The Climate Reality Project
SILICON VALLEY CHAPTER

February 8, 2026

California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Public Comments for CARB's Proposed 2026 Amendments to the Cap-and-Invest Regulation

We appreciate the opportunity to comment on CARB's ISOR for its proposed Cap-and-Invest regulation. Our comments pertain primarily to one particular actionable recommendation for a revised price floor (Auction Reserve Price) and price floor inflator.

The price floor should be based on program policy objectives, rather than continuing to follow the Waxman-Markey precedent. This would be more effective in carrying out the purpose for which the regulation is proposed for two reasons: (1) CARB's Proposed Amendments abandon the 2022 Scoping Plan's 48% GHG reduction target for 2030 and revert to the 40% minimum statutory requirement, but a higher price floor could nevertheless incentivize additional emission reductions consistent with CARB's Price Assumption for the 48% target. (2) The Proposed Amendments cannot adequately and reliably support SB 840 budget allocations without a higher price floor.

These points and related issues are covered under the following topic headings:

- Establish a price floor based on program policy objectives.
- The price floor's 5% inflator is unjustified and may be unwarranted.
- CARB's regulatory policy is not fully aligned with statutory policy.
- CARB has not adequately explained or substantiated the Proposed Amendments' purported cost-effectiveness.
- The Proposed Amendments would not ensure a "stable and steadily increasing price signal" conducive to long-term planning for GHG emission reduction investments.
- The Proposed Amendments lack a viable strategy for addressing the problem of climate change.

Sincerely,

Ken Johnson and Adam Sweeney
Legislation and Public Policy Committee
The Climate Reality Project: Silicon Valley Chapter

Establish a price floor based on program policy objectives.

The current price floor ($28 in 2026) and its 5% inflator were established in 2011 by adopting identical provisions from the 2009 Waxman-Markey federal congressional bill for a national Cap-and-Trade program.[1] There is no justification for continuing to rely on the precedent of a defunct, 15-year-old federal initiative that never went into effect.

We recommend that CARB adopt a price floor based on program policy objectives. Specifically, the price floor should be (a) consistent with the 2022 Scoping Plan's GHG reduction target, and (b) sufficient to support SB 840 budgetary allocations.

The SRIA's Proposed Scenarios (48% reduction by 2030) and the ISOR's Proposed Amendments (40% reduction) are both premised on a Price Assumption equal to the "Midpoint between Floor Price and APCR 1 Price"[2] (currently about $47). CARB has had to abandon the 48% target due to the two-year delay in program implementation, but CARB could nevertheless establish a price floor at the Price Assumption level. With this alternative, the price floor would incentivize additional emissions reductions to the extent that such further reductions are achievable within a marginal cost limit defined by the Price Assumption.

If CARB intends to enforce allowance budgets at significantly higher prices, then there is no reason why CARB could not set the price floor at the level of its Price Assumption. Maintaining a minimalist, precedent-based price floor would not comport with "dramatic action to reduce GHG emissions" (ISOR section II.A).

A higher price floor is also needed to support SB 840 budget allocations. The LAO recently warned that "[Cap-and-Invest] Revenues May Not Be Sufficient to Fully Support Statutory Allocations and Legislative Intent for 2026-27" due to lackluster allowance demand and low prices.[3] Even if allowance prices rebound to much higher levels, there is no guarantee that the next economic downturn or stock market dip won't again crash the allowance market. A higher price floor can ensure sufficient funding levels and funding stability for SB-840 programs, and will facilitate long-term business planning for investment in low-carbon energy and technology.

---

[1] 2022 Cap-and-Trade FSOR, response D-69, page 362
https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/fsor.pdf#page=366
[2] SRIA, page 101; ISOR, page 320
https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-Cap-and-Trade_SRIA2024.pdf#page=108
https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2026/cap_invest/nc_isor.pdf#page=322
[3] https://lao.ca.gov/Publications/Report/5096

The current price floor was established under CARB's existing statutory authority and has not been legally contested, so CARB does not need supplemental authority to modify the price floor in order to bring it into conformity with regulatory and statutory policy objectives. If CARB does not do so, its response to this recommendation in the FSOR may help to inform consideration of potential legislative action to enact a statutory price floor.

The price floor's 5% inflator is unjustified and may be unwarranted.

The price floor currently increases by 5% per year plus inflation, based on the Waxman-Markey precedent. With a higher price floor, the 5% inflator may be unnecessary and politically untenable, and it should be revised to reflect program policy objectives.

The combination of a higher price floor and lower inflator would result in earlier investment in clean technologies, so that they can return dividends in the form of reduced decarbonization costs and co-benefits sooner rather than later.

Any near-term "adverse economic impact" of a higher price floor would be counterbalanced by reduced long-term economic impacts resulting from a lower price inflator, and by economy-wide economic benefits from earlier deployment of clean technologies, not to mention climate benefits.

The 5% inflator also applies to the APCR price points and price ceiling, and is unjustified in light of the legislature's and CARB's increased concern about cost containment and affordability.

CARB's regulatory policy is not fully aligned with statutory policy.

The ISOR states, on page 13, that "Staff are proposing amendments to the Cap-and-Trade Regulation (Proposed Amendments), aligned with Legislative direction in AB 1207, Senate Bill (SB) 32 (Pavley, Chapter 249, Statutes of 2016) GHG emissions reduction target of at least 40% below 1990 levels in 2030, the carbon neutrality and 85% below 1990 targets in AB 1279 and the requirements of AB 398 (Garcia, Chapter 135, Statutes of 2017) …" But there are several points of misalignment with statutory policy.

The Proposed Amendments largely adhere to a regulatory policy paradigm that contravenes statutory policy by prioritizing cost reductions over emissions reductions

even when costs are far below expectations, and when significant further emissions reductions would be technologically feasible, cost-effective, and affordable.

For example, The IEMAC recommended in its 2024 Annual Report[4] that CARB establish either an "Emissions Containment Reserve" (ECR) or a higher price floor. (An ECR is basically a higher price floor but with only a limited percentage of the available allowances being withheld at the higher price.) CARB did not act on or seriously consider either suggestion. In its Feb 26, 2025 presentation to the JLCCCP, CARB dismissed the IEMAC's proposed ECR as a "fundamental design structure change that could increase compliance costs." [5] This characterization neglected potential benefits of an ECR. The presentation to the JLCCCP made no mention of the price floor or of its essential role in stabilizing allowance prices and auction revenue in the pre-2020 compliance period, and in contributing to the early attainment of the 2020 Cap-and-Trade target by 2016. There is no substantive discussion of the price floor (or Auction Reserve Price) in the ISOR.

CARB's regulatory policy effectively interprets the SB 32 language "at least 40 percent" to mean "at most 40 percent." Similarly, the phrase "no later than 2045" in AB 1279 is effectively translated to "no sooner than 2045." Cap-and-Invest cannot guarantee attainment of the 40% reduction goal in 2030 or the 85% reduction goal by 2045 because the AB-398 price ceiling precludes a binding cap. And none of the Core Design Features of Cap-and-Trade enumerated in CARB's JLCCCP report[6] or described in the ISOR would incentivize additional GHG reduction beyond minimal statutory requirements. With the exception of the price floor, the Cap-and-Invest market mechanisms generally disincentivize and deter overcompliance.

For example, the potential emissions benefit of the early attainment of the 2020 Cap-and-Trade target was largely nullified by banking. Low allowance prices attracted banking investments, not as a hedge against market volatility, but rather to circumvent more stringent future regulations or as an investment instrument with a 5% minimum real rate of return. If CARB's regulations had placed value on additional GHG reductions, they would have imposed banking constraints via reasonable expiration limits or devaluation requirements, and unsold or expired surplus allowances would have been retired.

---

[4] IEMAC 2024 Annual Report, pages 43 and 45
https://calepa.ca.gov/wp-content/uploads/2025/02/2024-ANNUAL-REPORT-OF-THE-IEMAC-final.pdf#page=43
[5] Feb 26, 2025 presentation to the JLCCCP, slide 13
https://climatechangepolicies.legislature.ca.gov/system/files/2025-02/jlcccp_carb_2_26_25.pdf#page=13
[6] Feb 26, 2025 presentation to the JLCCCP, slides 9-10
https://climatechangepolicies.legislature.ca.gov/system/files/2025-02/jlcccp_carb_2_26_25.pdf#page=9

The difference between the allowance removals for the Scoping Plan's 48% target (264 million) and the Proposed Amendments' 40% target (118 million) is 146 million, which is less than half of the current number of banked allowances in circulation. The Proposed Amendments' inability to adhere to the Scoping Plan's 48% target can be attributed to unconstrained banking, and more fundamentally, to CARB's cost-centric regulatory paradigm. If CARB had limited banking and set the price floor in the mid-range of initial allowance price expectations, then the 2020 target could have been achieved even earlier than 2016 and California could have been much further along in achieving its 2030 and 2045 climate goals. (In 2010, CARB expected allowance prices in 2020 to be in the $15-$30 range, in 2007 dollars, which translates to $19-$37 in 2020 with inflation.[7] Actual prices in 2020 were at about $17, very close to the price floor.[8]) A higher price floor would mitigate excessive banking and market speculation.

The ISOR notes on page 330 that "Staff rejected Alternative 1 because, while it meets the 40% GHG emissions reduction target for 2030, it is not aligned with the 2022 Scoping Plan Update modeling that suggests additional reductions are needed to be on a course with a high likelihood of meeting 2045 statutory targets." The Proposed Amendments similarly revert to the 40% target, and would thus also seem to be "not aligned with the 2022 Scoping Plan Update modeling". A higher price floor could potentially incentivize GHG reductions closer to the Scoping Plan target and increase the likelihood of meeting 2045 statutory targets.

CARB has not adequately explained or substantiated the Proposed Amendments' purported cost-effectiveness.

The ISOR asserts that "The Cap-and-Invest Program is the most effective policy for providing a uniform framework to reduce GHGs across economic sectors. ... The Program is designed to achieve the most cost-effective statewide GHG emissions reductions." (page 17) CARB has made similar claims, for example, at the February,

[7] 2010 Cap-and-Trade regulation, Appendix N, page N-12 and N-6
https://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm
https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/capv4appn.pdf#page=12
[8] https://ww2.arb.ca.gov/sites/default/files/2020-11/nov_2020_summary_results_report.pdf#page=4

2025 JLCCCP hearing.[9] Such claims have also been echoed by politicians and stakeholders; for example, Assemblymember Irwin has characterized California's Cap-and-Trade program as "the strongest, most cost-effective emissions reduction program in the world."[10]

These claims are stated declaratively without substantiation, but they may be empirically based on California's attainment of its 2020 Cap-and-Trade target with allowance prices close to the price floor over almost the entirety of the pre-2020 compliance period. To the extent that "cost-effective" connotes "low-cost", the Cap-and-Trade system could have been even more cost-effective without a price floor.

Low allowance prices are a natural consequence of the role that Cap-and-Trade has traditionally played as a backstop to other policies (the LCFS, RPS, ZEV mandates), which have been primarily responsible for achieving Cap-and-Trade GHG reduction targets. If those policies succeed in achieving or surpassing statewide reduction goals, then Cap-and-Trade allowance budgets would exceed industry's need for allowances, and the allowance over-allocation will result in low prices. Low allowance prices are a manifestation not of the innate "cost-effectiveness" of Cap-and-Trade, but rather of the efficacy of other programs (or the impact of economic conditions) in obviating the need for Cap-and-Trade to regulate emissions.[11]

However, low allowance prices in the context of Cap-and-Invest would result in revenue shortfalls and insufficient funding to support statutory budget allocations. The success of Cap-and-Invest as an investment vehicle would perversely rely on the failure of other policies to achieve or exceed cap targets.

---

[9] A Public Records Act request [PRA request #080-022825] was submitted to CARB for "records and information supporting Rajinder Sahota's representation to the legislature in the February 26, 2025 JLCCCP hearing that 'a cap-and-trade program is more cost-effective, four to six times more cost-effective than those other options of a carbon tax or prescriptive regulations'." In response to the request, CARB supplied the following documents, which do not appear to provide evidentiary support for CARB's representation:
- A copy of a web page dated June 11, 2018 and titled "Cap-and-Trade benefits all Californians" https://ww2.arb.ca.gov/resources/fact-sheets/cap-and-trade-benefits-all-californians
- The 2022 Scoping Plan with Appendices https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents
- CARB's PowerPoint presentation from the February 26 JLCCCP hearing https://climatechangepolicies.legislature.ca.gov/system/files/2025-02/jlcccp_carb_2_26_25.pdf
- An Excel spreadsheet dated Nov 14, 2022 and titled "CARB Scoping Plan Model Outputs" https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-PATHWAYS-data-E3.xlsx

[10] https://a42.asmdc.org/sites/a42.asmdc.org/files/2025-09/press_release_-_ab_1207_final_9-18-25.pdf

[11] Mastrandrea et al. "Assessing California's progress toward its 2020 greenhouse gas emissions limit." Energy Policy 138 (2020): 111219. https://doi.org/10.1016/j.enpol.2019.111219

The conflict between the competing policy objectives of cost-effectiveness and revenue generation can be resolved by establishing a price floor at a level consistent with funding requirements. The price floor has provided price stability and sustained GGRF funding in the pre-2020 compliance period, but it needs to be increased to support current SB 840 budget requirements.

The Proposed Amendments would not ensure a "stable and steadily increasing price signal" conducive to long-term planning for GHG emission reduction investments.

The ISOR makes a number of assertions about the purported "stable and steadily increasing price signal" of Cap-and-Invest:

> "A steady decline in allowance supply over time ensures a long-term steadily increasing carbon price signal to prompt GHG emissions reduction to achieve the statewide target. Long-range budgets allow for long-term business planning for investment in low carbon energy and technology." (page 17)
>
> "... In a well-designed market, these cumulative budgets enable a stable carbon-price signal reflective of the marginal abatement costs of GHG emissions reduction, and covered entities can plan long-term investments and compliance strategies that support achieving the State's goals." (page 34)
>
> "Together, the counterbalancing removals and releases of allowances are expected to provide the market with an overall steady source of allowances resulting in more steady prices and more stable auction proceeds. ... The regulatory certainty and carbon price imparted by establishing budgets through 2045 supports long-term planning for GHG emission reduction investments." (page 35)

Similar talking points are made by politicians, e.g., in Governor Newsom's 2025-26 State Budget, which asserted that Cap-and-Invest would "enable a stable and predictable price on carbon pollution to drive deeper investments in carbon reduction and clean technologies …"[12]

These unsubstantiated statements have no basis in economic theory or empirical reality. The marginal abatement cost of GHG emissions reduction can depend strongly on allowance supply in markets with price-inelastic demand, resulting in high market

[12] California's 2025-26 State Budget, "Climate Change and Environment" chapter, page 30
https://ebudget.ca.gov/budget/e/2025-26/BudgetSummary
https://ebudget.ca.gov/2025-26/pdf/Enacted/BudgetSummary/ClimateChangeandEnvironment.pdf#page=2

volatility. See, for example, Borenstein et al, 2019.[13] Banking is generally employed to try to mitigate the inherent price volatility of Cap-and-Trade systems, although market speculation can exacerbate market instability.

Allowance prices in the California market collapsed from a high of over $40 in early 2024 to the price floor of $26 in 2025 and were expected to rebound after reauthorization of Cap-and-Trade[14], but the November 2025 auction settlement price was hardly changed from the prior quarter. A new analysis from Greenline Insights and the Environmental Defense Fund[15] projects allowance prices at the price floor from 2030 through 2040, in sharp contradistinction to a UC Davis study commissioned by CARB in 2023, which projected allowance prices at or near the ceiling[16] over the same time frame. It is impossible to efficiently plan investments when long-term allowance price projections range from the price floor to the ceiling.

The ISOR asserts on page 21 that "... the basic framework of the [Cap-and-Trade] Program ... continues to support a stable and steadily increasing price signal, as demonstrated in Figure 4 …" But Figure 4 actually demonstrates unstable and volatile allowance prices in recent years. The only time the price signal has been "stable and steadily increasing" is when it was following the price floor prior to 2020. The ISOR is oblivious to the essential role that the price floor has played in stabilizing allowance prices and GGRF funding, and it gives no consideration to how the price floor can be adapted to continue this vital role going forward.

The Proposed Amendments lack a viable strategy for addressing the problem of climate change.

Section II.A of the ISSOR, titled "The Problem that the Proposal Is Intended to Address," outlines multiple climate impacts that California is experiencing, which will continue to worsen without "dramatic action to reduce GHG emissions." Such impacts are manifestations of atmospheric GHG concentrations, which will not be materially impacted by California's efforts to reduce statewide emissions unless those actions are part of, or are an inducement to, global-scale action to stabilize atmospheric GHG levels.

---

[13] Borenstein, Severin, et al. "Expecting the unexpected: Emissions uncertainty and environmental market design." American Economic Review 109.11 (2019): 3953-3977. https://www.nber.org/system/files/working_papers/w20999/w20999.pdf

[14] Report: "Money Left on The Table …," Clean & Prosperous California https://www.cleanprosperousca.org/reports

[15] https://www.greenlineinsights.com/carb-oct-29th-workshop-analytical-response-2025

[16] https://ww2.arb.ca.gov/sites/default/files/2023-11/nc-combinedSlides_Nov162023.pdf#page=34

The ISOR highlights emissions trading, with inter-jurisdictional linkage via the Western Climate Initiative (WCI), as a model for regional and international collaboration on combatting climate change. (ISOR, page 20) The WCI's membership included a dozen U.S. states and Canadian provinces in 2008, almost all of whom soon withdrew from the consortium, leaving Quebec as California's sole WCI trading partner.

Over the past decade, Quebec has paid out approximately $2 billion to California for allowances and offsets.[17] It is not clear what benefit Quebec has received for its $2 billion, or why the funds would not have been better spent on decarbonizing Quebec's own economy pursuant to its GHG target of net-zero by 2050. California should not need subsidization from Quebec to incentivize emissions reductions beyond minimal statutory requirements.

The environmental integrity of Quebec's Cap-and-Trade allowances and offsets is dependent on California enforcing its GHG caps, but there is no guarantee that California will do so. The caps are preempted by the AB-398 price ceiling, and AB 1207 effectively directs CARB to not enforce the caps if, in CARB's judgment, the price ceiling does not adequately protect California consumers. (HSR 38562(c)(2)(A)) CARB's rejection of the Governor's proposed 55% reduction target for 2030 (ISOR Alternative 2) was premised on a Price Assumption at the APCR 1 Price (ISOR Table 21), so allowance prices significantly in excess of the APCR 1 level would likely be deemed to be inadequately protective of consumers.

Even if CARB enforces caps at high allowance prices, probably very few other states or nations would follow California's lead, and California's failure to decarbonize at low cost could deter climate action by other jurisdictions. The best way that California can lead global action on climate change is to facilitate rapid, economywide adoption of zero-carbon technologies such as renewable energy, electrification, and associated infrastructure, which can outcompete fossil fuels and provide positive economic benefits after the initial investment hurdle has been overcome. A higher near-term price floor could provide adequate and stable early investment funding to support expedited economywide decarbonization.

The cement industry illustrates one example of how California's actions could have far-ranging impacts on global decarbonization. Cement only accounts for 2% of statewide GHG emissions, but CARB's policies could help bring zero-carbon cement to the point of commercial viability in the global cement market, which is 400 times larger than the California market and accounts for 7% of global GHG emissions.

[17] https://ww2.arb.ca.gov/sites/default/files/2022-12/nc-Article_8_Net_Flow_Report.pdf

The Proposed Amendments broaden the regulatory definition of “cement” so that zero-carbon cement will qualify for output-based allocation. (ISOR page 62) At a $28 Cap-and-Invest allowance price, this would provide zero-carbon cement a subsidy of around $17 per ton-cement in 2026. At a $47 price (CARB’s Price Assumption for the Proposed Amendments), the subsidy would be about $29 per ton-cement. CARB’s SB 596 cement strategy[18] could assume subsidization at this level (with the Cap Adjustment Factor and price floor inflator applied) if the Cap-and-Invest price floor were set to the Price Assumption level.

More significantly, zero-carbon cement could benefit from GGRF funding that could be made available with a higher price floor. The cement industry currently contributes to the GGRF through allowance purchases, but does not not get any GGRF support. An adequately financed GGRF could provide support, e.g., in the form of advance procurement commitments (APCs) to supply zero-carbon cement for California’s High-Speed Rail project. (At least one supplier, Brimstone, is developing a zero- or negative-carbon cement product that fully qualifies as an engineering substitute for ordinary portland cement.[19])

The LAO estimates that $4.3 billion in annual GGRF revenues is necessary to fully fund SB-840 allocations.[20] The November 2025 allowance auction brought in $844 million in quarterly revenue at an allowance price of $28.32, implying that a price of $36 would be required to fully support SB 840. A price floor at the $47 level of CARB's Price Assumption would provide a stable annual surplus of about $1.3 billion, which could be directed to programs such as zero-carbon cement APCs that have significant potential to impact atmospheric GHG levels. The funding allocation would be determined legislatively, but CARB’s regulatory policy could ensure stable and sufficient funding for California’s climate programs.

The most “dramatic action” that CARB can take to reduce GHG emissions would be to establish a Cap-and-Invest price floor sufficient to finance California's transition to a sustainable economy.

---

[18] https://ww2.arb.ca.gov/our-work/programs/net-zero-emissions-strategy-cement-sector
[19] CARB’s October 20, 2022 SB-596 workshop presentations https://ww2.arb.ca.gov/our-work/programs/net-zero-emissions-strategy-cement-sector/net-zero-emissions-strategy-cement
[20] https://lao.ca.gov/Publications/Report/5096