Re: California Carbon Market Collaborative Comments for CARB's Informal Workshop on Potential Amendments to the Cap-and-Trade Program

The California Carbon Market Collaborative (CCMC) appreciates the opportunity to provide public comment on the California Air Resources Board's (CARB) informal workshop on potential amendments to the Cap-and-Trade (C&T) Program held on 23 April 2024. This comment letter should be read together with our letters submitted to CARB on 17 August 2023, 26 October 2023, 15 December 2023, 08 May 2024 and 21 June 2024.

Elevate Climate convenes the CCMC in support of the design and implementation of an ambitious and equitable California C&T Program through 2045 and beyond. The CCMC gathers a wide array of C&T stakeholders to deepen mutual understanding and undertake careful examination of key Program design features. Participants of the CCMC include Environmental Defense Fund, Liminality Capital LP, and Pacific Gas & Electric.

1. **The CCMC puts forward two proposals for implementing changes to allocation in a timely manner during 2025 rather than waiting until 2026 as CARB outlined during the workshop.**

CARB has consistently messaged that the cap-and-trade rulemaking would be finished by the end of this year. Therefore, CARB surprised stakeholders and market participants during the workshop by revising the timeline for a completed rulemaking to "early 2025".

If the cap-and-trade rulemaking does conclude in early 2025, then according to the approach outlined by the workshop, CARB will not be able to influence 2025 cap levels because allowance allocations for 2025 must be determined by early December 2024 for auctioned allowances and 24 October 2024 for many compliance entities. Therefore, the updated timeline means that CARB won't be able to influence cap levels until 2026.

If CARB's current approach remains unchanged, then a delay of a few months for the rulemaking will cause an exacerbated delay of a year or more on allowance supply and demand, which has contributed to allowance prices recently dropping to their lowest level in over a year.

The CCMC created two options that would allow CARB to influence 2025 allocations even if the rulemaking is completed *during* 2025. The first option applies to auctioned allowances in 2025 and the second option applies to allowances allocated in 2025. The CCMC recommends implementing both proposals simultaneously. Both options offer the following benefits:

- Incentivizing earlier emissions reductions starting in 2025 rather than in 2026.
- Allowing CARB to maintain the effect of its original rulemaking timeline by facilitating changes to cap levels in 2025 rather than 2026.
- Facilitating a productive legislative discussion about extending cap-and-trade that is based on an updated regulation rather than leaving open a regulatory process that runs in parallel with legislative extension, thereby introducing unnecessary complexity and further uncertainty.
- Providing cost relief to compliance entities by spreading either 180 million allowance removals (Option 1 in CARB's workshop slides) or 265 million allowance removals (Option 2 in CARB's workshop slides) over six years between 2025 and 2030 rather than five years between 2026 and 2030. This approach would reduce the average annual cap decline from ~10 to ~8 percent under Option 1 and from ~14 to ~12 percent under Option

2 compared to the ~4 percent in the current regulation. In this way, the proposals would offer a less aggressive cap decline factor to compliance entities *without* increasing GHG emissions.

- Note that cumulative allocated and cumulative auctioned allowances between 2025 and 2030 would remain the same compared to the options proposed by CARB in their July workshop.

Proposal One: Pulling Allowance Removals Forward Via Auctions in 2025

Under this proposal, CARB could simply "pull forward" allowance removals into the 2025 auctions from any future auction. For example, CARB could decrease the quantity of allowances available at auction in 2025 and increase the quantity of allowances available at auction in 2030 by the same amount.

In terms of timing, CARB could simply change the quantity of allowances available at all remaining auctions in 2025 after the current rulemaking finalizes. For example, if CARB does not finalize an updated rule in time for the February auction, then CARB can change the quantity of allowances in the remaining three auctions for 2025 in May, August, and November.

This proposal would be straightforward to implement given that there are at least ten historical examples where CARB made mid-year changes to auctions without causing market disruption including modifying dates and updating the quantity of allowances offered without causing market disruption. Additions to regulatory language could further facilitate this proposal insofar as they are necessary.

While Proposal One would result in a lower quantity of auctioned allowances available in 2025, we note that if allowance prices appreciate in response to a "timely" implementation (instead of the "delayed" implementation in 2026 as proposed in the Workshop) then revenues for the greenhouse gas reduction fund could *increase* under Proposal One.

Proposal Two: Adjust Allowance Allocations for 2026

Under the current regulation, allocations for 2026 are distributed to compliance entities on 24 October 2025. Under Proposal Two, allocations for 2026 in the current regulation would be made subject to an "adjustment" when the ongoing rulemaking finalizes. That adjustment would represent a negative allocation that takes effect on 24 October 2025. In this way, the net allocation to compliance entities on 24 October 2025 would decrease by the level of the adjustment.

Equation 1 describes that net allocation for 2026 under Proposal Two would be the sum of (1) allocations to be distributed on 24 October 2025 according to the current regulation and (2) an adjustment to allocation that takes effect when the ongoing rulemaking finalizes. Note that the adjustment would be smaller than the allocation in the current regulation such that net allocation for 2026 remains positive.

Equation 1
Updating Allowance Allocations for 2026 Using an Adjustment

$$\begin{aligned} &Net\ Allocation\ for\ 2026 \\ &= (Allocation\ to\ be\ Distributed\ on\ 24\ October\ 2025\ According\ to\ Current\ Regulation \\ &- Adjustment\ to\ Allocation\ from\ Updated\ Regulation) > 0 \end{aligned}$$

There are provisions in the current regulation with similarities to the concept of adjustment described above. For example, Section 95890(k) outlines conditions under which covered entities must return allocations. As another example, Section 95892(a)(3) directs CARB's Executive Officer to retire a portion of allocation to the electric sector to account for Energy Imbalance Market purchaser emissions. For these reasons, we believe Proposal Two fits into CARB's current approaches to related issues.

The CCMC believes that Proposal Two should be relatively straightforward to implement for sectors receiving allocations based on cap adjustment factors. Additions to regulatory language could further facilitate this proposal insofar as they are necessary.

2. The CCMC continues to support the removal of 265 million allowances between 2025 and 2030 from allocation and auction pools.

Consistent with comment letters submitted to CARB on 08 May 2024 and 21 June 2024, the CCMC supports the removal of 265 million allowances between 2025 and 2030 from the allocation and auction pools. This level of removals would ensure that the C&T program plays at least a proportional role in California's climate policy mix according to the 2022 Scoping Plan. Moreover, as first outlined in a comment letter submitted to CARB on 17 August 2023, the CCMC continues to support the cap-and-trade program playing an increasing role in California's climate policy mix for the following reasons.

a. California's Cap-and-Trade Program is Environmentally Effective and Economically Efficient

First, the California C&T program reduces greenhouse gas emissions at approximately 30 dollars per ton, which is substantially lower than the social cost of carbon. In addition, C&T programs offer greater emissions certainty and provide a market signal to find least-cost reductions.

b. California's Cap-and-Trade Program Lowers Local Air Emissions

Second, the CCMC argues that lower cap levels imply local air emissions reductions, thereby supporting environmental justice outcomes. This notion was identified in 2016 by a group of academics including Dr. Manuel Pastor (USC) and Dr. Rachel Morello-Frosch (UC Berkeley) who theorized that "as regulated industries adapt to future reductions in the emissions caps, California is likely to see more reductions in localized greenhouse gas emissions and co-pollutant emissions".[1]

However, statistically "proving" that the C&T program reduces local air emissions has been complicated by the difficulty in identifying reliable control and treatment groups, a prerequisite to robust statistical studies. That difficulty stems from the fact that California implements several dozen climate policies simultaneously, making it complex to parse the "signal" from the C&T program from the "noise" of all other policies reducing local air emissions. For this reason, most studies to date have only been able to make claims about the *correlation* between the C&T program and local air emissions rather than directly answering the question of whether the C&T program *causes* a reduction in local air emissions.

[1] Cushing, Lara, Wander, Madeline, Morello-Frosch, Rachel, Pastor, Manuel, Zhu, Allen and James Sadd. 2016. "A Preliminary Environmental Equity Assessment of California's Cap-and-Trade Program". Research Brief by UC Berkeley, Occidental College, and USC.

Recently, two causal studies were published that in CCMC's view represent the best available scientific evidence answering the question of whether the C&T program changes local air emissions. First, Hernandez-Cortes and Meng (2023) find that "during 2012–2017, the C&T program reduced emissions annually at a rate of 9%, 5%, 4%, and 3% for GHG, PM2.5, PM10, and NOx, respectively, for the average sample regulated facility."[2] A presentation from Dr. Manuel Pastor at a 18 July 2024 meeting of the Environmental Justice Advisory Committee (EJAC) revised the Hernandez-Cortes and Meng (2023) study by among other things using an updated dataset, finding the C&T program reduced emissions annually at a rate of 3.2%, 2.3%, 0.7% and 0% for GHG, PM2.5, PM10, and NOx, respectively. Second, Sheriff (2023) finds that "minority communities experienced a relative reduction in cumulative exposure from [air toxic releases]" caused by the California C&T Program.[3] In conclusion, the CCMC believes based on the best available scientific evidence that lowering caps also lowers local air emissions.

In summary, the CCMC reiterates that removing 265 million allowances rather than 180 million allowances will likely lead to lower local air emissions including for disadvantaged communities. There are many other options for reducing local air emissions that are also worthy of further consideration[4] although since CARB is actively considering cap levels it is the CCMC's view that the most direct approach to securing lower local air emissions in the context of this rulemaking is to support the lowest cap level under consideration.

c. Allowance Banking Allows for Smoothing of Costs Over Time

Third, the allowance banking feature within the cap-and-trade program allows for smoothing of costs over time which helps avoid unnecessary shocks to prices. This is a feature that is unique to certain types of market-based programs.

d. The California Climate Credit Protects Affordability in the Electric Sector

Fourth, affordable electricity prices are important to California's decarbonization. For example, the 2022 Scoping Plan highlighted the importance of electrification in getting California to carbon neutrality by 2045. As another example, Dr. Meredith Fowlie's testimony to the Joint Legislative Climate Change Committee earlier this year highlighted how important electricity affordability is in driving electrification in the state.

Fortunately, the California C&T program is designed to protect electricity ratepayers, thereby limiting affordability impacts on households. Specifically, the California Climate Credit is part of the California C&T program. As the Governor's Office has pointed out, the California Climate Credit delivers "real climate action while giving you money back on your utility bills" and provides relief that "support[s] millions on California's families".[5]

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[2] Hernandez-Cortes, Danae and Kyle Meng. 2023. "Do Environmental Markets Cause Environmental Injustice? Evidence from California's Carbon Market." *Journal of Public Economics* 217: 104786.

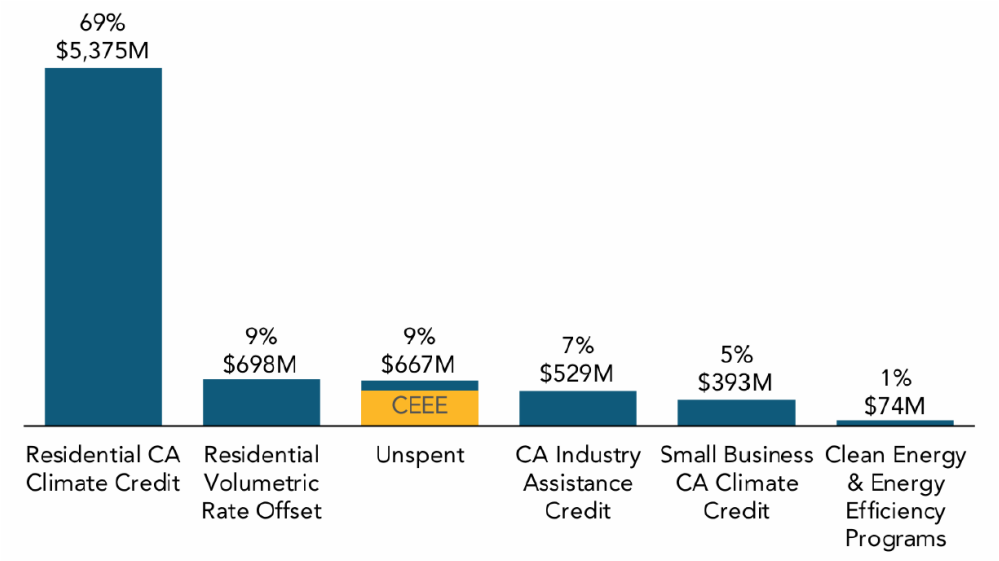
[3] Sheriff, Glen. 2023. "California's GHG Cap and Trade Program and the Equity of Air Toxic Releases". *Journal of the Association of Environmental and Resource Economists*.

[4] Including but not limited to more funding for air quality policies and targeted funding for projects that reduce local air emissions. These and other approaches have been discussed at recent meetings of the Environmental Justice Advisory Committee and the Independent Emissions Market Advisory Committee.

[5] Governor Gavin Newsom. 2024. "Californians to Get Average of $146 in Credits on their April Utility Bills Thanks to State's Climate Program". Available here: Millions of Californians to Get Average of $146 in Credits on their April Utility Bills Thanks to State's Climate Program | Governor of California.

The California Climate Credit provisions of the current regulation consign allowances to electric investor-owned utilities (IOUs) and proceeds must be used to benefit ratepayers consistent with the goals of Assembly Bill 32. As illustrated in Figure 1, the majority of IOU allowance value is returned to electricity ratepayers as California Climate Credits, which show up as rebates on consumer electricity bills in April and October annually. From 2013 – 2021, the total allocated allowance value was $7.74 billion, of which $5.38 billion (69%) went directly to California residents via the California Climate Credit.

Figure 1
IOU Use of Allocated Allowance Value from 2013 to 2021
Source: Cap-and-Trade Program Summary of 2013-2021 Electrical Distribution Utility Use of Allocated Allowance Value



e. The California Climate Credit Should Be Updated to Further Benefit Low-Income and Disadvantaged Communities by Disproportionately Lowering Their Net Electricity and Natural Gas Bills

Fifth, the CCMC reiterates that the California Climate Credit should be redesigned to disproportionately target rebates in low-income and disadvantaged communities, rather than returning rebates lump-sum across all households, per the provisions in the current regulation. This would further benefit low-income and disadvantaged communities by increasing the size of the rebate and thereby further reducing their net electricity bills. Protecting lower-income communities from high electricity bills is especially important because Borenstein et al. (2022)[6] show that higher electricity prices are more regressive than higher gasoline prices or higher income taxes. To that end, the CCMC repeats its assertion in our 26 October 2023 letter to CARB that the California Climate Credit could be updated to increasingly target lump-sum distributions

[6] Borenstein, Severin, Fowlie, Meredith, and James Sallee. 2022. "Paying for Electricity in California: How Residential Rate Design Impacts Equity and Electrification". WP-330 UC Energy Institute at Haas.

to low-income and/or disadvantaged electric and natural gas ratepayers to further channel revenue toward progressive outcomes.

3. Conclusion

The CCMC thanks CARB for the opportunity to provide public comment and looks forward to further engaging with CARB. Please direct any comments or questions to Clayton Munnings, Co-Founder of Elevate Climate, at clayton@elevateclimate.com.

Sincerely,

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Elevate Climate