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October 1, 2018

Independent Emissions Market Advisory Committee  
California Environmental Protection Agency  
Submitted electronically to: [iemac@calepa.ca.gov](mailto:iemac@calepa.ca.gov)

Dear Chairman Burtraw, Vice Chair Carlson, and Esteemed Committee Members:

Thank you for your volunteer public service on this committee. It's a strong assemblage of expertise, and the work you have produced is top rate. I hope your efforts will have a significant influence with the staff of the Air Resources Board (ARB).

The main purpose of this letter is to support the committee's call for ARB to do a better job in presenting publicly accessible information as laid out in the Subcommittee Report on Managing Allowance Supply. The bare minimum that ARB should do is report the amount of allowances banked from one compliance period to the next. This is basic information about program performance.

Currently, key documents and terminology, especially the compliance instrument reports that ARB produces, are not understandable on their own. The compliance instrument reports use undefined terms like "limited use holding accounts." This obtuse terminology is a barrier on its own and renders these key documents inaccessible to most. In addition, the precise timing of free distribution of allowances and submission of compliance instruments is complicated, making it challenging to properly define time boundaries in evaluating the balance of supply and demand in the market.

As a result of this complexity, it is difficult to calculate the amount of allowances banked from one period to the next. It is unrealistic to claim that a typically motivated person could calculate such metrics. ARB's public information should not be accessible only to insiders.

By my estimate, 49 million metric tons worth of allowances were carried forward from compliance period one to compliance period two. I tried to reach a common understanding with ARB staff on the number, but was never able to do so. This metric remains unsettled from the perspective of the public dialogue.

In ARB's evaluation of research on the potential for pre-2021 banking to interfere with achievement of the state's 2030 target in [Appendix D](#) of the 2018 cap-and-trade regulation revision package, the lack of specific causal analysis indicating inadequate stringency is referenced: "Staff did not find any analyses or data that indicated that the allowances issued in the Program would not be binding on emissions through 2030, or that allowance prices would decline in any years from now through 2030," (page 13, Appendix D).

It is notable that nothing in the 2030 Scoping Plan analysis provides a cause-effect evaluation demonstrating adequate stringency of the carbon price signal created by the cap-and-trade program.

On the topic of adequate stringency, Appendix D cites work by [Borenstein, Bushnell, and Wolak](#) as supporting ARB's decision making. It is important to point out that the findings of this work in fact raise doubts about the sufficiency of the emission reductions expected from the cap-and-trade program in the 2030 Scoping Plan. Figure 7 of the 2030 Scoping Plan shows that the carbon pricing mechanism is expected **to produce 236 MMT of CO<sub>2</sub>e reductions from 2021 to 2030**. Borenstein et al.'s 2030 analysis finds that at the price ceiling, and therefore at maximum impact, California's cap-and-trade program would be expected to yield reductions of **218 MMT in CO<sub>2</sub>e reduction from 2016 to 2030** (see Table 1).

We discussed the application of the Borenstein et al. framework to the oversupply question [in Energy Innovation's blog](#) and provide a technical exposition of how the inelastic abatement supply curve embedded in the work drives the conclusions [in an appendix](#) to the blog. In sum, the constrained view of abatement supply in the analysis produces a result where the carbon price is most likely either at the floor or at the ceiling. If there is relatively little price-responsive supply of abatement from cap-and-trade, then it is true that a supply adjustment makes little difference. If abatement supply is inelastic, there's a good chance that a supply adjustment would move the intersection of supply and demand from one point within the price floor region to another within the same region, or from one point within the price ceiling region to another within the same region. In the extreme, if there is no price-responsive abatement, then the carbon price would always be at the floor or the ceiling, and a supply adjustment makes no difference in emissions under any circumstances.

In the September Independent Emission Market Advisory Committee meeting, ARB staff stated that their unpublished research demonstrates that the price signal cap-and-trade is expected to provide is sufficient to put the state on track to achieve its long-term goals. We urge the committee to recommend the release of this analysis and continued work to advance state-of-the-art modeling to evaluate policy options and promote optimal policy design.

Thank you for considering these views and for your hard and skilled work in service of the success of the state's climate policies.

Sincerely,



Chris Busch, Ph.D.

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