



July 7, 2023

Ms. Liane Randolph
Chair, California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comments on June 14 CARB workshop regarding updates to California's Cap-and-Trade Program

Dear Chair Randolph,

On behalf of Environmental Defense Fund (EDF), we appreciate the opportunity to provide comments on the June 14, 2023 workshop on updates to the California Cap-and-Trade Program. EDF recognizes this is the beginning of a significant undertaking by CARB staff and we look forward to ongoing engagement through the informal and formal processes. These comments respond to several of the proposals put forward in this initial workshop, as well as considerations we recommend CARB take up at future workshops.

As CARB knows, **this decade is a critical time for California, and the world, to dramatically reduce greenhouse gas emissions.** Avoiding the worst impacts of climate change will require securing as many reductions as possible as early as possible to stay within the carbon dioxide budgets identified by the Intergovernmental Panel on Climate Change (IPCC) to limit global warming to 1.5°C, a grave milestone that the world could reach as early as 2030. Fortunately, due to decades of state climate leadership including at CARB, California already has many of the tools and certainly the opportunity to increase ambition, right now, in addressing climate change.

The June 14 workshop rightfully recognized that there is an opportunity for greater ambition in the cap-and-trade program specifically. CARB must ensure that the emissions cap be calibrated to achieve at least the 48% reduction by 2030 that the Scoping Plan determines is necessary to meet net-zero by 2045 target. At the same time, EDF recommends that CARB consider several additional design features that could support greater climate ambition, market stability, and reductions in local air pollution. Lastly, any changes to the cap-and-trade must go into effect absolutely no later than January 1, 2025 to ensure sufficient time to meet the 2030 emission reduction goal.

Emissions cap must be aligned with 2030 emission reduction goal as modeled in the 2022 Scoping Plan to be the necessary backstop.

EDF supports CARB's plan to evaluate multiple allowance budget scenarios, including allowance budgets that would reduce near-term emissions 40%, 48%, or 55% below the 1990 level by 2030 and achieve an 85% emission reduction by 2045. Considering both the result of that modeling, the

emissions trajectory necessary in the Scoping Plan, and the urgency of near-term reductions, **EDF urges CARB to move forward in the formal rulemaking with a cap adjustment to achieve at least a 48% emission reduction by 2030.**

To effectively minimize climate damages, California must rapidly cut climate pollution in this decade. The sooner California cuts emissions, the greater the cumulative reductions — and the easier it becomes to ensure California is on a reduction trajectory consistent with what climate science demands. EDF is enthusiastic that CARB is evaluating allowance budgets that could not only enable California to meet its 2030 climate target, but also increase the program’s near-term ambition by accelerating emissions cuts in this decade.

This increased ambition is especially important as the cap-and-trade program plays an important role in providing an emissions backstop to keep California on track to its climate goals. **When well-designed, a firm, declining cap on emissions provides the greatest possible certainty of meeting greenhouse gas reduction targets.** This pollution limit, set by the emissions budget for covered sources, is the most essential feature of the cap-and-trade program. The 2022 Scoping Plan rightly considered the role of the cap-and-trade program as the tool to close the gap between expected abatement from sectoral policies and the emission cuts necessary to achieve reductions consistent with the state’s goals. The relative role of the cap-and-trade program compared to sector-based policies as the “primary driver” for emission reductions is less important than the role the cap plays in ensuring that emissions do not exceed the allotted budget, and the stringency of the budget itself. If other programs help achieve greater reductions than expected, then there is less pressure on the cap; but if other programs deliver fewer reductions, the cap remains the state’s “insurance policy” to make sure emissions continue to decline at the pace required.

To function effectively as the backstop, the emissions budget must be calibrated to ensure that cumulative emissions in California, at a minimum, do not exceed emissions allowed under a linear trajectory from 2020 to 2030 targets, factoring in any previously “banked” allowances that may be retired for compliance in the upcoming years. Moreover, CARB should use the emissions projections developed for all California emissions sources — including sectors outside the cap — to ensure that the allowance budget in the cap-and-trade program is stringent enough to accommodate any potential growth in emissions from uncapped sectors and still secure the cumulative reductions necessary. In other words, if an increase is projected in uncapped sectors even given any existing or likely future complementary policies, the budget should be reduced in order to ensure the capped sectors overperform and reduce additional emissions to accommodate any projected increase in uncapped sectors. EDF again applauds CARB for evaluating allowance budget adjustments and urges CARB to move forward with an allowance budget that achieves at least a 48% economy-wide emission reduction by 2030.

Consider opportunities to update cap-and-trade program design for greater climate ambition and local air pollution reductions.

Both the Independent Emissions Market Advisory Committee and the Environmental Justice Advisory Committee have made numerous recommendations on the design of the cap-and-trade program. EDF appreciates these recommendations and engagement with CARB staff and urges consideration of many of these recommendations and other potential updates in the upcoming rulemaking.

- *Facility-specific caps in overburdened communities:* While the cap-and-trade program was not designed to address local air pollution, only global greenhouse gas emissions, it is

increasingly clear that considering conventional air pollutants in program design decisions is not only valuable — due to the ongoing and significant air pollution in California, especially in the most disadvantaged communities — but also possible. As we transition to a clean energy economy, it is crucial that the benefits of the cap-and-trade program are widely distributed, with a priority given to those who bear the brunt of pollution and climate change impacts. **To ensure a reduction in greenhouse gas emissions and co-pollutants in communities burdened by air pollution, EDF urges CARB to consider, including through a public workshop, the imposition of specific emission reduction requirements on individual pollution sources.** While this approach would somewhat limit the compliance flexibility inherent to a cap-and-trade program, the creation of facility-level emission caps on stationary sources in the most overburdened communities will help ensure that local air pollution benefits are realized alongside climate benefits. This targeted approach would hold facilities accountable for their contributions to cumulative air pollution burdens but could be designed to maintain certain other compliance flexibility and cost containment strategies.

In an upcoming report, Resources for the Future considers the role and impact of facility-specific emission caps in the California program. They find that overall, emissions of both greenhouse gases and conventional air pollution declined at a faster rate in disadvantaged communities compared to the state as a whole. However, there are notable exceptions in some of the most urban areas and of course significant disparities still exist between disadvantaged and non-disadvantaged communities in California. RFF also finds that had facility-specific emission caps been implemented from the start of the cap-and-trade program, California would have realized approximately an additional 3.5% greenhouse gas reductions compared to what we have actually achieved, and over 2% additional reductions in both NO_x and SO_x in disadvantaged communities. At the same time, the impact on the carbon market itself would be relatively minimal in terms of allowance price. The details of such a design change matter greatly and RFF's paper considers several important ones, such as adjustments to allowance budgets to help prevent emission increases in other communities. EDF strongly encourages CARB to publicly consider this program feature to address local air pollution.

- ***Emissions containment reserve (ECR):* EDF recommends that CARB incorporate an ECR into its program,** leveraging the frameworks already established in Washington's Climate Commitment Act (CCA) and the Regional Greenhouse Gas Initiative (RGGI). Like the existing Allowance Price Containment Reserve, an ECR would adjust the supply of allowances available at auction in response to the price. If auction prices remain near the price floor, then fewer allowances are available for purchase, representing a temporary tightening of the emissions cap.

The benefit of this approach is that it is predictable based on auction settlement prices and represents a modest increase in climate ambition when emission reductions are relatively inexpensive. Allowances not offered for sale now represent emissions that are not occurring now, and if those allowances are then permanently retired, then California is achieving greater cumulative emission reductions. Importantly, if allowances are not permanently retired, they may be added to the market to permit additional emissions later in the decade. Thus, to increase the ambition of the cap-and-trade program, an ECR should permanently remove excess allowances.

- ***Bring offsets under the cap:*** EDF recommends that CARB consider counting offsets underneath the emissions cap, instead of in addition to the emissions cap. This approach was pursued in Washington, where the issuance of new allowances will regularly be reduced to reflect offset usage. Another way of thinking about this is that the annual budget of compliance instruments is inclusive of both allowances and offsets, rather than only an annual budget of allowances (with offsets adding to compliance instruments beyond the emissions budget). This approach represents an increase in climate ambition across the cap-and-trade program as there would no longer be the additional compliance instruments (offsets) outside of the emissions cap.

The additional benefit of this approach is that it preserves the opportunity for emission reductions in sectors not subject to a compliance obligation under cap and trade such as forestry and agriculture and maintains the price signal to take on conservation and other traditional offsetting practices. This in turn preserves the social and environmental benefit those practices can provide to tribes, local communities and ecosystems. At the same time, this approach ensures that should offsets in the market be found to be of low-quality, they are contained underneath the emissions cap and the overall integrity of the program is maintained.

Begin exploring potential market linkage with other jurisdictions.

California's cap-and-trade program has had a long and successful linkage with Quebec under the Western Climate Initiative. By creating a larger market, linked jurisdictions can achieve emission reductions at a lower cost because of the expanded base of each jurisdiction's emission reduction opportunities, which in turn enables increased climate ambition. In addition to the significant climate benefits of a linked market, expanding the market would enhance market stability by mitigating price shocks and fostering confidence in the system. This would provide a greater level of certainty in achieving climate goals while reducing the economic burden on individual jurisdictions. **EDF encourages CARB to use this rulemaking as an opportunity to consider linkage with other jurisdictions - specifically Washington and New York.**

Washington is engaging in a public process to consider the benefits and impacts of linkage for themselves, and EDF encourages CARB to take a similar approach as part of the current rule-making process. While a joint analysis between EDF and the International Emissions Trading Association found the two jurisdictions are largely aligned already, this process could include exploring additional steps or potential program adjustments that may be beneficial to facilitate potential future linkage with Washington or other jurisdictions.

California has been a strong leader in developing a carbon market capable of ensuring emission reductions on the pace and scale required and generating significant revenue for the state to invest in programs to further reduce greenhouse gas emissions and address environmental inequity. With Washington's launch of their cap-and-invest program and New York actively considering a similar program, California has a unique opportunity to enhance its leadership with an expanded carbon market. As with all good partnerships, this process will take time, research and analysis, negotiation and compromise - but this is a process worth undertaking to realize the myriad benefits of linkage and to further elevate California's climate leadership.

Robust and differentiated protocols are required for carbon capture and storage (CCS) and carbon dioxide removal (CDR)

CARB staff presented at the June 14, 2023 workshop that the upcoming cap-and-trade program rulemaking may evaluate the role of carbon capture and storage (CCS) and carbon dioxide removal (CDR) strategies in the cap-and-trade program. CCS generally refers to technologies that capture carbon pollution at the point where it is emitted from industrial facilities or power plants, and then securely and permanently store the captured carbon. CDR encompasses a range of strategies that drawdown carbon pollution from the atmosphere, including natural carbon sinks (such as forests and soil) as well as engineered carbon removal (such as direct air capture).

If deployed with robust environmental justice protections, environmental integrity, and as part of a full suite of climate strategies, both sets of strategies may play a role in achieving California's climate goals by reducing or avoiding carbon emissions to the atmosphere. However, in order to effectively incorporate these strategies into California's cap-and-trade program, it will be essential for CARB to develop rigorous protocols that ensure any carbon captured from point sources or the atmosphere is stored—securely, verifiably, and permanently—before these activities can reduce a compliance obligation or generate offsets. The viability of these strategies as compliance mechanisms hinges on having in place robust protocols through which operators demonstrate the volumes of carbon that have been securely stored. Protocols must also uphold all the community protections enshrined in SB 905 (2022, Caballero & Skinner) including protection of local air and water quality, community engagement, ongoing monitoring, etc.

Moreover, it is important to recognize the distinction between CCS and CDR in the program: deploying CCS at a point-source can reduce the amount of CO₂ a facility releases to the atmosphere and thus reduce the facility's compliance obligation. By contrast, CDR strategies remove carbon pollution that is already in the atmosphere (regardless of its source) but does not affect the amount that facilities directly emit to the atmosphere, nor their compliance obligations. Incorporating CCS into the cap-and-trade program most likely involves stringent reporting and verification of captured and securely stored carbon which is then subtracted from an entity's compliance obligation. On the other hand, CDR inclusion in the cap-and-trade program should look more like an offset protocol to make-up for legacy pollution, complete with third-party verification and ongoing monitoring for secure and long-term storage. Also akin to offsets, CARB should ensure that entities could only use credits from CDR to cover a limited portion of their compliance obligation.

Program updates to incorporate CDR must ensure that carbon removal is not a substitute for reducing emissions directly from pollution sources. In September 2022, Governor Newsom signed the California Climate Crisis Act (AB 1279, Muratsuchi) into law – codifying the state's goal to reach net-zero greenhouse gas emissions by 2045, while committing to cut emissions from pollution sources at least 85% below the 1990 level by 2045. These ambitious targets demonstrate that emission reductions from pollution sources should lead the way to achieving net-zero greenhouse gas emissions, with removal strategies utilized only to balance out the last tranche of emissions that may prove technologically infeasible to abate—at least on the timeline necessary.

Proposed leakage studies will be very valuable.

EDF appreciates that CARB plans to initiate a study on electricity-sector emissions leakage under the cap-and-trade program, as well as a study on industrial sector leakage and output-based allocation. The additional data and analysis provided by this research will be extremely valuable in understanding if and how California's program can achieve even greater environmental integrity

and where other jurisdictions looking to California can mirror the design of the state's successful program.

Increasing price triggers for cost containment points is reasonable.

At the June 14 workshop, CARB staff indicated they are considering increasing the trigger prices for the Allowance Price Containment Reserve (APCR). This is a reasonable step to take and EDF would support this update, but we also want to make clear that were California to reach the APCR trigger price, this is not a failure of the program or reflection of a design flaw. The APCR is an important cost-containment feature and would function to do exactly that - slow the increase in allowance prices to help contain compliance costs. In fact, this is exactly what has taken place in Washington - that jurisdiction copied California's well-designed cost containment features and they are working as intended. Washington also copied California's specific trigger prices, which in a much tighter market has resulted in achieving these price points more quickly than in California.

Given the desire for a steadily increasing allowance price, the consideration of increased ambition in the program and the broader economic context, increasing the cost containment points is an appropriate step to consider. But it should not be considered a threat to the program should those points be met.

EDF appreciates CARB kicking-off this important process to update the state's landmark cap-and-trade program. We look forward to working closely with staff and stakeholders to ensure the final product of this process is a program that maximizes climate ambition, supports local air quality improvements, continues to provide appropriate compliance flexibility and cost containment, and remains a model for other jurisdictions looking to accelerate their own climate leadership.

Sincerely,

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