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## 23-ERDD-03 - SoCalGas Comments re Carbon Removal Innovation Support Program (CRISP)

Additional submitted attachment is included below.



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May 4, 2023

Mr. Ilia Krupenich California Energy Commission Docket Unit, MS-4 Docket No. 23-ERDD-03 715 P Street Sacramento, CA 95814-5512

## Subject: Comments on the CEC Carbon Removal Innovation Support Program (CRISP)

Dear Mr. Krupenich:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments to the California Energy Commission (CEC) regarding topics discussed at the April 19, 2023, workshop on implementation of the Carbon Removal Innovation Support Program (CRISP) created pursuant to Assembly Bill (AB) 209.<sup>1</sup> SoCalGas shares the Commission's and the State's goal to accelerate economy-wide decarbonization through direct air capture of atmospheric carbon, the impetus for creation of CRISP. We commend CEC for its leadership on this important matter. Our comments are summarized as follows:

<sup>&</sup>lt;sup>1</sup> Assembly Bill (AB) 209 (2021-2022), Chapter 251, Statutes of 2022 (Chaptered Sept. 6, 2022). An act to amend Sections 2950, 2951, and 2954 of the Fish and Game Code, to amend Sections 6254.5, 7921.505, and 63048.93 of the Government Code, to add Section 18944.21 to the Health and Safety Code, to amend Sections 25545.7.4, 25545.10, 25792, 25794.2, 25794.3, 25794.5, 25794.6, and 26011.8 of, to add Section 25704.5 to, and to add Chapter 7.2 (commencing with Section 25625), Chapter 7.6 (commencing with Section 25660), Chapter 7.8 (commencing with Section 25685), and Chapter 15 (commencing with Section 25992) to Division 15 of, the Public Resources Code, to amend Sections 274, 314.5, 362, 379.6, 583, and 792.5 of, and to add Section 80710 of the Water Code, relating to energy, and making an appropriation therefor, to take effect immediately, bill related to the budget. Available at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\_id=202120220AB209.

1) To better achieve state goals, we recommend inclusion of cement production as required by SB 596 and incorporation of various data and findings from the U.S. Department of Energy's recent report entitled *Pathways to Commercial Liftoff:* Carbon Management.<sup>2</sup>

California has made significant progress in reducing its direct greenhouse gas (GHG) emissions. The State's direct GHG emissions now represent less than one percent of global output.<sup>3</sup> That said, even if the State's direct emissions were reduced to zero, much work would remain in addressing legacy GHGs that remain in the atmosphere. As such, engineered carbon removal – especially direct air capture – will be a critical strategy for achieving necessary global emissions reductions while maintaining balanced and equitable economic growth in California's workforce.

In order to achieve California's goal of carbon neutrality by 2045, removal of legacy GHGs from the atmosphere will be critical. As the CEC staff presentation pointed out, Governor Newsom has set a Statewide target of reducing CO<sub>2</sub> by 100 million metric tons (MMT) of CO<sub>2</sub>e by 2045 via carbon capture & storage (CCS) and mechanical and natural carbon dioxide removal (CDR). The California Air Resources Board (CARB) in its adopted 2022 Scoping Plan likewise envisions utilizing CCS and mechanical and natural CDR to remove 20 MMT of CO<sub>2</sub>e by 2030 and 100 MMT by 2045. As CARB notes, "Even if anthropogenic emissions are reduced to at least 85 percent below 1990 levels by 2045 as called for by AB 1279, there will still be residual emissions in the AB 32 GHG Inventory sectors in 2045 that must be addressed in order to achieve the California's carbon neutrality target."<sup>4</sup>

Slide 6 of the workshop presentation noted that CRISP's purpose is to incentivize eligible projects and advance technologies for direct air capture (DAC) of atmospheric carbon, seeking to address legacy GHGs.<sup>5</sup> It also highlights ineligible projects, including petroleum or gas production, processing or refining facilities, and enhanced oil recovery. Among activities that are not cited as ineligible are industrial processes like cement production, which produces materials-related and other GHGs that emit roughly eight MMT of  $CO_2$  annually to the atmosphere – about 10 percent of the State's total industrial emissions. We request that CEC explicitly clarify that cement production would be eligible for funding and recommend the inclusion, per Senate Bill (SB) 596.

In September 2021, Governor Gavin Newsom signed SB 596 (Becker), which requires that CARB, by July 1, 2023, develop a comprehensive strategy for the cement sector in California that achieves a greenhouse gas emissions intensity level 40 percent below baseline levels by 2035 and net-zero GHG emissions by 2045.

<sup>&</sup>lt;sup>2</sup> U.S. Department of Energy (US DOE), "Pathways to Commercial Liftoff: Carbon Management," April 2023, available at: <u>https://liftoff.energy.gov/wp-content/uploads/2023/04/20230424-Liftoff-Carbon-Management-vPUB\_update.pdf</u>.

<sup>&</sup>lt;sup>3</sup> California Air Resources Board (CARB), 2021 GHG Facility and Entity Emissions (11/4/2022), available at https://ww2.arb.ca.gov/mrr-data.

<sup>&</sup>lt;sup>4</sup> California Air Resources Board (CARB), "Final 2022 Scoping Plan", December 2022.

<sup>&</sup>lt;sup>5</sup> California Energy Commission (CEC), Energy Research & Development Division, Presentation: *Staff Workshop on Implementation of the Carbon Removal Innovation Support Program (CRISP)*, April 19, 2023, available at: https://efiling.energy.ca.gov/GetDocument.aspx?tn=249816.

In April 2023, the United States Department of Energy (U.S. DOE) released the *Pathways to Commercial Liftoff: Carbon Management* report which indicates that a large majority of the emissions from the cement industry can be addressed through carbon capture, utilization, and storage (CCUS).<sup>6</sup> We recommend that CRISP include a pathway to help fulfill this vision. As noted by the U.S. DOE, the challenges facing widespread deployment of carbon management include the fact that, "Estimated project economics for CCUS retrofits on higher-cost-to-capture applications (e.g., cement, and steel) will not lead to widespread deployment without cost or revenue improvements or additional policy."<sup>7</sup> With appropriate configuration of CRISP, the CEC can position these initiatives to substantially address that challenge.

Moreover, the U.S. DOE Liftoff report includes a variety of other potentially helpful data and insights. We recommend a thorough review of its contents and integration of appropriate references and information into CEC's continued work on this topic.<sup>8</sup> In particular, Chapter 2 includes a variety of references to CDR and DAC,<sup>9</sup> and a chart entitled "Carbon capture costs excluding storage and transport costs,  $/ CO_2$ " estimates capture costs for more than a dozen source categories.<sup>10</sup>

## Conclusion

CCUS and DAC have an important role in mitigating legacy GHG emissions as part of a comprehensive climate change strategy. SB 596 and the U.S. DOE Liftoff report support the inclusion of cement production into the CRISP program. Enabling the cement production industry to reach GHG reduction goals will go a long way in helping the State reach its goal of carbon neutrality by 2045. Thank you for your consideration of our recommendations.

Respectfully,

/s/ Kevin Barker

Kevin Barker Senior Manager Energy and Environmental Policy

<sup>&</sup>lt;sup>6</sup> U.S. DOE, *Id*.

<sup>&</sup>lt;sup>7</sup> *Id.* p. 3.

<sup>&</sup>lt;sup>8</sup> We note that the U.S. DOE released the Liftoff report on April 24, 2023 – after the CRISP workshop had taken place.

<sup>&</sup>lt;sup>9</sup> *Id.* p. 7-21.

<sup>&</sup>lt;sup>10</sup> *Id.* p. 24.