350 Contra Costa
350 East Bay
350 San Francisco
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Napa Climate NOW!

April 8, 2022

Dear Colleagues,

Your upcoming draft of the 2022 Scoping Plan is a crucial product that pulls together for the entire state feasible approaches to meet California's climate goals; the 2022 plan is the last chance to influence California agency actions and policies that can make a difference before the 2030 target date. This letter highlights challenges facing the 2022 Scoping Plan that we have observed during our participation in multiple workshops and rounds of public comments over the past year and a half. Your agency has the critical mandate to look across the different silos in a comprehensive way.

350 Bay Area has expert volunteers who have been involved across the different CARB sectors, as well as working with a number of the agencies who are charged with implementing California's climate goals. Furthermore we represent over 20,000 environmental activists, California residents, and "ratepayers"--we are your partners and supporters for policies that can solve the climate crisis in an effective–and cost-effective– way.

We suggest how following issues can be better evaluated and addressed in the 2022 Scoping Plan:

Carbon drawdown:

1. Maximizing Natural and Working Lands (NWL) sequestration: Include a sequestration goal for NWL, Integrate that sequestration target in the Energy Sector Pathways model, and Accelerate organic acreage targets.

   The recent IPCC workgroup 3 report makes clear that drawdown of carbon will be essential in parallel with more rapid reduction of emissions. As the IPCC report demonstrates, land management, including croplands, forestry and wetlands, constitute the least expensive and substantially scalable approaches for carbon drawdown. However, the current Natural and Working Lands scenarios do not have targets for greenhouse gas emissions reductions. We urge that the Natural and Working Lands sector include a "stretch" sequestration target in the NWL sector scenarios, similar to the "top down" modeling used in the energy sector, which starts with the GHG objective. The "stretch" goal would be determined as the MMT sequestration that could hypothetically be accomplished by substantially increased and targeted funding.

   Furthermore, the Energy Sector Pathways include analyses of sequestration approaches. How will these Energy Sector calculations incorporate the role of Natural and Working Lands carbon sequestration compared to other, more costly approaches?

Finally, we appreciate that the NWL scenarios now include a target for increasing the proportion of organically farmed acreage in California cropland. We strongly urge a more ambitious timeline to meet these targets–2030 instead of 2045. Organic farming correlates with effective soil carbon sequestration, and the criteria of a proportion of organic acreage provides a readily trackable defined measure.

2. Exclude Carbon Capture and Sequestration that extends fossil fuel use

   Carbon drawdown through Natural and Working Lands has been demonstrated, although additional data will be needed to measure impact. Direct Air Capture, and Carbon Capture and Sequestration from hard to electrify industries such as concrete may be useful, but additional research is needed to address environmental justice impact and cost-effectiveness. However, certain CARB workshop presentations and models included Carbon Capture and Sequestration as a basis for continuing fossil fuel industry practices and/or uses the CO2 produced for enhanced oil recovery processes. The current failure of Carbon Capture and Sequestration pilots in the fossil fuel industry and elsewhere (expensive and energy intensive with incomplete capture of CO2) demonstrates that Carbon Capture and Sequestration research/pilot investments should not be a part of the 2022 Scoping Plan given the time frame necessary to meet our climate goals. Certainly CARB's assumption that CCS will capture 90% of the carbon is several times more than has been documented to date.

Oil and Gas Industry:

1. Phasing out fossil fuel production (extraction and refining of petrochemicals)

   We support Alternative 1 with its strong climate and environmental proposals that aim to achieve carbon neutrality by 2035 with a complete phaseout of combustion and production with minimal reliance on engineered carbon removal. CARB must prioritize direct emission reductions and phasing out fossil fuel consumption and production rapidly, and reduce health harms, especially for low-income and disadvantaged communities. Phasing out fossil fuel combustion (electricity and vehicles) and ending oil and gas extraction and petroleum refining by 2035 provides multiple benefits for both public health as well as combatting the climate crisis. Alternative 1 is directly aligned with the requirements under AB 197 (E. Garcia, 2016) to reduce direct emission reductions as well as the Governor's request that CARB pursue carbon neutrality by 2035.

   The scenarios show that at least 60% of refinery capacity should be phased out by 2035 and at least 80% and up to 100% by 2045. Decommissioning oil refineries, ramping down and phasing out oil extraction, phasing out exports (of oil and coal) and developing a just transition plan for specific communities and workers must be part of CARB's plan. The closure of most oil refineries in 22 years presents a major change for communities and workers, who need clear guidance so they can prepare. For this reason, we strongly support the specific recommendations of the Environmental Justice Advisory Committee on oil refineries (section F2 of Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022).

Energy sector:

1. Incorporate Distributed Energy Resources, public health, and land use benefits in CARB and state agency planning and implementation

   The energy sector has been the primary source of California's success in decreasing emissions over the past 10 years. However, modeling from the CEC recognizes that we need to markedly accelerate construction of new renewable energy sources, especially in the face of building and transportation electrification. Two independent modeling studies and analyses (Vibrant Clean Energy[1] and Stanford[2]) show that optimizing distributed energy resources (DER) (ie energy efficiency, storage, solar and flexible load management on the distribution grid) **consistently results in decreasing electricity rates over time** compared to meeting clean energy goals by investments in utility scale PV—in part by avoiding enormous investments in transmission infrastructure. The VCE study, for example, shows that California saves $120 billion dollars by optimizing DER. Of crucial importance, current modeling on which California Integrated Resource Planning is based **does not have the capacity to model optimized distributed energy resources** to assess the least cost route to meet California's climate goals. Specifically RESOLVE, used in CPUC and CARB models, can only optimize for utility scale resources without differentiating between generation (such as PV or storage) located on the distribution grid versus those requiring transmission. Models need to optimize all three scales and locational categories of resources - those larger than 20 MW connected to the transmission system, those up to 20 MW connected directly to the distribution system, and the millions of resources typically below 1 MW sited behind the meter (BTM) on customer premises, including distributed generation (DG), storage, and demand response.

   We commend CARB for commissioning modeling of Public Health impacts of energy generation and urge the results be quantitatively incorporated into preferred scenarios for energy policy. We strongly urge that the modeling also include monetized values for land use. In addition to saving money, policies which optimize DER will decrease disruptions to NWL carbon sequestration caused by new transmission corridors and utility scale solar installations eg in deserts.

While we appreciate CARB incorporating values for public health and ideally for land use in the 2022 scoping plan, we urge consultation within the Executive Branch about how to assure that these cross-sector issues are addressed to assure effective implementation of the 2022

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[1] Vibrant Clean Energy Executive Summary Why Local Solar For All Costs Less: A New Roadmap for the Lowest Cost Grid p12-13

[2] Jacobson MZ et al Zero air pollution and zero carbon from all energy at low cost and without blackouts in variable weather throughout the U.S. with 100% wind-water-solar and storage. Renewable Energy 184 (2022) 430e442 " "Whereas transitioning more than doubles electricity use, it reduces total end-use energy demand by ~57% versus business-asusual (BAU), contributing to the 63 (43-79)% and 86 (77-90)% lower annual private and social… energy costs, respectively, than BAU."

Scoping Plan. Currently for example the CPUC makes decisions without incorporating any value for public health or land use and without modeling optimized DER. We would welcome the opportunity to work with CARB and other government agencies in an effort to assure that the scoping plan leads to a genuine all-of-government effort.

With regards,

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