

August 10, 2023

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

**RE: California's cement decarbonization strategy must set clear direction**

Dear Chair Randolph,

In September 2021, [Governor Newsom signed SB596 into law](#), which requires the Air Resources Board (ARB) to develop a comprehensive strategy for the cement sector in California by July 1<sup>st</sup>, 2023. The law commits to a reduction of 40% in greenhouse gas (GHG) emissions intensity by 2035 of all cement used in the state and net-zero GHG emissions by 2045. The undersigned organizations representing environmental organization and industry strongly urge the Board to promptly release a clear and ambitious strategy that sets goalposts for industry, unequivocally articulates California's vision in decarbonizing the U.S.'s second-largest cement industry and outlines the role that ARB intends to play in providing steady leadership and coordination between stakeholders, producers, and buyers.

Cement manufacturing currently accounts for 2% of the state's GHG emissions and 8% of global emissions. California is the first state to tackle cement decarbonization and the state's strategy promises to not only comprehensively reduce emissions but also demonstrate how other states and localities can act to eliminate the climate impact of one of the most critical materials for a clean economy. Cement and concrete are both ubiquitous and irreplaceable in our built environment and the hard work necessary to achieve net-zero GHG emissions cement production by 2045 needs to start today.

In order to lead the way effectively, California should include the following three elements in its forthcoming strategy:

**1. Clear and tangible targets that demonstrate how the state will reach the emissions reductions outlined in SB596.**

To fully decarbonize cement, the industry will need to stack decarbonization solutions. The best near-term solution is to just use less traditional cement by partially replacing clinker with lower-carbon cementitious materials. To reach net zero cement, however, the industry will need to rely on emerging and transformative technologies that can significantly reduce emissions but that are currently at earlier technological readiness levels. ARB's strategy must set targets that make it clear that both decarbonization pathways should be pursued simultaneously and in the near-term. By 2030, ARB's strategy should at the very least seek to:

- Replace 50% of conventionally produced clinker in cement with-lower carbon cementitious materials; and,

- Build [first of a kind](#), technologically diverse, projects that can demonstrate the technological pathways for near-zero emissions cement production.

Such targets will help both the industry and agencies to coalesce around the technologies and cohesive policy measures that will transform cement manufacturing and align with the climate goals of the state. ARB should also establish interim checkpoints between now and 2030 to ensure that progress toward those two targets is on track.

**2. Comprehensive policy measures that incentivize wide market adoption of readily available decarbonization levers, and first of a kind, near-zero cement production in the state.**

Decarbonizing California’s cement industry will require public policy support that matches the pace and scale of the task ahead. ARB must develop a comprehensive set of enabling policies that support both the supply and demand for low-emissions cement. The State of California, and Caltrans in particular, should use their buying power as one of the largest users of cement and concrete in the United States, to promote emissions reductions across the cement and concrete value chain, as well as affirmatively support the commercialization and scale-up of next-generation, ultra-low-carbon cement and concrete technologies. Supportive policies that create steady markets for low-carbon cement and concrete and protect domestic industry against carbon leakage, coupled with regulatory certainty can help attract both federal funding and private sector investments flowing for industrial decarbonization projects.

**3. Steady leadership from ARB and coordination with Caltrans and other relevant agencies.**

Successfully implementing a comprehensive strategy will require ARB’s steady and sustained leadership. The evolution of this sector cannot take place within the intended time frames without ARB’s leadership and without coordination between stakeholders, producers, and buyers. ARB must commit staff and resources to successfully implement this plan and coordinate with other relevant agencies. Key among those is Caltrans who must establish demand-side policies like low-carbon cement and concrete procurement, promote the use of blended cements and design innovative policies to help scale up ultra-low-carbon cement and concrete production.

California can be the first to successfully decarbonize this “hard to abate” sector and transform cement from a climate challenge into a massive opportunity. Many California policy priorities in the coming years—new housing, new infrastructure, increased clean energy supply, and more—will depend on a steady supply of cement and concrete. With direction and action now, low-carbon cement and concrete can add to the benefits of these efforts by accelerating climate action and building the market. As governments and private sector buyers move toward purchases on low-carbon materials, action now can help to put California at the front of innovating an essential global sector.

We sincerely appreciate ARB’s public engagement process so far and look forward to continued work with ARB and all stakeholders involved in implementing SB596.

Sincerely,



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## DC<sub>2</sub> Working Group Members

The logo for BIOMASON features the word "BIOMASON" in a bold, blue, sans-serif font. The letter "O" is stylized with a horizontal line passing through its center.

Contact: Troy Hottle  
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The logo for BRIMSTONE consists of a black square icon containing a white circle with a horizontal line below it, positioned above the word "BRIMSTONE" in a bold, black, sans-serif font.

Contact: Simon Brandler  
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The logo for chement features the word "chement" in a lowercase, green, sans-serif font.

Contact: Gregory Houchins  
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The logo for MINUS MATERIALS includes a stylized "M" icon made of two overlapping shapes (one teal, one grey) to the left of the words "MINUS MATERIALS" in a bold, black, sans-serif font.

Contact: Sarah Williams  
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Sublime Systems  
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The logo for Blue Planet features the word "Blue" in a blue, sans-serif font with a blue arc above the "e", followed by the word "Planet" in a black, sans-serif font.

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The logo for CarbonBuilt includes a blue square icon with a white "C" inside, followed by the word "CarbonBuilt" in a bold, black, sans-serif font, and the tagline "CARBON FOR GOOD" in a smaller, black, sans-serif font below it.

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The logo for fortera features a blue square icon with a white "f" inside, followed by the word "fortera" in a lowercase, black, sans-serif font.

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The logo for QUEENS CARBON includes a circular icon with a blue and green molecular structure to the left of the words "QUEENS CARBON" in a bold, black, sans-serif font.

Contact: Daniel Kopp  
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The logo for TERRA CO2 features the word "TERRA" in a bold, black, sans-serif font, with each letter in a separate colored box (T: orange, E: red, R: black, R: black, A: grey). Below it, "CO2" is written in a red, sans-serif font.

Michele Blackburn  
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