March 9, 2026

Comments on Proposed Amendments to the Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms

Dear Chair Sanchez,

Thank you for the opportunity to provide public comments on the proposed amendments to the California Cap-and-Invest Program.

This letter's signatories represent a range of stakeholders across the engineered carbon dioxide removal (CDR) ecosystem, including buyers, project developers, and ecosystem builders. We are grateful for the opportunity to engage with CARB on this important rulemaking and commend the Board and staff for their substantial and ongoing work to strengthen and extend the Program through 2045. The Proposed Amendments reflect a serious effort to implement the requirements of AB 1207 and to align the Program with California's legally binding climate targets.

Our organizations are united by a shared commitment to building California's durable CDR ecosystem to achieve carbon neutrality by 2045. CARB's 2022 Scoping Plan is unambiguous on this point: "carbon removal and sequestration will be an essential tool to achieve carbon neutrality, and the modeling clearly shows there is no path to carbon neutrality without carbon removal and sequestration"[1]. It sets an explicit CDR target of 20 MMT by 2030 and 100 MMT by 2045, and recognizes that natural and working lands alone cannot supply sufficient sequestration to close the residual emissions gap. To achieve that, California will need a broad portfolio of engineered CDR approaches, including but not limited to direct air capture (DAC), enhanced rock weathering and mineralization, marine-based carbon removal (mCDR), and biomass carbon removal and storage (BiCRS).

The legislative package relevant to this rulemaking creates a clear and affirmative mandate for CARB to consider CDR in the Cap-and-Invest Program. AB 1207 directs CARB to "consider developing additional compliance offset protocols to address sectors that are not covered by the market-based compliance mechanism but are identified in the scoping plan prepared pursuant to Section 38561, including carbon dioxide removal". SB 905 provides the regulatory foundation for CARB to evaluate, demonstrate, and regulate CDR technologies, and creates the framework for CDR to be integrated into compliance programs. SB 840 furthers these goals by directing the Greenhouse Gas Reduction Fund toward climate-focused technological innovation, including the deployment of solutions identified in the Scoping Plan. These statutes, taken together, reflect a legislative determination that durable, engineered CDR is an indispensable part of California's climate strategy and that CARB should act accordingly.

With that context, we offer the following comments on the Proposed Amendments:

I. CCUS Provisions: Preserve legislative intent through "Geologic Storage or Equivalent" language

The Proposed Amendments "remove the word geologic from the description of sequestration to include potential future carbon sequestration methodologies that are not geological sequestration". We understand and support the underlying goal of recognizing the full range of

[1] https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf, p.84.

durable engineered CDR approaches, including non-geologic storage pathways (such as mineralization and ocean-based approaches) and future technologies.

However, given the inherent interplays between Cap and Invest and SB 905, we are concerned that the proposed language undermines the original intent of SB 905. SB 905 was enacted alongside AB 1279 specifically because legislators recognized that reaching California's climate goal would require durable, engineered carbon removal alongside emissions reductions. CARB already has broad authority to develop offset protocols for a wide range of carbon sequestration approaches. SB 905 was intended to establish an additional and distinct pathway for engineered CDR, as reflected in the deliberate reference to geologic storage. Removing that reference entirely as it applies to carbon capture and sequestration definitions within Cap and Invest would erase the market signal that the legislature had intended. The undersigned organizations have heard directly from investors that this proposed language, if carried consistently through Cap-and-Invest regulations and SB 905, would stymie additional venture and project level investment into engineered CDR companies.

We therefore recommend that CARB adopt the following amended language for the relevant definition:

> *"Carbon dioxide capture, removal, or sequestration project" means a carbon dioxide capture project, a carbon dioxide removal project, or a sequestration project that seeks to provide for the long-term isolation of carbon dioxide from the atmosphere through* ***storage in a geologic formation or equivalent****.*

The phrase "geologic formation or equivalent" is a precise and workable formulation that preserves the statute's intent - integrating and scaling engineered CDR into California's policies and programs - while creating space for non-geologic pathways and future carbon sequestration methods that result in carbon sequestration of a similar storage lifecycle, like enhanced rock weathering and marine CDR methods. CARB would retain full discretion to define "equivalent" through the future rulemaking process.

II. Offset Allocation: Consider alternative pathways to scale durable, engineered CDR, including those that enable support mechanisms and differentiation

The Cap and Invest Program allows a covered entity to meet up to 6% of its compliance obligation with offset credits. As CARB works towards integrating CDR into California's compliance architecture, one pathway to advance CDR *could* be to integrate it into the offset framework, under the 6% cap. However, without significant adjustments to the offset pool, this is likely a poor fit for CDR, and unlikely to create opportunities to scale these necessary technologies to appropriate levels.

CDR is fundamentally different from the existing compliance offset categories. Engineered CDR technologies are still progressing toward broader commercial deployment and currently operate at costs that exceed the allowance price. Following the trajectory of other clean energy technologies, CDR costs are expected to fall significantly as the industry scales. However, without mechanisms that recognize the current stage of the industry, engineered CDR will struggle to compete with cheaper offset categories in the near-term, jeopardizing its ability to grow at the speed and scale required in California's long-term climate strategy. The 2022 Scoping Plan acknowledges that the sequestration potential of California's natural and working lands will not be sufficient to meet the residual emissions gap. If engineered CDR does not establish a robust foothold in the compliance market today, there is a serious risk that carbon

removal needed to meet California's target will not materialize in time. Policy design must recognize the need for differentiation of CDR from other offsets in order to enable its specific and intentional pairing with near-term programs that can bring down cost.

Scaling CDR will require continued investment. Investor confidence in the CDR sector depends on visible, durable demand signals from compliance programs. Without differentiation within the offset market or complementary pricing support, the price signal sent by Cap-and-Invest will not be sufficient to generate real market demand needed to develop and scale CDR in California in line with CARB's Scoping Plan.

There are a range of possible mechanisms that CARB can consider to provide the differentiation or support necessary for CDR to contribute meaningfully to the Program's goals. We therefore urge CARB to incorporate dedicated support mechanisms for engineered CDR, and to consider carefully whether inclusion of CDR as an offset achieves the state's goals both of unlocking affordable compliance pathways through offsets *and* of scaling necessary climate technologies. We would welcome the opportunity to discuss these approaches with CARB staff in more detail.

Importantly, supporting CDR today is also a prudent long-term cost policy. The residual emissions that will need to be addressed will increasingly consist of processes that are prohibitively expensive to decarbonize through fuel switching or electrification alone. CDR offers a cost-effective compliance pathway for those hard-to-abate emissions. Building the CDR market now will reduce industry's compliance burden in the years ahead when CDR will be most needed. The time to invest in that market infrastructure is today, while there is still a meaningful window to drive down CDR costs through scale.

III. Manufacturing Decarbonization Incentive Allocation: Include CDR as an eligible pathway

The Proposed Amendments establish a new manufacturing decarbonization incentive allocation that would provide additional allowances to eligible manufacturing facilities that invest in technologies to reduce their covered emissions. This is a meaningful provision, and we support its inclusion in the Proposed Amendments.

However, the list of eligible GHG emission reduction activities specified in section 95891(g)(2) does not currently include carbon dioxide removal. The current eligible categories address emissions reductions from energy use and fuel switching. Research shows that deploying CDR alongside emissions reductions lowers the overall cost of decarbonization[2]. For manufacturing facilities with hard-to-abate process emissions that cannot be addressed through fuel switching or electrification, CDR is a cost-effective and viable pathway to deep decarbonization.

CARB notes that the purpose of the allocation is to "incentivize a set of GHG emissions reduction strategies that can achieve GHG emissions reduction at facilities thereby decreasing compliance costs and reducing emissions leakage risk." CDR serves this purpose: a manufacturing facility that procures high-quality CDR credits to address its residual process emissions is, in effect, reducing its net GHG footprint and its compliance cost. Excluding carbon removal from the list of allowable activities constrains the pool of eligible decarbonization strategies and may inadvertently preclude more cost-effective pathways for certain industrial categories.

[2] https://www.nature.com/articles/s41467-022-32468-w

We note that adding CDR to the list of eligible pathways would be consistent with the ISOR's description of the decarbonization challenge facing California's industrial sector, which explicitly identifies "capture and sequestration or use of CO2 emissions that cannot otherwise be abated" as one of the strategies that industrial sources will need to deploy to meet climate targets.

Conclusion

California is at a pivotal moment in the implementation of its climate strategy. The Proposed Amendments represent a significant step forward in extending and strengthening the Cap-and-Invest Program, and we commend CARB for the rigor and care reflected in this rulemaking. Our recommendations would ensure that the Cap-and-Invest Program sends a clear and credible market signal for durable, engineered CDR, consistent with the Scoping Plan's targets and the legislative direction in SB 905, AB 1207, and SB 840. These changes would further strengthen the Program and advance the likelihood of achieving California's climate goals.

We look forward to continued collaboration with CARB staff and welcome the opportunity to discuss these recommendations in greater detail.

Sincerely,

Climeworks

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