

SB 596 Cement Sector Net-zero Emissions Strategy Kick-off Workshop Comments from Project 2030 November 30, 2022

We would like to thank the California Air Resources Board (CARB) staff for organizing the October 20, 2022, *SB 596 Cement Sector Net-zero Emissions Strategy Kick-off Workshop* and for the excellent presentations. It is essential to understand the economics of significant GHG reductions from the production of clinker. While this is not an immediate opportunity for reductions, we believe significant GHG reductions from the production of clinker are possible in this decade. Federal incentives combined with not having to purchase GHG allowances make the economics more attractive.

Project 2030 is modeling combinations of three example solutions that will illustrate the conditions under which GHG reductions from the production of clinker would likely be “in-the-money.” We expect to show that there are solutions that improve the competitiveness of cement produced in California while significantly reducing its GHG emissions.

We anticipate completing the modeling on or before December 10, 2022 and will submit the models and a summary of the results. We are currently validating our preliminary results.

Our three examples are:

1. Eliminating GHG emissions from a calciner and/or a portion of the kiln by using renewable electricity to power a heat battery based on Rondo Energy’s product. We look at two potential sources of renewable electricity: (a) a local dedicated renewable combination of solar/wind and (b) purchase from the California grid.
2. A dedicated calciner for the limestone with carbon capture, transport and storage. This is modeled using the LEILAC process which produces a nearly pure CO₂ stream. This can be combined with #1 above which then eliminates most of the process emissions and half of the energy emissions.
3. An alternative cement based on Fortera’s process which absorbs the CO₂ emissions from existing cement operations.

These examples illustrate the range of opportunities that could be technically proven in the near term and could provide significant, economically feasible reductions in GHG emissions in a time frame that could meaningfully contribute to the Scoping Plan 2030 targets.

Project 2030 looks forward to providing the models, implementation issues and policy options as part of the SB 596 implementation.

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