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

May 3, 2022

Dear Chair Randolph,

Health organizations and experts around the world see the climate crisis as the greatest health challenge of this century. It is, at the same time, a very significant health opportunity, because well-designed climate solutions can also yield huge health benefits. The Center for Climate Change and Health works to promote climate solutions that optimize health and health equity benefits and minimize any health harms of local, state and federal climate policies.

We appreciate the work of the California Air Resources Board to model climate and health impacts associated with various Scoping Plan scenario options, and the presentation of an overview of the modeling results at the March 15 workshop. Our fundamental concern is that CARB staff appear to be using the workshop to justify its selection of Scenario 3, rather than as an opportunity to hear public comments that would improve the modeling and to use modeling results and public comments to devise the most efficient, equitable, and healthy Scenario. The result is that staff are proposing a Scenario that lacks the urgency of ambition necessary to minimize climate harms, rests on non-transparent and inadequate modeling, and threatens to perpetuate if not exacerbate unacceptable health inequities in our state.

Urgency of greater ambition: CARB appears to have chosen Scenario 3 based on its lower modeled implementation costs relative to the more ambitious options. But neither the economic nor health modeling adequately integrates the costs of delays in climate action.
As delineated nearly ten years ago (and many times since), any delay in action increases CO2 concentrations because CO2 accumulates in the atmosphere. Future climate-related risks depend on the rate, peak and duration of warming. And every fraction of a degree of additional warming has significant health consequences – e.g. from heat, wildfire smoke, increased air pollution - that disproportionately impact disadvantaged communities, the elderly, children, and those with chronic illnesses and disabilities.

Selection of Scenario 3 will not only increase risks associated with greater warming; it will result in significant short and long-term health impacts that would be averted with a more ambitious plan . **We strongly urge CARB to pursue a plan to attain carbon neutrality by 2035.**

Process concerns: Since 2009, the health community has advocated for the integration of a comprehensive health analysis into the design of the Scoping Plan so that CARB could optimize the health benefits of a suite of actions to reduce greenhouse gas emissions. It is deeply

concerning to us that staff have not done this. Instead, they have identified four scenarios and then conducted a health analysis – rather than assessing which actions are likely to have the most significant health and health equity benefits and intentionally integrating them into scenario planning.

Lack of transparency: It is difficult to fully understand the analyses that were conducted given that CARB and contractors provided insufficient information on assumptions, methodology, or range of uncertainty for the health and economic analyses. Without the opportunity to evaluate the models, assumptions and methods used to assess benefits and costs of specific policies in each scenario, it is not possible for the public to assess CARB's findings nor conclusions. This is not the way that sound public policy is made. Also, in a February 2022 workshop, staff stated that they would analyze "the health benefits of decarbonization by 2045 vs status quo." We are still unclear on how or if this will be achieved.

Inadequate health analysis: The health analysis presented at the workshop rests entirely on the use of BenMap to analyze air pollution impacts. We appreciate that CARB and its contractor have integrated new health endpoints into the BenMap analysis. But the analysis of air pollution impacts is insufficient and misleading as the basis for ascertaining actual health impacts and health benefits of various scenario options or for designing a plan that optimizes health benefits and health cost reductions.

Failure to integrate health benefits of vehicle miles traveled (VMT) reduction: Both CARB and CDPH have supported development of and been trained in the use of Cal-iTHIM (Integrated Transportation and Health Impacts Model) to model the health impacts and monetized health costs associated with increased physical activity from active transport and reduced vehicle miles traveled. These analyses have repeatedly shown that even modest increases in active transportation yield health benefits and averted health costs that far eclipse – by orders of magnitude – those associated with even 100% electrification of cars.[1] A recent analysis of California health impacts suggests that the averted health costs of doubling active transportation would alone exceed the total costs of implementation of Scenario 3 in 2045.[2] Failure to integrate VMT health benefits into the analysis significantly skews the cost analyses by failing to take into account the very significant averted health costs associated with VMT reduction. It also once again belies CARB's alleged commitment to developing a Scoping Plan that maximizes health

[1] https://ajph.aphapublications.org/doi/10.2105/AJPH.2021.306600
[2] Available on request, courtesy of Dr. Neil Maizlish

benefits and benefits to disadvantaged communities that bear a disproportionate burden not only of climate change but also due to existing chronic disease inequities.

Align transportation scenarios with climate and health goals: Scenario 3 does not sufficiently align with stated state policy and goals, such as more rapid electrification of heavy duty trucks, or VMT reduction.

Exclude investments in new fossil fuel infrastructure: Numerous IPCC and IEA reports[3] have documented the folly of developing new fossil fuel infrastructure and the urgency of transitioning to clean and renewable energy sources. Yet all of the CARB alternatives incorporate building new gas facilities. Fossil gas is not a climate-friendly nor healthy solution. There is an increasing body of evidence demonstrating the health impacts of burning fossil gas and the climate impacts of methane emissions associated with fossil gas infrastructure.[4] CARB must pursue a strategy that does not incorporate new fossil fuel infrastructure that will likely lock in additional fossil fuel use for decades.

The perception of a need for new gas plants might be diminished if CARB incorporated a strategy for more ambitious and rapid electrification including incentives and subsidies for electrification of homes – especially in multi-unit and low-income housing – well before the “end of useful life” of gas appliances. Note that this too would have health benefits that have not been incorporated into the CARB health analysis.

Do not rely on carbon management: Proposed carbon management solutions are untested, expensive, and potentially risky carbon management solutions. CARB’s preferred Scenario 3 relies extensively on carbon capture, use and sequestration and direct air capture of carbon. These are technologies that to date have not been proven to be feasible at scale, rely on massive underground storage facilities and associated pipelines that carry poorly delineated but perhaps significant risks, require huge energy inputs, and to date are extremely costly.

Additionally, given the imperative to rapidly reduce fossil fuel extraction and combustion, the use of CCS to enhance oil and gas recovery should be prohibited.

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[3] https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf https://www.iea.org/news/pathway-to-critical-and-formidable-goal-of-net-zero-emissions-by-2050-is-narrow-but-brings-huge-benefits

[4] For example, indoor air pollution from gas stoves https://rmi.org/insight/gas-stoves-pollution-health

Focus on direct emissions reductions: Rather than bet our future on these unproven solutions, CARB should pursue more rapid and ambitious direct emissions reductions that would (as the analysis suggests) have significant health benefits, particularly in the low income communities and communities of color that are disproportionately burdened by the health impacts of transportation, industrial, agricultural and fossil fuel extraction emissions.

In summary, we urge CARB to adopt a more ambitious plan to reach carbon neutrality by 2035 that optimizes health and health equity benefits, minimizes risks to already disproportionately burdened communities, and protects the health of California's future generations.

Sincerely,
Dr Amanda Millstein
Dr Ashley McClure
on behalf of the >600 health professional members of Climate Health Now in California