October 22, 2018

Ms. Rajinder Sahota
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Submitted electronically via:
https://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=ct2018&comm_period=A

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

Dear Ms. Sahota:

Thank you for this opportunity to comment on the proposed amendments to the California cap-and-trade program. The process building up to these comments has been a thorough one including several workshops and seeking the input of the new Independent Emissions Market Advisory Committee (IEMAC) and the Environmental Justice Advisory Committee (EJAC). Environmental Defense Fund appreciates the multiple opportunities to comment. While the proposed amendments do not follow EDF's exact recommendations, we recognize the role CARB is playing in balancing multiple policy interests. **EDF supports the overall adoption of these proposed amendments in order to move the cap-and-trade program forward into the next decade**. The following comments provide a summary of our position on various design elements, areas where CARB could choose to make updates in a 15-day process, and areas where we would like to see the agency continue to work in future rulemakings.

Price Ceiling Level

We urge CARB to increase the level of the price but at the very least *not* to adjust the level of the price ceiling downward before adopting these amendments.

Throughout this process EDF has advocated for a price ceiling that is significantly higher than the price tiers included in the previous Allowance Price Containment Reserve which created a soft price ceiling. Absolute price certainty warrants a higher upper bound for prices. Furthermore, the price tiers have been lowered beneath the level of previous price tiers in order to increase the spread of cost containment. Instead of making the price ceiling roughly

1107 9th Street
Suite 540
Sacramento, CA 95814

T 916 492 7070
F 916 441 3142
edf.org

New York, NY / Austin, TX / Bentonville, AR / Boston, MA / Boulder, CO / Raleigh, NC
Sacramento, CA / San Francisco, CA / Washington, DC / Beijing, China / La Paz, Mexico

equivalent to the highest price tier, CARB could have made the lowest proposed price tier equivalent to the lower previous price tier and achieved the same spread with a higher price ceiling. CARB's current proposed price ceiling which starts at $61.25 in 2021 (2018 real dollars) is not significantly higher than the single price tier currently in regulation; the proposed price ceiling actually starts a little lower than the current price tier until about 2026 and then becomes slightly higher. EDF believes an even higher price ceiling could be appropriate but we strongly urge CARB not to further lower the level of the price ceiling. As an environmental organization, EDF develops our position and advocates based on what impact the policy will have on emissions. That being said, we do consider prices and cost carefully as cost containment and price stability are important to California's program being viewed as a success and proliferating in other locations. Given this perspective, here is a summary of the reasons EDF believes a relatively higher price ceiling could be beneficial and urges CARB, at the very least, to not weaken the current proposal:

- A higher price ceiling makes it less likely that allowances will be released from the price containment tier therefore lowering supply of allowances and lowering emissions.
- A higher price ceiling provides more market flexibility to allow the market to set the appropriate price for incentivizing abatement. A recent working paper by Borenstein et al.[1] found a high likelihood that prices are either at the floor or ceiling. Some have used this to argue that increasing the price ceiling or tightening the cap would have little impact on emissions but would drive up prices. The problem with this argument is several fold. First, there is significant uncertainty about abatement opportunities and their model could have significantly underestimated these abatement opportunities, especially in the medium to long-term in the transportation sector.[2] Second, even this model found 42 MMT of emission reductions inside California, which is not insignificant. And finally, this argument ignores the fact that if the state reaches the price ceiling, reductions will be purchased with the revenue from Price Ceiling Units (PCUs) on at least a ton-for-ton basis, resulting in important atmospheric reductions.
- A higher price ceiling also means more revenue will be available to secure high-quality reductions outside the cap, perhaps allowing the state to exceed the critical ton-for-ton requirement in statute.
- A higher price ceiling could also encourage more emission reductions even if the price does not reach the price ceiling. Companies will plan their reduction investments based on the price certainty they get from the price ceiling. A higher price ceiling might cause businesses to invest in more emissions reductions in order to protect itself from the risk of higher prices. This activity combined with the efforts with others could lower overall emissions, making it even less likely that the price ever reaches the ceiling.
- It is important that CARB considers the social cost of carbon (SCC) in designing the post-2020 program and in setting the price ceiling as it is a helpful reference point. We do not believe, however, that a carbon price should necessarily be directly pegged to the SCC –

[1] https://ei.haas.berkeley.edu/research/papers/WP281.pdf
[2] https://energyinnovation.org/2018/01/10/analyzing-likely-impact-oversupply-californias-carbon-market-must-consider-states-2030-emissions-goal-potential-clean-tech-breakthroughs/

rather, we believe that climate policy design should be focused on reaching specified emissions reductions and performance goals at least cost, and not on the price per se. Therefore, we disagree with arguments that the price ceiling should be equal to the SCC. The latest best estimates of the social cost of carbon are those developed by the Interagency Working Group (IWG) under the Obama Administration.[3] These estimates remain absolutely crucial for use in regulatory benefit-cost analysis and to help provide an important set of data points that can inform policy, investments, and decision-making. Using these estimates to *inform* the level of the price ceiling is appropriate, but that does not mean the price should be pegged directly to them – in large part because there is no one "right" SCC figure. The IWG -- appropriately – produced a range of estimates that vary depending on discount rates and other factors. We also know that these estimates are certainly a lower bound given that they do not yet include quantification of all important climate damages. Therefore, CARB is taking the best course by using the SCC as a point of reference to inform the level of the price ceiling (as the Legislature in fact required) but not to tie the price ceiling directly to the SCC.

- There are many other ways to address concerns about costs for consumers other than lowering the price ceiling itself. As the Initial Statement of Reasons points out there are already many features built into the program to contain costs and to protect consumers. These include the climate dividend that customers of investor-owned utilities receive on their bill twice a year which the UCLA Luskin Center has shown is providing a net benefit to low-income Californians.[4] Current investments of auction proceeds are also being used in ways that will help those most impacted by costs transition to the clean economy. This includes programs to get cleaner or electric vehicles into the hands of low-income Californians, energy efficiency and solar programs for low-income housing, and investments in public transportation. If prices do begin to approach the price ceiling California will see even more revenue for these investments to drive the transition more quickly and in turn lower demand for allowances and prices. Finally, the Legislature also has significant flexibility to try to achieve further cost mitigation through use of the auction proceeds if necessary.

<u>Price ceiling discussion should occur in coordination with linked jurisdictions.</u>

Finally, we would like to reiterate our previous comments about the importance of coordinating with linked jurisdictions and potential linked jurisdictions on topics that may impact the larger Western Climate Initiative (WCI) market like the price ceiling. This is one of the reasons that it is important that CARB rather than the Legislature is able to set the price ceiling so that the agency maintains the ability to remain coordinated as much as possible with linked jurisdictions. We would appreciate it if CARB could respond regarding whether productive conversations on this topic have occurred with Quebec and any potential linkage partners.

---

[3] https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf

[4] In fact the Luskin Center Report shows a new benefit to low-income Californians from cap and trade as a whole. http://newsroom.ucla.edu/stories/ucla-luskin-center-study-shows-low-income-californians-benefit-from-cap-and-trade

Price Ceiling Units

CARB should begin working now to identify high-integrity reductions to back PCUs and work with the Legislature to consider a "rainy day" fund for reductions in advance of reaching the price ceiling.

A critical aspect of the new price ceiling is the requirement that if the price ceiling is met and reductions are sold above the cap, CARB is required to use the resulting revenue to secure reductions on at least a ton-for-ton basis. This is essential to maintain the environmental integrity of the program and make sure the atmosphere remains whole.

We encourage CARB to begin developing the pathway for these PCU reductions now, even if models indicate that hitting the price ceiling is possibly several years away. Establishing what kind of reductions would be eligible and where they could be sourced in sufficient quantity will take some time. In order to do this important advance work following the current regulatory process, CARB should develop a plan and where necessary make specific recommendations to the Legislature regarding how to prepare for the inclusion of PCUs in the market. These recommendations could include establishing a "rainy day" fund to ensure reductions are available as soon as the price ceiling is triggered, perhaps using some revenue from allowances sold at one of the other price containment tiers. To guarantee the continued integrity of the cap-and-trade program and maintain it as a global model for emission reductions, the best option would be not to wait until there is revenue from PCUs to begin purchasing reductions to fulfill the ton-for-ton reduction requirement.

Most modeling and projections seem to show higher demand for offsets from within California than supply due to the new Direct Environmental Benefits (DEBs) requirement. As such, we would anticipate that most PCUs would need to come from outside of California, including from protocols that have not yet been approved. Therefore, we urge CARB to continue the effort to identify appropriate reductions particularly in areas where there could be sufficient supply if California does need to sell PCUs.

As EDF has commented previously, one potential source of PCU reductions are international sector-based offsets, such as those that could come through the proposed California Tropical Forest Standard.[5] As CARB has made clear, a future rule-making would be a necessary next step to allow these credits into California's market, and EDF is extremely supportive of that regulatory process moving forward. With California's standard in place and subsequent rule-making and linkage findings, international sector-based offset credits would provide a significant supply of high-quality emission reductions that could be available to purchase with revenue from the sale of PCUs. EDF commends CARB for taking the critical first step of introducing the California Tropical Forest Standard, and encourages CARB to adopt that standard and continue on the rule-making process in the next year.

[5] EDF comments on this standard are forthcoming.

Post-2020 Emissions Cap

California has an opportunity to increase ambition by tightening the cap that would not penalize regulated entities.

EDF maintains its position that a cap adjustment of 52,400,000 is appropriate post-2020. This cache of allowances exist because the current regulation sets the 2021-2030 cap based on a straight-line reduction between 2020 and 2030, rather than a step down to emissions in 2021. These allowances are currently intended to be split evenly between the two post-2020 reserve tiers, but by removing them from the program instead, California would be taking a step toward greater climate ambition.

The most important reason for making this adjustment from EDF's perspective is that the program now contains a firm price ceiling with environmental integrity protection, both described above. Before AB 398, these additional allowances could perhaps be justified as providing further price protection given the soft price ceiling. However, the new hard price ceiling will provide absolute price protection. Pre-2020 APCR allowances will also provide a buffer before CARB needs to begin issuing new PCUs above the emissions cap. If the price ceiling is triggered, the reserve at the ceiling is exhausted, and PCUs are sold above the cap, AB 398 requires CARB to use the resulting revenue from the PCUs to secure reductions that meet standards similar to those for offsets on at least a ton-for-ton basis. If these 52,400,000 tons are placed in the two price tiers instead of removed from the annual budgets that will mean a delay in triggering that environmental integrity mechanism and will represent 52,400,000 fewer reductions for the atmosphere.

The retirement of these 52,400,000 allowances is important to EDF from an environmental perspective because cumulative emissions are what matter to the atmosphere so a more stringent set of annual budgets represents a more ambitious climate reduction trajectory for the state. In recommending that CARB reset post-2020 caps based on the trajectory between expected emissions in 2021 and the 2030 target, we are identifying an opportunity that California has for this increased ambition.

EDF recognizes that CARB is in a position of trying to balance stringency with cost containment, and we appreciate that CARB has explained the consistency in their cap-setting methodology between pre- and post-2020. However, we respectfully request that CARB give this proposal further examination and consideration, or explain why they do not see this as an opportunity to increase climate ambition.

The cap-and-trade program has been successful at reducing emissions, as demonstrated by current emissions being below the cap, and tightening the post-2020 cap puts California on even stronger footing to meet the 2030 target.

Direct Environmental Benefits

CARB has developed a reasonable approach to identifying Direct Environmental benefits.

EDF believes that offsets play an important role in the cap-and-trade program. They provide opportunities for uncapped sectors to participate in emission reductions, provide pathways for lowering compliance costs and therefore opportunities for increasing ambition, and importantly the cost-containment they provide can also help California avoid triggering its new hard price ceiling post-2020. Therefore we urge CARB to continue considering new offset protocols as we approach 2020.

From EDF's perspective, CARB has laid out a reasonable way to identify the direct environmental benefits that must apply to some offsets. The proposal aligns with what EDF considers fundamental principles to defining direct environmental benefits:

1. Consider what is administratively practical so as to ensure that the state can reap the many benefits of offsets including accrual of direct environmental benefits
2. Ensure that California is able to fully consider the direct environmental benefits at issue rather than focus exclusively on geographic restrictions
3. Adhere to the statutory requirements as written in AB 398.[6]

24 Month Rule

The 24 month rule is important for temporarily tightening the cap and CARB should continue to consider options for similar mechanisms that would provide a permanent increase in ambition by retiring allowances.

EDF believes that the "24 Month Rule" is an important addition to the cap-and-trade program. As a version of cap tightening, this rule achieves a small level of increased ambition by placing allowances that have remained unsold for the previous 24 months evenly into the two post-2020 price tiers. Rules such as these that are automatic and therefore predictable are an appropriate way to drive even greater emission reductions.

Under the existing rule, there was also the possibility of these unsold allowances being fully retired from the program to account for Energy Imbalance Market Outstanding Emissions. While adjustments to EIM's compliance are understandable and discussed further below, we do regret the elimination of the possibility of full allowance retirement. In an effort to continuously drive greater climate ambition, we would encourage CARB to leave open the possibility, either in conjunction with or separate from the 24 Month Rule, of developing a mechanism to automatically tighten the cap by full retirement of allowances under conditions that could be considered in more detail during a future rulemaking.

[6] Adhering to the statutory requirements of AB 398 includes giving meaning to the term "direct environmental benefit". Greenhouse gases are an air pollutant, however if CARB had determined that reducing a ton of greenhouse gases as each offset does created a direct environmental benefit to California, the direct environmental benefit language in AB 398 would be essentially meaningless.

Energy Imbalance Market

EDF is pleased with the overall direction CARB has taken in the ISOR when it comes to the reforms under consideration. On balance, we remain supportive of these initiatives. The EIM is a key strategy for California to ensure that excess renewable generation is not curtailed. Since energy generation does not always match energy demand, the EIM creates a market-based mechanism for the export (and import) of these clean energy assets. Generators (those who would use EIM to export) and Load Serving entities (those who would use EIM to purchase and import) electricity need clear market rules and regulatory certainty to maximize the benefits to the state.

At present, the EIM handles a very small amount of real time energy transactions. The rules, as proposed in the ISOR, appropriately reflect the relatively small nature of the EIM. However, the California Independent System Operator (CAISO) is considering expansion of the EIM from a spot market to day-ahead resources. As discussed on page 72 of the ISOR, the proposals are limited to the current market design and do not contemplate EIM expansion to the day ahead market. EDF encourages CARB to anticipate this expansion where possible in the current regulation and below we suggest certain clarifications and refinements that we believe would be helpful now.

First Purchaser as the point of compliance

As discussed in the ISOR on page 70, the point of compliance for electricity sold into California would be the first purchaser of the imported electricity. In general, EDF supports this approach of having the point of compliance be when the electricity first enters the California grid. EDF is concerned, however, that the concept as proposed may create seams issues with the rest of the electricity sector's compliance obligations. Primarily, the state uses the first deliverer. As the EIM expands, there may be instances where the compliance obligation should remain with the deliverer and not the purchaser. If the EIM were left isolated, then there may not be a problem, but as the EIM expands there is a potential for market confusion of responsibility between deliverer and purchaser. Part of California's success has been in having a clear set of distinctions between the load and the source, and this proposal introduces uncertainty. We recommend that the ISOR rationale be expanded to explain how under a day ahead EIM, the linkages between first deliverer and first purchaser coordinate, and suggest that this issue may be revisited once the CAISO expansion of the EIM has been finalized.

Terminology of Electric Distribution Utility and Load Serving Entity

The ISOR uses the purchaser as the point of compliance. With the rise of Community Choice Aggregation and the recent raising of the cap on Direct Access, California is poised to have a significant percentage of the transactions in the EIM be these non-utility entities. If the Board wants the purchasers of power in the EIM to be the point of compliance, however, then certain clarifications would be beneficial. EDF suggests that clarifying the role of allocation of allowances to non-utility actors, such as the Community Choice Aggregators, needs to be

harmonized. EDF suggests that the ISOR utilize the language of "load serving entity" and "electric service provider" consistent with the definitions in Public Utilities Code Section §394. EDF seeks this clarification to ensure that all participating ratepayers receive the benefits of allowance allocation and that market rules are not unfairly tilted from one entity or another. The Electric Distribution Utilities should not be used interchangeably with the load serving entities and electric service providers, and clarifying what is the responsibility of the grid operator vs. the purchaser of the electricity for the EIM would be beneficial.

Energy Imbalance Imports Net and Gross

The ISOR proposes a ratio of purchased MWh of electricity to total transactions. In general, EDF supports this methodology. EDF seeks clarification on a principle, which is that compliance should be on all imported electricity through EIM, and not just the net imports. EDF suggests that that the type of purchases that are required to comply with the ISOR, as discussed on page 72, need to be more clearly defined. For example, an entity could import 10 MWh and in the same day export 9 MWh of electricity. The daily net purchase attributed to that entity would be 1 MWh. In this scenario, it is unclear from the language in the ISOR whether the compliance obligation would be the 10 MWh or the 1MWh. Since the 9MWh that are being exported through EIM are already captured in other parts of the regulation, it would be natural to exclude them consideration. However, we do not believe this is how the ISOR is intended to be interpreted. EDF contends that the compliance obligation should not be 1 MWh, but rather the full 10MWh that was imported. EDF suggests that the language listed in the ISOR be updated to ensure that the ratio as described on page 72 be total purchases and not net purchases. As discussed in this section, the language modifications proposed in the ISOR is to prevent leakage. This clarification is even more important for the anticipated EIM expansion. EDF encourages the Board to make revisions to the ISOR now anticipating that there will be additional imports and exports of electricity that go beyond the ratio contemplated under a day ahead system.

Western Climate Initiative

CARB and Quebec acted swiftly and effectively to manage the impact of Ontario's withdrawal and should continue with plans to retire excess allowances.

EDF is deeply disappointed in the political decision earlier this year in Ontario to end their cap-and-trade program and withdraw from the Western Climate Initiative (WCI). EDF commends the staff of CARB and the WCI partners in Quebec for taking swift and decisive action to maintain the stability of the linked market. This was the most important immediate step CARB and WCI could take, and now it is very appropriate that CARB turn its focus to maintaining the environmental integrity of the linked program. Retiring allowances in California accounts to ensure there is no negative impact on the market from Ontario's departure is an important step to maintain stringency of the program and ensure California stays on track to meet its emission reduction targets.

Finally, thank you for your consideration of these comments and for your extensive work on AB 398 implementation. EDF looks forward to continued participation in the balance of this process and subsequent rule-makings.

Sincerely,

Erica Morehouse
Senior Attorney, U.S. Climate Policy and Analysis

Katelyn Roedner Sutter
Senior Analyst, Climate Policy