



August 16, 2021

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

Re: 350 Ventura County Climate Hub and Conejo Climate Coalition Comment on 2022 Scoping Plan Update – Engineered Carbon Removal Technical Workshop August 2, 2021

Thank you for the workshop on this important topic. We recognize that meeting the state's climate goal requires drawing down millions of tons of legacy carbon dioxide from the atmosphere to do our part to return to a global average concentration of approximately 350 ppm.

The workshop needed more clarity in defining terminology for each technology under consideration, especially as regards clear distinctions between technological approaches, with purposeful context and prioritization of those that may provide lower social costs. For example, the term 'Carbon Capture Utilization and Storage' (CCUS) was used by some as a blanket term to refer to all forms of Direct Air Capture and Bioenergy CCS, regardless of the associated feedstocks and/or their environmental costs, including full lifecycle data showing net emissions and sequestration. Their respective comparative costs, risks, benefits and opportunities were blurred. A much needed context finally emerged thanks to Vanessa Suarez, but not until the final presentation.

Our primary comment is that the concerns expressed by the Environmental Justice Advisory Committee (EJAC) members must be taken seriously and addressed. They need additional advance notice, long-range timelines, inclusion in discussions and decisions about workshop agendas, panelists, and the order of presentations. They should be provided time and funds with which to hire their own experts to help them study the many complex issues at stake. EJAC's inclusion in the workshop sounded like an after-thought for tokenistic objectives not much different than five years ago. The internal transformation to integrate environmental justice is your most important job and should be treated as such. Had EJAC representatives been included in the planning, this workshop could have been a more truth-seeking educational

dialogue for lay-people. Space for vested financial interests to show up during working hours to deliver a greenwashed slant with no opportunity for rebuttal must be eliminated if this agency's commitment to environmental justice is to be trusted.

Regarding workshop presentations and comments:

Julia May, Communities for a Better Environment, questioned investment in CCS in the energy sector as a means to “lengthen the life of the fossil fuel industry”. *The past five years shows a profound lack of state commitment to decarbonization and phasing out of the oil and gas industry.* Ms. May suggested that in a focus just on the energy sector, the CPUC has succumbed to the influence of the Investor-Owned Utilities (IOUs) by preventing fair competitiveness for Community Choice Aggregators and by opposing removal of barriers to the accelerated development of renewable energy. The Commission voted against including health impacts as a social cost in the avoided cost calculator!

Mark Jacobson, Stanford researcher in renewable energy, expressed useful high level principles for evaluating investments. His perspective in future discussion panels is immensely valuable and should be routinely included.

Martha Dina Arguello, EJAC Chair, stated in this and prior workshops a concern that the EJAC is not being included early enough in these scoping processes to effectively help develop workshop roadmaps and consent to the assumptions made in support of specific investments. To the outsiders' ears, these critical decisions do sound like they've been predetermined, and still with no discussion about respective benefits and burdens. We recommend more respect and deference be afforded to these requests of the EJAC members, especially as regards planning workshops concerning complex experimental investments for which experts disagree about either the necessity and/or the costs.

Ryan Orbuch, of Stripe, showed a slide listing technologies his organization would like to see developed, including macroalgae, ocean electrochemistry, and surface mineral weathering ... none of which were discussed. The Lawrence Livermore report Getting to Neutral dismisses kelp forestry because it is not sufficiently developed; the state and its consultants should ask if a lengthy permitting process involving various state agencies could be a barrier to development.

Julia Levin, Bioenergy Association of California, seemed to suggest forest thinning and slash as desirable strategies for producing feedstocks for Bioenergy CCS, a well-funded narrative of the fossil gas industry intended to ‘lengthen the life’ of fossil gas infrastructure. Ms. Levin also mentioned manure as a feedstock, another boondoggle propagandized by the fossil gas industry that also supports continued excessive cattle and cow herd size in California.

Vanessa Suarez, Carbon 180, gave a high level vision of what California needs. However, she and the public-facing work of Carbon 180 should be frank about the capture of both federal and state agencies by the fossil fuel industry and expose self-interested narratives designed to ‘lengthen the life of the fossil fuel industry’. A follow-up workshop on carbon dioxide removal should be organized based on the perspectives detailed by Carbon 180. Additionally, EJAC should be given advance notice of said follow-up workshop as well as staff support empowering their Committee to study with Carbon 180 staff how to best approach project case studies from an environmental justice lens, including redress of prior harms. The new report from Carbon 180, Removing Forward - Centering Equity and Justice in a Carbon-Removing Future, August

2021, includes a summary on page 5 enumerating their guiding principles for just carbon removal:

1. The benefits of carbon removal solutions must be equitably distributed.
2. Public engagement must be robust and involve seeking input from groups throughout the development and deployment of carbon removal solutions.
3. Safeguards are needed to ensure adverse impacts are not borne by disadvantaged communities.
4. The socioeconomic consequences and distributional impacts of carbon removal solutions need to be evaluated alongside their technological and economic attributes.
5. Carbon removal is seeking to address a challenge that is both local and global, and therefore should incorporate justice across temporal and spatial scales.

Specifically, this workshop appears to be a distraction from top priority issues for the scoping:

1. Real, serious clean, renewable energy development,
2. No forest thinning slash as legitimate “bio-waste” for large-scale BioEnergy or Carbon Capture and Storage (CCS) technology, and
3. No more investment in manure digesters, especially for CCS; focus on policies that reduce herd size.

There is a modest and necessary role for appropriate, distributed, site-specific carbon capture and storage mainly with technologies not described in the workshop that best adhere to the Sierra Club guiding principles that we summarize below. However, these and other much higher priority environmental and environmental justice issues seem to have been ‘glossed over’ in the eagerness to promote mainly the technologies that are clearly being driven by heavy influence from and for the benefit of polluting commercial interests. Here are some issues we want workshops about:

1. **Hold the CPUC accountable to the public and not the monopoly IOUs.** We have been asking for rate-setting and tariff policies to expand rooftop solar plus storage. And we need the CPUC to begin the process to reform Transmission Access Charges (TAC) to steadily expand Distributed Energy Resources (DERs) to finally release the potential of commercial scale DERs. The deeply embedded TAC policy barrier was made clear in 2017 by CAISO in its Transmission Access Charge Structure Enhancements Proposal. If they had been removed when recommended by CAISO, we would now have more DERs, community microgrids, and long-term cost-effective resilience and reliability and lower emissions. Monopoly IOUs have been slowing the rate of California’s clean energy transition *for far too long*, making the prospect of taxpayer-funded state investment in carbon capture from power plant smokestacks to “lengthen the life” of the natural gas industry *completely unacceptable*.
2. **Hold state agencies accountable to protect forests from logging.** The fallacy in the comment by the BioEnergy Association spokesperson is described by Chad T. Hanson in [Smokescreen: Debunking Wildfire Myths to Save Our Forests and Our Climate](#). He writes on page 26, “Of all the myths that are impeding real progress in overcoming the Climate crisis, the most persistent is the notion that wildland fire destroys forests in general and forest wildlife habitat in particular. More specifically...the notion that patches of high-intensity fire are unnatural and destroy wildlife habitat remains a cornerstone of the “catastrophic wildfire” political narrative.... Our challenge...is to protect forests from logging, thereby allowing them to sequester and

store more carbon and help imperiled wildlife species recover, while we also protect vulnerable human communities.”

3. **Stop investing in manure digesters; put cow manure to its highest use as compost to incentivize organic farming and ecosystem restoration.** Our concerns about cattle manure were ignored by the legislature in the passage of SB 1383 in favor of the dairy lobby. SB1383 prevented you from pursuing programs to reduce enteric methane emissions. The manure has given the fossil gas industry, especially SoCal Gas an excuse for their massive propaganda against building decarbonization. You should buy the manure, contract for composting and give it or sell it at a discount to organic farmers. Paying ranchers or dairies to use cattle manure for carbon farming is not an option, because that policy maintains herd size--the largest in the nation. The biodigesters are a boondoggle. The jury is out on the amount of enteric methane resulting from payments to ranchers.

Guiding principles for evaluating technological Carbon Dioxide Removal (CDR) projects

In addition to the above-noted environmental justice principles offered by Carbon 180, the following guiding principles were either not discussed or not adequately discussed: This is a summary of points from Climate Resilience, Carbon Dioxide Removal, and Geoengineering Policy, Sierra Club, March 2020, pages 85-93.

1. **NO enhanced oil recovery** (where CO₂ is injected into oil-bearing formations to aid crude extraction), involving injection operations near communities, or used to extend the life or financial viability of fossil fuel facilities.
2. **Control air pollutants and toxic materials.**
3. Use only clean, renewable energy to power DACCS.
4. Strict evaluation of sites using the CEQA process where water use and land for energy generation may have issues or impacts.
5. **Prove net sequestration** including complete lifecycle energy use and emissions.
6. Utilization as an industrial resource must result in net sequestration.
7. NO feedstocks from livestock manure by which CARB continues to enable continued excessive herd sizes of cattle and cows.
8. NO feedstocks from sources involving conversion of intact ecosystems or forest degradation: “Keep it in the forest, keep it on the ground.”
9. Account in forests for impacts to carbon stores and future sequestration, including impacts due to nutrient removal and logging-caused soil damage.
10. Biomass feedstocks must be true wastes or residues—where the energy costs of production are therefore assumed to be low or zero—that would otherwise have been required to be burned or go to the landfill.
11. Full lifecycle emissions accountability of captured carbon utilization products.
12. Prioritize feedstock use for available alternatives that offer superior ecosystem benefits and lower carbon profiles.
13. Funds must be prioritized for environmentally or socially beneficial CDR alternatives and renewable energy programs.
14. Support local zoning and permitting processes for projects that ensure full consideration of the projects' environmental and community impacts.
15. Define permanent sequestration per California Low Carbon Fuel Standard (LCFS) as 100 years or more. Require sequestration permanence certification.

16. Stockpiling of mineralized CO₂ above ground should be done only with stable carbonate minerals or other materials that can be demonstrated stable for 100 years. Permanent sequestration products include carbon in the form of rocks or other low energy and stable material, such as concrete.

The bottom line is:

For California to have any realistic chance of actually meeting its greenhouse gas emissions reductions targets while centering environmental justice as required by state law, all corresponding policy and decisions must be made based on quantifiable social benefits rather than continuing to cater to the financial interests of for-profit, private industries including, but not limited to, the fossil fuel, cattle, and dairy industries.

We want support for the Environmental Justice Advisory Committee to be informed participants in workshops on what they see as scoping priorities.

We want a calendar of workshops on priority issues recommended by the Environmental Justice Committee that may include those we cited above.

Sincerely,

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