September 25, 2024

AB 32 Environmental Justice Advisory Committee
California Air Resources Board
1001 I Street
Sacramento, CA 95814
By email: catherine@calcleanair.org and mdarguello@psr-la.org

Re: Recap of IEMAC Discussion on Carbon Capture - August 7, 2024

Dear EJAC Members:

It was my honor to assist the EJAC co-chairs in a conversation about carbon capture during the Independent Emissions Market Advisory Committee (IEMAC) meeting on August 7, 2024. This letter is to recount the key details of that conversation to inform future EJAC deliberations.

The IEMAC reached out to the EJAC co-chairs in July to coordinate a discussion on carbon capture at the August 7th IEMAC meeting. Due to my deep involvement in legislative discussions on this topic on behalf of the Central Valley Air Quality Coalition, the EJAC co-chairs invited me to present along with EJAC Co-Chair Dr. Catherine Garoupa. The IEMAC was keen to discuss if and how to incorporate carbon capture into the cap-and trade program. Specifically, the committee inquired about if/how panelists thought captured carbon should impact compliance obligations for entities covered by the cap-and-trade regulation, and whether carbon capture should be considered for offset credits in the future. The IEMAC also invited Virgil Welch from Caliber Strategies to present.

I prepared a handout summarizing environmental justice concerns about carbon capture broadly. I began my presentation by reminding the committee of the requirements of Assembly Bill 32 (2006) to pursue cost effective and equitable solutions to our climate crisis, and the requirements of Assembly Bill 197 (2016) for the California Air Resources Board to prioritize direct emissions reductions measures. Carbon capture is by far the most expensive method of "reducing" carbon on the market today; the most cost effective strategies remain direct emissions reductions measures. Further, whether carbon is pulled from the air or captured at an industrial source, the process of capturing, transporting, and storing the carbon carries significant risks to environmental justice communities - where most of these projects will occur.

The IEMAC members and invited speakers had a robust conversation after the presentations. Some members expressed a strong interest in exploring carbon capture's integration into cap-and-trade, while others raised questions and concerns about how that integration would be achieved in a meaningful and cost effective manner. Some key takeaways from that discussion for EJAC consideration include:

- **Is a ton a ton?** A major critique I presented was the question of whether a ton "captured" was truly a ton permanently removed from the atmosphere. There are serious questions about how much carbon is actually captured and stored through these processes (research and case studies suggest that real-life capture rates are far lower than lab conditions) and the potential implications if the carbon is not stored permanently. If a credit is issued for that carbon - whether it counts toward reducing an entity's compliance obligation, or to generate an offset to be sold at market - and the level of carbon captured permanently ends up being lower than predicted, there is currently no recourse that could be taken to ensure the integrity of the market. Given that California is not on track to meet the 2030 emissions target in statute, we cannot afford this kind of liability. This issue is exacerbated by the fact that there is no oversight mechanism to ensure carbon is only counted and sold once, with IEMAC vice chair Danny Cullenward mentioning during the discussion that the possibility of a project developer trying to sell carbon multiple times over is not just a possibility - but something actively being discussed in those circles. While it is possible to create mechanisms to prevent this, the California Air Resources Board hasn't yet shown any interest or capacity to do that within the Low Carbon Fuel Standard (one of the primary funding mechanisms for carbon capture nationwide).

- **False promise of offsets.** Committee members kept emphasizing the difference between direct air capture (pulling carbon from the air) and carbon capture, utilization and storage at industrial sites. One IEMAC member argued that carbon capture was critical to consider integrating into the cap-and-trade program since we know direct air capture is critical to achieving global climate goals. This is a critical point for the EJAC to consider, as the virtue of direct air capture is canceled out when it is integrated into cap-and-trade as offset credits, since the carbon captured is being sold to industries in a manner that allows them to continue to pollute (similar to how direct air capture and CCUS projects that sell credits under the Low Carbon Fuel Standard facilitate continued emissions from the fossil fuel industry). Also, considering the earlier point of how to account for carbon given the leakage and other risks inherent to the process, one could argue that carbon captured and sold as offset credits carry as much, if not more, risk than forestry offsets.

- **Serious implications of carbon capture for cap-and-trade.** Several academics, numerous EJ organizations and coalitions, and the EJAC have long criticized the cap-and-trade program, arguing in-part that the program is not stringent enough to meaningfully contribute to California's ambitious emissions reduction targets. Adding new compliance mechanisms and offset credits will not address those concerns, and may further exacerbate concerns about oversupply in the market.

- **Do the dollars make sense?** Part of industry's argument in favor of integrating carbon capture into cap-and-trade was the need for significant financial resources to ensure the technology became viable. However, when offset credits and other compliance instruments cost less than $20 a ton, this argument simply doesn't make mathematical sense. Carbon capture - whether from the air or at industrial sources - is INCREDIBLY expensive, even

when heavily subsidized by federal and state funding and tax credits. Furthermore, according to Steven Feit from the Center for International Environmental Law, the energy and resource intensity of carbon capture projects makes it unlikely that the cost of projects will decrease over time, as has been true with investments in industries like solar. Given the low costs of credits and allowances in the cap-and-trade market and the high cost of projects, it is hard to argue that including direct air capture as an offset would significantly impact project viability. It is my personal opinion that industry is pushing hard for carbon capture integration into cap-and-trade NOT because it will help fund direct air capture projects, but because it will enable them to create a pathway to using CCUS for compliance when they fail to sufficiently reduce their emissions.

While I appreciate that we may need to find creative ways to fund direct air capture projects that reduce harm to environmental justice communities and help us reach our global climate goals, integrating carbon capture into the cap-and-trade system is simply not the way to achieve that end.

I hope this summary is helpful to future EJAC discussions on this topic. If you have any questions or would like to discuss any of this further, please do not hesitate to contact me or Dr. Catherine.

Sincerely,

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