heat recovery technology in the cement industry is primarily stymied by an unfavorable investment environment. In order to offset the high cost of this equipment, the California cement industry needs greater public investment support and financing options that can enable predictable returns on industry investment.

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<sup>12</sup> SB 596 (Section 38561.2(b)(7)(D)) – “Measures to create incentives and remove obstacles for energy efficiency improvements and waste heat recovery at cement manufacturing facilities.”

CARB can help make this a reality by working with relevant stakeholders to establish a framework that enables industry investment in waste heat recovery.

- **Address Utility Pricing Issues:** Current fee schedules for California utilities disincentivize on-site electricity generation by charging unavoidable departing load fees when cement plants generate their own energy. Investments in equipment to use waste heat to offset electricity consumption are effectively penalized due to these fees. CARB should use their convening authority to address this issue with the California Public Utilities Commission and utilities.

#### **IV. THE STRATEGY SHOULD IDENTIFY PROGRESS STEPS AND CONDITIONS THAT WILL TRIGGER REASSESSMENT**

We wholeheartedly support the goals codified in SB 596 and feel that we can be a powerful ally in CARB's quest to implement a cement industry specific carbon neutrality strategy. We believe that, with CARB's help and understanding, we can achieve both the interim target (40% below 2019 cement industry average emissions intensity by December 31, 2035) and the overall goal of net neutrality by 2045. However, the pace of decarbonization largely depends on external conditions outside the control of the cement industry, and as a result, setting a clear process for monitoring and reassessing industry progress is essential to successful implementation.

SB 596 affirms this understanding by stating the need to revisit targets on the path to 2045. Specifically, the bill states that CARB should, "By July 1, 2028, evaluate feasibility of achieving interim targets and may adjust to reflect technological advancements and progress in addressing barriers to the deployment of greenhouse gas emissions reduction technologies and processes." To ensure that CARB's cement industry carbon neutrality reflects industry realities and the feasibility of specific decarbonization actions, the industry feels that the following open questions must be adequately addressed before implementation begins:

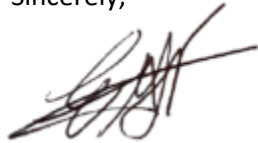
- **How will progress be measured?** There are many different ways to measure the GHG intensity of cement manufacturing and no single measure will perfectly reflect industry progress. We recommend that CARB, in close cooperation with cement industry stakeholders, develop a framework for measurement that gives full credit to industry decarbonization efforts and recognizes specific efforts and investments.
- **What does sufficient progress and pace towards the 2035 target look like in 2028?** In 2028, given permitting timelines and the generally slow-moving nature of developing targeted policy to clear implementation barriers, the industry will likely be in the extremely early stages of deploying the GHG mitigation levers prescribed in SB 596. This dynamic will complicate the task of determining whether the industry is on a path to meet the 2035 target. CARB should devote extra emphasis to outlining discrete benchmarks and triggers to reevaluating the 2035 target. Otherwise, the cement industry may be unfairly penalized against a statutory target that does not reflect "on the ground" realities.
- **Do current conditions support economical industry investment in the decarbonization measures prescribed in the strategy?** This question should underpin all of the assumptions included in CARB's

cement industry specific carbon neutrality plan and should be a living process driven by open communication and transparency with cement industry stakeholders. Although we are optimistic that CARB's support can make SB 596 a vehicle to clear the decarbonization barriers facing the cement industry, due to the sheer universe of relevant stakeholders and policymakers that will be required to achieve the goals set forth in the bill, CARB's strategy should prioritize flexibility in terms of timeline and magnitude.

## **V. CONCLUSION**

By using SB 596 as a vehicle to provide much needed support to the California cement industry, CARB can foster a regulatory environment that preserves the competitive balance and climate benefits of locally produced cement and enable a feasible course to carbon neutrality by 2045. The urgency of the climate challenge is clear. With the support of CARB's convening authority and by reducing the uncertainty of industry investment, the California cement industry can meet the challenge of deep decarbonization head on and take the actions necessary to reduce net emissions to zero, while continuing to provide the climate-friendly raw materials needed to realize the state's infrastructure and resilient development ambitions.

Sincerely,



Erika Guerra  
Chair, Executive Committee  
Coalition for Sustainable Cement Manufacturing & Environment

CC:

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