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Mary Nichols, Chairperson, and Richard Corey, Executive Officer
California Air Resources Board
1001 I St, Sacramento, CA 95812

Letter submitted through online portal at https://www.arb.ca.gov/

Chairperson Nichols and Executive Officer Corey,

We thank you and the entire staff and leadership of California Air Resources Board (CARB) for the time, labor and expertise that have gone into the 2030 Scoping Plan process. We support the adoption of the Proposed Plan. Though this letter offers some recommendations for adjustments to the cap-and-trade program, we unreservedly support CARB's overall approach, which builds on the successful 2020 Scoping Plan. California's strong commitment to strong 2030 reductions and its thriving yet increasingly decarbonized economy offer powerful messages to the world, and are more important than ever in the face of backsliding in Washington DC.

We could write many pages of laudatory comments full of superlatives about the achievements of California climate policy and the smart design choices included in the Proposed Plan. CARB is a state treasure; it is effective, thoughtful, open to input and increasingly engaged at the community level. CARB staff members are buffeted by criticism on all sides and by political uncertainty. Balancing the interests of stakeholders in developing policies with economy-wide implications is challenging at best and thankless at worst. Thus, we emphasize our overall agreement and gratitude for the efforts of our public servants.

With this preface, we would like to explain concerns we have that current oversupply (emissions below cap levels) are not being taken into account in 2030 planning. At a delicate time politically for cap-and-trade, we emphasize that the program must be counted as a success in the context of 2020 Scoping Plan implementation. At the same time, emissions have been below cap levels for covered facilities for the three years of empirical data available so far (Mandatory Reporting Rule data for 2013-2015). Moreover, in recent a recent study, *Recalibrating Cap-and-Trade to Account for Oversupply*,[1] we analyze future trends, and find it likely that oversupply will continue for years.

[1] *Recalibrating Cap-and-Trade to Account for Oversupply: An original quantitative analysis and policy recommendations.* Available at:
http://energyinnovation.org/wp-content/uploads/2017/04/RecalibratingCA_Cap-Trade_2017.pdf

Below we explain how our analysis leads us to conclude that there is a risk that a very large bank accumulated by the end of the third compliance period could compromise future stringency. *Before delving into the diagnostics, we highlight two approaches that are recommended as adjustments.*

Either

(1) Lower cap levels for 2018-2020 to account for surplus allowances already in circulation and to better align near term emissions and the demands of the cap.

Or

(2) After the third compliance period ends, in 2021, adjust future caps downward to account for the size of the bank at that time, sending an equivalent amount of allowances to the Allowance Price Containment Reserve, providing additional cost containment.

We see the potential and likelihood that an undesirably large bank could build up by 2020 based on some the analysis of supply and demand described more fully in our recent report. If future emissions under the cap continue to fall at the one percent annually, the historical rate, there would be enough space under the cap for a bank of 200 MMT to emerge by the end of 2020.[2] Once questions about the long-term shape of California's carbon pricing policy are finalized, there is every reason to expect that auctions will begin to sell out again and that excess allowances will be purchased and banked. However, the return to fully subscribed auctions (e.g. a situation in which all allowances offered are purchased) would not necessarily be an indicator that all is well, under these circumstances. Instead, long run demand would be serving to compensate for current oversupply.

The emergence of banked allowances is not a problem in and of itself. The problem is that it appears the size of the bank in 2020 could equal all the reductions that cap-and-trade aims to deliver through 2030. The proposed Scoping Plan states at page 42 that cap-and-trade is expected, "to deliver approximately 191 MMT CO2e net savings of the 680 MMT CO2e," in reductions expected from 2030 Scoping Plan actions additional to AB 32 Scoping Plan policies. Thus, if policies produce the results CARB expects, our analysis suggests that the amount of banked allowances carried forward after the third compliance period could greatly undermine the effectiveness of cap-and-trade.

[2] Our study focuses on the oversupply in the linked California-Quebec market. This statistic is derived from the results presented on page 16, which shows that the linked market could see oversupply in the range of 190-300 MMT. The mid-point of this range is 245 MMT, which corresponds to future emissions falling at the same rate as in the past. The 245 MMT figure for the linked market is then downscaled to California only, reflecting the current distribution of emissions covered under the programs, with California responsible for 85 percent of the emissions under the linked market. Page iii of the report provides a link to the spreadsheet with all assumptions and calculations underlying the report's findings.

We agree with one of CARB's economic reviewers, Professor Meredith Fowlie, that it is "time to unleash carbon markets."[3] CARB's price floor is an important feature that ensures a minimum level of stringency. Even with oversupply, the existence of a carbon price is valuable. However, it appears current plans would lead to suboptimal utilization of the cap-and-trade program. Moreover, it appears possible the use of banked allowances could lead to emissions significantly above the 2030 target.

At the extreme, if the bank we forecast materializes, and if it were fully exploited by 2030, emissions in 2030 could exceed 300 MMT (as shown in Figure II, which maps the accumulation of the 191 MMT in expected reductions from the cap-and-trade program). In fact, in the years leading up to 2030, post-2030 caps should be well understood and authorized, and hence some banked allowances would be expected to be retained for these stronger caps in 2031 and later. Moreover, if performance standards and sector policies underperform, more reductions would be required from the cap-and-trade program.

While the 2030 target is aggressive, we should also recognize and plan for the possibility that it will be easier to achieve than we might expect at this time. That has certainly been the case for the 2020 target. We do not suggest CARB should commit to getting to 260 MMT by 2030 at any cost. However, it would be an unfortunate result if we end up significantly above 260 MMT with carbon prices continuing to be at or near the floor price at auction.

Leaving aside the question of long run trends, there is a need for the state to start ramping up the pace of emission reductions now in pursuit of the level of reductions that will be needed to hit the 2030 goal precisely because it is an aggressive goal. Perhaps the best way to accomplish this would be to lower cap levels for 2018-2020 to account for surplus allowances already in circulation and to better align near term emissions and the demands of the cap. Adjustments to the third compliance period cap levels would also have the benefit of reducing the size of the bank that will emerge.

Another way to counter the risk that a very large bank accumulated by the end of the third compliance period will compromise future stringency would be to announce that 2021-2030 caps will be adjusted downward to account for the size of the bank at the end of 2020. Allowances removed from the cap could be removed and placed in the Allowance Price Containment Reserve, providing additional cost containment.

At an earlier 2030 Scoping Plan analysis workshop, I first raised the topic of the likelihood of a large bank by 2020. I asked if the expected amount of banking carried forward from the third compliance period is being factored into the analysis. CARB staff told me in reply this was not really a concern because of limits on banking. In follow up conversations, I was told that holding limits were the limits on banking being referenced. Having had some time to reflect on this

[3] "Time to Unleash Carbon Markets?" Fowlie's answer is yes. She concludes: "If we want to see carbon markets really work, we need to give them more work to do."
https://energyathaas.wordpress.com/2016/06/20/time-to-unleash-the-carbon-market/

answer, it occurs to me that holding limits should be tuned to avoid accumulation of market power and are not well positioned to do double duty in addressing the buildup in a bank. The reason is the same that a simple prohibition on banking itself is undesirable. The reason being that once the banking limit starts to bind, that will induce price volatility. Such volatility is to be avoided. Thus, holding limits are not the best approach to managing the buildup in a bank. Instead, adjustments in future cap levels are the best response. As well, it seems that the holding limits of more than 10 MMT per firm covered (per corporate association, in cap-and-trade terminology) would allow for the emergence of a private bank of the size discussed above.

Our report *Recalibrating Cap-and-Trade to Account for Oversupply* includes other recommendations. We highlight three of these for your consideration:

1. ***Switch to one-year compliance periods.***
2. ***Improve access to secondary market data.*** There is a problem of a lack of publicly available secondary market data regarding the California carbon market. One has to pay thousands of dollars for this information. As a solution, CARB should require all trades be reported through a publicly available, free, searchable database. If confidentiality is a concern, identifying data can be deleted.
3. ***More fine grained compliance instrument data.*** Separate the entity accounts into third-party investors and covered entities in quarterly compliance instrument reports. This will help analysts better understand market dynamics.

We hope that you find these observations a constructive addition to the dialogue. We stand ready to discuss further and look forward to being as helpful as we can be to support your work.

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