



CENTER FOR
CARBON
REMOVAL

October 16, 2015

Mary D. Nichols, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comment for 2030 Target Scoping Plan Kickoff Workshop

Dear Chair Nichols,

The Center for Carbon Removal applauds California for setting ambitious and viable goals for its 2030 Target Scoping Plan. The overarching vision to build a clean energy economy is critical for the health and wellbeing of California's people, economy, and environment. However, climate experts agree that it is increasingly likely that we will not just have to build a clean energy economy for the future, but we will also have to develop and deploy large scale solutions to clean up excess carbon dioxide that has accumulated—and will continue to accumulate—from the carbon-emitting economy of the past. The 2030 Target Scoping Plan provides an opportunity for California to lay the groundwork for a negative emission future.

There are many reasons that California would benefit from including measures to support the development of carbon removal solutions—i.e. processes that remove and sequester carbon dioxide from the air, on net (such as bioenergy and direct air capture with sequestration, reforestation/afforestation, carbon farming agricultural practices, and enhanced weathering of carbon sequestering minerals)—in the 2030 Target Scoping Plan that are highly aligned with the goals identified in the Plan. In addition, no other government has emerged as a leader in the carbon removal field to date; if California leads in developing carbon removal systems, it can create sustainable jobs and hubs of expertise in the state, creating a competitive advantage and economic growth engine for decades to come. Finally, carbon removal can expand the portfolio of solutions available to fight climate change helping to meet emissions reduction targets, potentially reducing the overall cost of compliance with climate regulations, and offering more opportunities to build political support for deep decarbonization.

Already, the 2030 Target Scoping Plan emphasizes the need to both protect and utilize natural carbon sinks, including wetlands, forests, rangelands, and farmland. As noted, using these lands to sequester carbon can also be accompanied by numerous co-benefits that justify implementation on their own. In order to align these two priorities, additional basic science to properly account for the true amount and permanence of carbon stored in these systems is key. This pillar offers a myriad of

opportunities for research and innovation to understand the lifecycle carbon sequestration of various climate solutions at a local level, as well as to develop tools to enable farmers, ranchers, and forest managers to measure and monetize the carbon sequestration benefits of their activities cost- and time-effectively.

Although the Scoping Plan has incorporated the use of natural sinks, it has not considered sequestration in the energy sector. Bioenergy with carbon capture and storage has the potential to produce carbon negative electricity and fuels, helping California to meet its bioenergy goals, RPS, and Low Carbon Fuel Standard. Although these systems currently are early stage technologies, California can lead the way by funding pilot projects, carving out provisions for bioenergy + CCS in the RPS, and by answering key questions on the lifecycle carbon and sustainability impacts of such bioenergy production.

All in all, developing carbon removal solutions is an urgent priority that California would benefit from addressing in a meaningful way today through the 2030 Target Scoping Plan. While there are challenges to implementing carbon removal solutions, these challenges highlight areas in which the 2030 Target Scoping can have an immeasurable impact on the development of carbon removal solutions and on the mitigation efforts of California and the rest of the world. In conclusion, the 2030 Target Scoping Plan offers a prime opportunity for California to become a leader in the carbon removal field, which would generate myriad benefits to the state's people, economy, and environment.

Respectfully Submitted,



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About the Center for Carbon Removal:

www.centerforcarbonremoval.org

The Center for Carbon Removal is an initiative of the UC Berkeley Energy and Climate Institute dedicated to curtailing climate change. Our focus and mission is to accelerate the development of scalable, sustainable, economically-viable carbon removal solutions. To accomplish this mission, we lead industry and policy collaborations to unlock the potential of carbon removal solutions by conducting research and analysis, convening events, and curating an online hub for information and

discussion about carbon removal. Our website is available at: www.centerforcarbonremoval.org and you can engage with us on Twitter (@CarbonRemoval) and Facebook (The Center for Carbon Removal).