September 3, 2021

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

RE: Comments on 2022 Scoping Plan Update - Scenario Concepts Technical Workshop

To Chair Randolph and the Air Resources Board,

The California Environmental Justice Alliance ("CEJA") provides the following comment on the scope of environmental review for the 2022 Climate Change Scoping Plan Update ("Scoping Plan"). We request the California Air Resources Board ("CARB") to include an adequate analysis of environmental justice concerns, including but not limited to those detailed below, in the Environmental Assessment ("EA") of the Scoping Plan as required by the California Environmental Quality Act ("CEQA").

I. The Project Description Must Include Environmental Justice, Prioritize Meeting SB 32, and Include Measures that At Least Reduce Emissions 80% Below 1990 Levels.

A. The EA's Project Description Must Include Environmental Justice.

The Scoping Plan must "ensure that activities undertaken to [meet climate goals] do not disproportionately impact low-income communities."[1] In order to allow for informed decision-making, the EA must therefore also include this mandate as a Project Objective. Consequently, each section of the Scoping Plan and EA must address: whether respective GHG reduction

[1] Cal. Health and Safety Code § 38562(b)(2).

measures present disproportionate impacts to low-income communities; propose measures to mitigate those impacts; or alternatively, detail the degree of significant and unavoidable impact(s) for the Board and public to consider.

Similarly, Assembly Bill ("AB") 197 is a central piece of climate policy, and in fact, a *companion bill* to Senate Bill ("SB") 32. Importantly, AB 197 is also an environmental justice bill, specifically intended to address the environmental injustices of pollution trading mechanisms. If CARB is to meet the objectives of SB 32, CARB must also meet the environmental justice objectives of AB 197. The Scoping Plan and EA must therefore include AB 197 as a Project Objective. Specifically, the Project Objective must include the prioritization of direct emission reductions, as contemplated by AB 197.

Additionally, to the extent that the EA fails to adequately disclose, analyze, and provide sufficient mitigation measures for, or identify less harmful alternatives to the Scoping Plan's potential and disproportionate impacts to Black, Indigenous and People of Color Communities and other protected classes, it must not conflict with the Board's duties under state and federal fair housing and civil rights laws.[2]

B. The Scoping Plan Must Prioritize the SB 32 Target.

Our organizations have previously noted our concern that the workshops have so far placed too much emphasis on the carbon neutrality guidance set forth in Executive Order B-55-18 and lacked focus on the 2030 emission *reduction* target set forth in **statute**. We reiterate our request that the Scoping Plan must focus on the 2030 target first, and not the other way around. Failure to meet the 2030 goal first presents significant local and global impacts. The Legislature shares this concern:

> long-term policy considerations and non-binding scenarios should not supplant the more important task of ensuring the ARB's policy measures are adequate to achieve the mandatory 2030 emissions limit.
>
> Simply put, the upcoming Scoping Plan needs to focus on achieving the 2030 emissions limit—not to the exclusion of long-term policy planning, but as a requirement of state law as well as a practical prerequisite for carbon neutrality.[3]

C. Each Scenario in the Scoping Plan Must *At Least* Reduce Emissions 80% Below 1990 levels.

California's climate policy includes a goal to reduce carbon emissions 80% below 1990 levels by 2050.[4] "[T]his level of greenhouse gas reduction should be considered the minimum level of reductions needed in the state."[5] Each proposed scenario in the Scoping Plan must

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[2] *See e.g.*, Cal. Gov. Code §§ 11135 et seq., 65008, 8899.50; 42 U.S.C. § 2000d, et seq., 3601, et seq., 5304(b)(2)&(s)(7B), & 12075; 12 C.R.R. § 12161.

[3] Senate Majority Leader Letter to Chair Liane Randolph, August 6, 2021 attached as Attachment A.

[4] *See* EO B-55-18 and EO S-3-05

[5] *Id.* and see E3, Achieving Carbon Neutrality in California, October 2020 at 1.

therefore, at a minimum, meet this target. CARB should also include scenarios that go even further, for instance to meet the recent directive from the Governor to include a phase out oil extraction by 2045 in the Scoping Plan, and the Zero-Carbon Scenario in the Achieving Neutrality Report.

II. The Scope of Environmental Analysis Must be Sufficient to Account for Local Impacts to Public Health.

Although the Scoping Plan is a broad statewide-level planning document, its EA must evaluate the potential significant adverse impacts and beneficial impacts of the reasonably foreseeable compliance responses for implementing its measures.[6] While this analysis does not have to be as robust as that required for specific construction projects by various entities to comply with regulations or policies in the plan, the analysis must still, at a minimum, allow for informed decision-making. Specifically, the Scoping Plan and EA must include sufficient information to adequately compare and evaluate the relative costs and benefits of each GHG reduction measure and overall, each scenario presented in the Scoping Plan. In this regard, CARB should: reject its prior inadequate environmental justice analyses; include an analysis of the full social costs of GHG reduction measures; and in doing so, include a lifecycle analysis. Such analysis must include the broad range of local environmental impacts including, but not limited to, impacts to air quality, water quality, water supply, odor, traffic, noise, aesthetics, and impacts that result in displacement or division of a community or neighborhood.

A. CARB Must Reject its Prior and Inaccurate Environmental Justice Analyses.

The 2017 Scoping Plan analysis of environmental justice was fraught with errors that obscured or diminished significant environmental impacts on low-income communities of color. To the extent that this Scoping Plan's EA relies upon prior analyses as part of CARB's certified regulatory program, CARB should ensure that this iteration's environmental review is not similarly skewed, and reject the prior inadequate analyses.

CARB's prior inaccurate insistence that cap-and-trade is a direct emission reduction serves as one glaring example. As the Legislature has recently stated, CARB "should not have designated cap-and-trade as a 'direct emission reduction measure' and should not do so again . . . [doing so] needlessly exacerbated tensions with the environmental justice community and other air quality advocates."[7]

B. The Scoping Plan Must Include the Full Range of Social Costs, and Not Only Avoided Social Costs.

Cost-effectiveness is central to climate policy.[8] Consequently, in order to adequately meet an environmental justice Project Objective, CARB must necessarily balance the appropriate costs and benefits. We recently submitted a comment regarding the mandate to consider the full

[6] *See* CEQA Guidelines § 15252.
[7] Senate Majority Leader Letter, Attachment A at 3.
[8] *See eg.* AB 32.

range of social costs of GHG reduction measures.[9] That comment detailed some social costs that are important to environmental justice communities, but which CARB has consistently ignored in prior Scoping Plan and EA analyses. For instance, reasonably foreseeable impacts of dairy biomethane production include the expansion of mega-dairies to provide adequate dairy waste feedstocks, and the associated significant environmental impacts, such as increased local air pollution and groundwater contamination. CARB must not repeat the same mistake, and must include an assessment of such impacts in the Scoping Plan and EA. As CARB's own consultants have previously identified the need for such dairy expansions, these impacts are reasonably foreseeable and must be included in the EA.

Similarly, offset programs and other pollution trading strategies such as the low carbon fuel standard, implicate local impacts including air quality, water quality, traffic, and odor impacts. The EA must include a robust analysis of the potential impacts of any programs and projects that allow for continued GHG emissions (and concomitant) pollution, especially in disproportionately burdened communities.

In addition, any analysis of social costs must extend beyond the social costs of avoided GHGs, as currently analyzed by CARB in the 2017 Scoping Plan. Similarly for this Scoping Plan, CARB has so far proposed to adopt the Biden Administration's work on social costs. However, that work is only based on avoided social costs. CARB is aware of the omission of local impacts in their analyses, and has been since at least 2017:

> There are additional *costs to society* outside of the SC-CO2, including costs associated with changes in co-pollutants, the social cost of other GHGs including methane and nitrous oxide, and costs that cannot be included due to modeling and data limitations. The IPCC has stated that the IWG SC-CO2 estimates are likely underestimated due to the omission of significant impacts that cannot be accurately monetized, including important physical, ecological, and economic impacts. CARB will *continue engaging with experts to evaluate the comprehensive California-specific impacts of climate change and air pollution*."[10]

CARB must include an analysis of these additional costs to society in the Scoping Plan and the EA. Only then can CARB determine if it has met the Project Objective to adequately address environmental justice.

C. Analysis of Environmental Impacts from GHG Reduction Measures Must Consider Lifecycle Impacts.

CEQA requires the consideration of reasonably foreseeable impacts, as opposed to those that are speculative. In this regard, the EA must include a lifecycle assessment ("LCA") of GHG reduction measures.

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[9] *See* CEJA et al. Comments on Public Workshop Series, July 9, 2021, available at https://www.arb.ca.gov/lists/com-attach/72-sp22-kickoff-ws-UzABYgZtUWMHXlI3.pdf.
[10] *Id.* at 41 (emphasis added).

LCAs are essential to comprehensively evaluate the cost-effectiveness and equity-related impacts of a given measure. An assessment of a resource's environmental impacts or cost effectiveness that omits significant impacts upstream and downstream from the point of use is likely to miss crucial factors. For instance, two seemingly identical biofuels would vary widely in terms of total costs if one is associated with deleterious land-use changes, more GHG-intensive inputs, and more polluting processes, such as the example of foreseeable mega-dairy expansions noted above. Likewise, total costs would also vary if the combustion emissions of one resource are distributed in more vulnerable environments and populations. Furthermore, applying LCAs to energy resources is not a novel idea: both CARB and the CEC have applied LCAs of GHG emissions from transportation fuels. It is important to consider LCAs to identify and avoid disproportionate impacts in environmental justice communities.

The mega-dairy/digester example is an unfortunately typical example where environmental review ends too soon–at the dairy digester, and does not extend to the integral and foreseeable dairy expansion. Carbon Capture and Sequestration ("CCS") projects also present similar risks of avoiding environmental review. The Scoping Plan and EA must analyze all associated impacts, not just at the site of CCS, but also for instance, at the site of generation to power the CCS infrastructure.

III. The Scoping Plan Should Include Measures that are Not Captured by Technical Modeling and the GHG Inventory.

A. The Scoping Plan Should Include Measures that Are Not Addressed by the Scenario Input Questions.

The Scoping Plan must be forward looking. It must "identify and make recommendations on direct emissions reduction measures,"[11] and importantly, must not be constricted by current regulations but also assess "*alternative* compliance mechanisms." Related, we thank CARB staff for committing to include a scenario developed by the Environmental Justice Advisory Committee ("EJAC"). This EJAC Scenario should not be constrained by the limits of technical modeling, as reflected in the Scenario Input Questions. The EA must consequently disclose the gaps in current regulations, or these questions, so that the public can make an informed determination on the recommendations of the Scoping Plan. The Scoping Plan must provide a comprehensive plan for California to meet its climate goals based on current regulations, but where those regulations are inadequate or based on technical modeling that is inadequate, the Scoping Plan and EA must also identify alternative regulations to meet climate and equity goals.

Moreover, as "[a]ll GHG rules and regulations adopted by the state board shall be consistent with the scoping plan,"[12] it is imperative to include a robust set of anticipated scenarios that the State can then build on to further reduce GHGs beyond current regulations. Just as prior iterations of the Scoping Plan considered and evaluated alternative strategies,[13] this

[11] Cal. Health and Safety Code § 38561(b).
[12] Cal. Health and Safety § 38592.5(a)(2)
[13] *See eg.* 2017 Scoping Plan Appendix D, assessing 20 or 30 percent reductions in emissions from the Refinery sector.

Scoping Plan must not only leverage existing regulations and programs, but also explore "new potential measures [and policies] to help achieve the State's 2030 target."[14]

Importantly, Scoping Plan assessment and discussion of regulations and alternative regulations are also not limited to those under CARB's jurisdiction. CARB "shall consult with all state agencies with jurisdiction over sources of greenhouse gases."[15] In so doing, "the Board must ensure that GHG emissions reduction activities are complementary."[16] CARB cannot omit certain strategies or GHG reduction measures from the Scoping Plan simply because they may lie outside of CARB's jurisdiction. The Scoping Plan should be a holistic document that spans across all "state agencies with jurisdiction over sources of GHGs."

The Scenario Input Questions provided by CARB do not capture all of the GHG emissions that CARB should address in the Scoping Plan. The Scoping Plan should propose measures or a timeline to address measures that are important to environmental justice communities, but which are not captured by the modeling inputs. Just as CARB will factor in Natural and Working Lands to further "shave" GHGs to meet the 2030 target and beyond, CARB can also set a schedule, and if necessary propose methods to coordinate with other state agencies, to achieve further direct GHG reductions that the modeling inputs do not capture. This should include existing recommendations developed from the AB 617 process.

<u>Examples of Measures not Included in the Modeling that CARB can Exogenously Assess Just as with Natural Working Lands</u>:

1. *Transportation*: The modeling does not include active transportation despite the potential to greatly reduce motor vehicle usage, especially for shorter trips which often produce more criteria pollutants. Strong investments in improving access to bicycling, other micromobility options, and walking can shift a substantial number of trips out of motor vehicles, a very achievable outcome in most areas of the state as trips shorter than three miles, a perfect distance for other options, make up the biggest single share of trips taken. Additionally, the reach and usefulness of these options can be extended farther by being seamlessly integrated with transit. The modeling also does not include a full range of mass transit options.

2. *Pesticides*: The modeling fails to include pesticides and their contribution to climate change, despite the studies that have established the immense harm that synthetic pesticides inflict on environmental justice communities, including the increase of GHG emissions. CARB must include an adequate analysis of pesticide emissions for three primary reasons. First, pesticides are a petrochemical, the production of which is energy intensive and increases fossil fuel usage and greenhouse gas emissions.[17] Second, synthetic pesticides contribute significantly to GHG emissions, with studies

[14] *See eg.* 2017 Scoping Plan at 67. See also Appendix E to 2017 Scoping Plan that analyzes five hypothetical policy scenarios, and also, projected policies and cost estimates for development of SB 1383.
[15] Cal. Health and Safety Code § 38561(a)
[16] *Id.*
[17] Zane R. Helsel, Energy in Pesticide Production and Use, in Encyclopedia of Pest Management 157, 159 (David Pimentel, ed. 2007), at http://1.droppdf.com/files/ioiJk/encyclopedia-of-pest-management.pdf.

showing application of 3 fumigant pesticides alone (chloropicrin, metam sodium, dazomet) causing anywhere from 7- to 100-fold increases in nitrous oxide, a greenhouse gas considered 300 times more potent than carbon dioxide.[18] Approximately 20 million pounds of these fumigants are applied to California fields each year, and it is well established that these applications disproportionately affect Latinx communities throughout the Central Valley, particularly in Fresno and Kern Counties.[19] Third, healthy soil is critical for carbon sequestration, especially stable carbon sequestration, which derives primarily from soil microbial processes. Alternatively, organic farming, which is virtually free of synthetic pesticides and fertilizers, results in higher stable soil organic carbon and reduced nitrous oxide emissions when compared to "conventional" farming reliant on synthetic chemicals.[20]

3. In addition to a failure to consider the role of pesticides in climate change, and the role of direct emission reductions to address those impacts, the assumptions as presented by CARB to date fail to consider the full scope of agricultural emissions, and as importantly, the role of direct emission reduction standards for agricultural emissions, including those from confined animal feeding operations such as enteric emissions and emissions from manure.

4. There is inadequate consideration of the role of goods movement and other land use and transportation inputs such as road expansions that increase medium- and heavy-duty vehicle travel within and across regions and that increase use of drayage vehicles in warehousing and similar operations. As with other impacts identified throughout this letter, goods movement and similar facilities are disproportionately located in and draw increased medium- and heavy-duty truck traffic to communities already heavily burdened by air, water, light, noise and traffic impacts. The transition to clean energy vehicles over the next several decades does not mitigate the likely impacts discussed above, which the Scoping Plan and EA must include.

B. The Scoping Plan Should Include a Schedule to Address the Gaps in CARB's GHG Inventory; the EA Should Disclose these Gaps to the Public.

Meeting the SB 32 target wholly depends on the accuracy of the GHG Inventory. Central to this inquiry, CARB must detail the baseline that the EA will use, which must include SB 901 wildfire emissions. The Scoping Plan and EA should disclose which emissions do not appear in the GHG Inventory and set a schedule to address those unreported emissions. The EA must at least identify such unreported emissions, and where possible, provide an estimate to allow for informed decision-making. "Any emissions or discharges that would have a significant effect on

[18] Spokas K., Wang D. 2003. Stimulation of nitrous oxide production resulted from soil fumigation with chloropicrin. Atmospheric Environment 37 (2003) 3501–3507, *available at* https://doi.org/10.1016/S1352-2310(03)00412-6.
[19] Department of Pesticide Regulation annual Pesticide Use Reports, *available at* https://www.cdpr.ca.gov/docs/pur/purmain.htm.
[20] Klein K. 2021, Pesticides and Soil Health. Friends of the Earth, *available at* https://foe.org/wp-content/uploads/2019/08/PecticidesSoilHealth_Final-1.pdf.

the environment in the State of California are subject to CEQA where a California public agency has authority over the emissions or discharges."[21]

C. The EA Must Disclose Limitations in Health Models.

Similarly, the EA must also disclose the limits to health modeling to provide the public and decision-makers with the full picture of public health impacts. For instance, the value of a statistical life ("VSL") method is inequitable and consequently distorts and minimizes public health impacts in environmental justice and low-income communities.

As currently modeled in BenMAP, the VSL is calculated using a blanket willingness-to-pay methodology across all demographics. Specifically, willingness-to-pay is "a statistical construct based on the aggregated dollar amount that a large group of people would be willing to pay for a reduction in their individual risks of dying" or other adverse health outcomes.[22] This approach aggregates the maximum amount a person would be willing to pay to avoid adverse health outcomes.[23] Given disproportionate historic and current health impacts to environmental justice communities from air pollution, as well as existing income inequality in our state, using such a methodology to calculate VSL is inequitable. Essentially, willingness-to-pay analysis is limited by the amount of spending power each individual possesses. As a result, this approach "inherently gives more weight to [individuals] with bigger budgets" or spending power, even though the risk-reduction benefits to lower-income EJ communities would be proportionally greater.[24]

As VSL is a key component in determining the social costs of air pollution, we hope BenMAP and other related models using VSL employ a more just approach. One such approach is the *willingness-to-accept* methodology, which offers a more equitable assessment by aggregating "the minimum monetary amount required for an individual to forego some good, or to bear some harm."[25] This approach allocates more bargaining power to affected communities because: "[w]hen converted to dollars, the willingness-to-accept measure invariably yields much larger values . . . [than] the willingness-to-pay measure. People have limited resources to draw upon in deciding how much they can pay to reduce risks, but there is no limit to the amount that they can demand to accept those risks."[26]

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[21] CEQA Guidelines § 15277.

[22] California Air Resources Board, Clean Miles Standard and Incentive Program: Standardized Regulatory Impact Assessment, 2020, at 39.

[23] *See* Martin-Fernandez, Jesus et al. 2010. Differences between willingness to pay and willingness to accept for visits by a family physician: A contingent valuation study. BMC Public Health 10:236. https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-10-236 [defining willingness to pay].

[24] Richardson, H. (2000). The Stupidity of the Cost-Benefit Standard. The Journal of Legal Studies 29:S2 at 973; *see also* Brown, T. & Robin Gregory. (1999). Why the WTA-WTP disparity matters. Ecological Economics 28:3.

[25] *See* Martin-Fernandez, Jesus et al. 2010. Differences between willingness to pay and willingness to accept for visits by a family physician: A contingent valuation study. BMC Public Health 10:236. https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-10-236 [defining willingness to accept].

[26] McGarity, T. (2002). Professor Sustein's Fuzzy Math. 90 Georgetown Law Journal at 2370.

Additionally, VSL calculations using a willingness-to-accept methodology can be further improved and yield more realistic values if a "granularity" or distributional weighted analysis is used. Given that costs and benefits of any proposed strategy are unevenly distributed across different communities, in line with the Project Description Objective to address disproportionate impacts, CARB must consider and account for the distributed impacts (or benefits) that any emissions reductions strategy would have for communities that have been disproportionately affected by air pollution. In previous regulations, CARB has acknowledged omission of distributional weighting, stating that "health studies have shown that populations with low socioeconomic standing are more susceptible to health problems from exposure to air pollution" yet "the models currently used by U.S. EPA and CARB do not have the granularity to account for this impact."[27] We hope to see a shift in the Scoping Plan process towards this approach in any modeling. Not only does distributional weighted cost-benefit analyses satisfy foundational welfare economics principles of efficiency, unlike population-average cost-benefit analyses, it also produces more precise information about affected stakeholders. Moreover, distributional weighted analysis improves risk-reduction policy analysis and allows policymakers to engage in more reasoned decision-making.[28] Without this level of "granularity," CARB's analysis will inevitably underestimate the qualitative and quantitative benefits of any health protection strategies, which could ultimately lead to inaccurate calculation of social costs and less aggressive strategies, leading us further astray from our climate and equity goals. CARB should utilize the willingness-to-accept methodology in any VSL calculations and employ distributional weighted analysis in tandem throughout relevant models.

More broadly, the models CARB uses to estimate human health impacts have significant gaps which underestimate social cost outputs and public health concerns. For example, the models do not include subclinical conditions/reporting of symptoms/seeing treatment. At a minimum, the EA must disclose these shortfalls, and the Scoping Plan should set a schedule to revise measures based on revision of these public health models and metrics.

[27] California Air Resources Board, Clean Miles Standard and Incentive Program: Standardized Regulatory Impact Assessment (2020) at 37.
[28] Adler, M. (2016). Benefit-Cost Analysis and Distributional Weights: An Overview. Review of Environmental Economics and Policy 10:2 at 264-285, *available at* https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=5813&context=faculty_scholarship

IV. Conclusion

We look forward to collaborating with the EJAC to develop additional recommendations for the Scoping Plan. We reiterate our request that CARB begin to meaningfully integrate environmental justice in the Scoping Plan process by immediately implementing four prior EJAC recommendations from 2017 that are overdue and mandated by the State's climate and equity policies, as detailed in our earlier comment this year.[29] The Scoping Plan and EA must also assess those measures.

Respectfully submitted,

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[29] *See* CEJA et al. Comment on the EJAC, May 20, 2021 attached as Attachment B.

ATTACHMENT A

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SENATOR ROBERT M. HERTZBERG
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REPRESENTING THE SAN FERNANDO VALLEY

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August 6, 2021

Chair Liane M. Randolph
California Air Resources Board
1001 I Street
Sacramento, CA 95812

RE: Priorities For California Climate Policy

Dear Chair Randolph,

Congratulations on your confirmation as Chair of the Air Resources Board (ARB) and thank you for meeting with us to discuss how the Senate and the ARB can work together to successfully implement California's air quality and climate agendas. In particular, we look forward to working with you to strengthen California's climate leadership and appreciate your commitment to ongoing dialog.

We write to follow up on our conversation and highlight three areas of the ARB's climate strategy where we believe additional engagement will be needed in the months ahead: (1) the focus of the 2022 Scoping Plan, (2) the cap-and-trade program for greenhouse gas emissions, and (3) the forest carbon offsets program. Much of what follows concerns matters that arose prior to your appointment as Board Chair but remain relevant today, including with respect to statutory provisions that guide the ARB's work. We share this letter with you now to provide a legislative perspective on some of the key challenges and priorities that we hope will inform your leadership at the ARB, and we welcome the opportunity to work together in the years ahead.

1. Focus on 2030 in the Scoping Plan

The ARB began its process to update the climate change Scoping Plan earlier this summer, providing the first significant opportunity for the Board to evaluate its climate policy strategy since the last plan was completed at the end of 2017. Although we commend the Board for including Executive Order B-55-18's goal of carbon neutrality by 2045 in its new planning process and appreciate the Governor's recent direction to study a 2035 carbon neutrality scenario, we are concerned that a focus on long-term or aspirational goals could come at the expense of near-term actions that are required by law.

As you know, Senate Bill 32 (Pavley, Stats. 2016, Ch. 249) requires the ARB to develop a suite of policies to reduce statewide emissions 40% below 1990 levels by 2030.[1] This obligation is no mere afterthought. Ever since the legislature authorized the ARB to pursue climate policy under Assembly Bill 32 (Nuñez/Pavley, Stats. 2006, Ch. 488), the Board has been required to develop periodic climate change Scoping Plans that "achiev[e] the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions."[2] Although the ARB has discretion in defining this key term, Senate Bill 32 set a minimum level of overall ambition the Board must achieve. Specifically, the ARB's definition "shall ensure that statewide greenhouse gas emissions are reduced to at least 40% below [1990 emissions levels]."[3] Thus, state law explicitly requires the ARB to demonstrate how its Scoping Plans achieve the 2030 emissions limit.

Although the law is clear on this point, several stakeholders have recently raised concerns that the initial Scoping Plan meetings have focused on long-term carbon neutrality goals in a way that minimizes or overshadows the ARB's legal requirement to develop policies and measures that achieve the mandatory 2030 emissions limit. We appreciate how long-term targets help frame needed policy strategy and welcome the ARB's analysis of an accelerated timeline for statewide carbon neutrality, pursuant to Governor Newsom's recent instructions. Nevertheless, long-term policy considerations and non-binding scenarios should not supplant the more important task of ensuring the ARB's policy measures are adequate to achieve the mandatory 2030 emissions limit.

Simply put, the upcoming Scoping Plan needs to focus on achieving the 2030 emissions limit—not to the exclusion of long-term policy planning, but as a requirement of state law as well as a practical prerequisite for carbon neutrality. We hope that you and your colleagues on the Board will bring this perspective to the next steps in the Scoping Plan process.

2. The cap-and-trade program

As we discussed in our meeting together, questions about the performance of the cap-and-trade program have been a source of ongoing tensions in state climate policy discussions. We urge you to follow through on the commitments California Environmental Protection Agency Secretary Jared Blumenfeld made to the Senate to evaluate the role and performance of the program in the upcoming Scoping Plan process, as further detailed below.

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1 Health and Safety Code § 38566.

2 *Id*. at § 38561(a).

3 *Id.* at § 38566. *See also Association of Irritated Residents v. California Air Resources Board* (2012) 206 Cal.App.4th 1487, 1496-98 (finding that the ARB reasonably interpreted the phrase "maximum technologically feasible and cost-effective reductions" when it defined that term to achieve the statewide emission limits that were then required by law).

For context, California has historically relied on direct emission reduction measures to achieve its climate policy goals, with the cap-and-trade program playing an important but supporting role. In its initial 2008 Scoping Plan, for example, the ARB identified regulatory measures as responsible for about 80% of the expected efforts needed to achieve the state's 2020 emissions limit, leaving the cap-and-trade program responsible for a manageable 20%.[4] In contrast, the most recent 2017 Scoping Plan increased this expected role to nearly half of the reductions required for the significantly more ambitious 2030 emissions limit.[5]

We note that the ARB's decision to make cap-and-trade the single largest element in its 2030 climate strategy was all the more controversial because Assembly Bill 197 (E. Garcia, Stat. 2016, Ch. 250) requires the ARB to prioritize direct emission reductions.[6] While there are a range of views about the right balance to strike between direct emission reductions and market-based policies like cap-and-trade, there is no ambiguity about Assembly Bill 197's intent: it was designed to focus attention on policies other than cap-and-trade. Nevertheless, the ARB listed the cap-and-trade program as a direct emission reduction measure in its 2017 Scoping Plan.[7] This choice effectively obviated the statutory framework the ARB was required to use in its scoping plan analysis and needlessly exacerbated tensions with the environmental justice community and other air quality advocates as a result.[8]

The 2017 Scoping Plan also proved controversial in terms of the implementation strategy that followed. Although well-designed cap-and-trade programs can achieve substantial greenhouse gas emission reductions, experts have raised concerns that the program the ARB adopted is not up to the task it was assigned. In 2018, the ARB completed a rulemaking to implement Assembly

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4 ARB, Climate Change Scoping Plan: A Framework for Change (Dec. 2008) at 17 (Table 2) (indicating reductions needed from the cap-and-trade program at 34.4 million tCO_2e, or about 19.7% of the 174 million tCO_2e in total reductions needed by 2020); *see also* Michael D. Mastrandrea et al., Assessing California's progress toward its 2020 greenhouse gas emissions limit, *Energy Policy* 138: 111219 (2020) (retrospectively analyzing the drivers of California's emissions reductions relative to expectations in the 2008 Scoping Plan).

5 ARB, California's 2017 Climate Change Scoping Plan (Nov. 2017) at 26 (Table 2). The 2017 Scoping Plan does not make this calculation transparent, but its numbers are clear. The ARB projects baseline 2030 emissions of 389 million tCO_2e, which are projected to fall to 320 million tCO_2e as a result of non-cap-and-trade measures; an additional 61 million tCO_2e is needed from the cap-and-trade program to reach the 2030 emission limit of 259 million tCO_2e. Thus, cap-and-trade-related reductions in 2030 (61 million tCO_2e) account for about 47% of the total reductions needed to reduce baseline emissions down to the 2030 emissions limit (389 – 259 = 130 million tCO_2e). *See also* Joint Legislative Committee on Climate Change Policies, Informational Hearing (May 24, 2018), Background Document at 2 (making similar calculations).

6 Health and Safety Code § 38562.5.

7 ARB, 2017 Climate Change Scoping Plan (Nov. 2017) at 34 (Table 4); Joint Legislative Committee on Climate Change Policies, Oversight Hearing: 2030 Target Scoping Plan (Jan. 4, 2018), Background Document at 3.

8 Expressed another way, however the ARB might reasonably have interpreted Assembly Bill 197's requirements in setting the balance of effort between cap-and-trade and other policies, it should not have designated cap-and-trade as a "direct emission reduction measure" and should not do so again.

Bill 398 (E. Garcia, Stat. 2017, Ch. 135) and extend the cap-and-trade program through 2030. Among other matters, Assembly Bill 398 directed the ARB to "evaluate and address concerns related to overallocation" of pollution allowances,[9] the excess supply of which could put California at risk of missing the 2030 emissions limit established by Senate Bill 32.[10] A number of independent experts criticized the ARB's implementation of this statutory requirement, including the former Environmental Commissioner of Ontario (formerly a linked cap-and-trade partner jurisdiction) and a member of the Independent Emissions Market Advisory Committee (IEMAC), [11] which was established pursuant to Assembly Bill 398 to provide expert guidance to the ARB and the Legislature.[12]

To help resolve this debate, the IEMAC recommended that the ARB adopt so-called "banking metrics" to track market outcomes and provide transparency about whether or not critics' concerns manifest in practice.[13] A bicameral group of legislators echoed this recommendation and called for the ARB to adopt banking metrics in a letter to CalEPA and the ARB.[14] To date, how-

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[9] Health and Safety Code § 38562(c)(2)(D); ARB, Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation, Staff Report: Initial Statement of Reasons, Appendix D, AB 398: Evaluation of Allowance Budgets 2021 through 2030 (Sept. 4, 2018).

[10] *See*, *e.g.*, Legislative Analyst's Office, Cap-and-Trade Extension: Issues for Legislative Oversight (Dec. 12, 2017); Chris Busch and Justin Gillis, A Landmark California climate program Is in Jeopardy, *The New York Times* (Dec. 12, 2017).

[11] Julie Cart, Checking the math on cap and trade, some experts say it's not adding up, *CalMatters* (May 22, 2018); Joint Legislative Committee on Climate Change Policies, Information Hearing Background Document (May 24, 2018) at 2-4 (identifying technical errors in the AB 398 implementation analysis); Environmental Commissioner of Ontario, Ontario's Climate Act: Annual Greenhouse Gas Progress Report 2017 (Jan. 2018) at Appendix G (providing a technical analysis of cap-and-trade allowance overallocation); Chris Busch, Oversupply grows in the Western Climate Initiative carbon market: An adjustment for current oversupply is needed to ensure the program will achieve the 2030 target, Energy Innovation LLC Report (Dec. 2017) (providing a technical analysis of cap-and-trade allowance overallocation); Statement of IEMAC member Dr. Danny Cullenward, 2018 Annual Report of the Independent Emissions Market Advisory Committee (Oct. 22, 2018) at Appendix B (reviewing technical overallocation concerns and the AB 398 implementation process).

[12] Health and Safety Code § 38591.2.

[13] IEMAC, 2018 Annual Report of the IEMAC (Oct. 22, 2018) at 54-55 (recommending banking metrics); IEMAC, 2019 Annual Report of the IEMAC (Dec. 11, 2019) at 21-25 (Chapter 4) and 43-47 (Appendix C) (providing a methodology for constructing banking metrics from existing public reporting data).

[14] Letter from Senator Ben Allen et al. to CalEPA Secretary Jared Blumenfeld et al. (Mar. 1, 2019), available as Appendix A of the 2019 IEMAC Annual Report.

ever, the ARB has taken no action—even though the IEMAC developed a complete methodology for implementing public banking metrics that has since been peer-reviewed,[15] banking metrics are considered best practices in other leading cap-and-trade programs,[16] and the ARB publishes similar metrics for its Low Carbon Fuel Standard.[17]

Although the ARB does not publish any banking metrics, we gratefully recognize the Board's leadership in calling for an opportunity to revisit allowance overallocation concerns later this year. Specifically, Board Resolution 18-51 directs ARB staff to report on surplus allowance holdings by the end of 2021 and evaluate the potential for these allowances to frustrate California's ability to achieve the Senate Bill 32 limit on 2030 greenhouse gas emissions.[18] This forthcoming evaluation is timely because regulated polluters are required to finalize their compliance filings in November 2021 to account for greenhouse gas emissions through the end of calendar year 2020, and thus by the end of this year complete data on the program's first eight years of operation will be available.

California's recent success in achieving its 2020 climate target early and the effects of the global pandemic provide additional reasons for programmatic review. Whenever emissions decline faster than planned—whether due to policy successes, or macroeconomic forces outside of policymakers control—polluters in the cap-and-trade program can stockpile surplus allowances and bank them for future use. As the ARB notes, California achieved its 2020 target four years early.[19] In addition, the global COVID-19 pandemic led to temporary pollution reductions in 2020 that were not anticipated in the current cap-and-trade program regulations.[20] Both of these

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15 Danny Cullenward et al., Tracking banking in the Western Climate Initiative cap-and-trade program, *Environmental Research Letters* 14: 124037 (2019); Mason Inman et al., An open-source model of the Western Climate Initiative cap-and-trade programme with supply-demand scenarios to 2030, *Climate Policy* 20(5): 626-40 (2020).

16 *See*, *e.g.*, European Commission, Publication of the total number of allowances in circulation in 2020 for the purposes of the Market Stability Reserve under the EU Emissions Trading System established by Directive 2003/87/EC, C(2021) 3266 (May 12, 2021) (reporting banking metrics for the European cap-and-trade program); Regional Greenhouse Gas Initiative, Third Adjustment for Banked Allowances Announcement (Mar. 15, 2021) (announcing a reduction in allowance supplies in the east coast states' RGGI program, based on observed allowance banking outcomes).

17 ARB, LCFS Data Dashboard, https://www.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm.

18 ARB, Board Resolution 18-51 (Dec. 13, 2018) at 11.

19 ARB, Latest state Greenhouse Gas Inventory shows emissions continue to drop below 2020 target (July 28, 2021), https://ww2.arb.ca.gov/news/latest-state-greenhouse-gas-inventory-shows-emissions-continue-drop-below-2020-target.

20 Tony Barboza, Global carbon emissions dropped a record 7% due to COVID-19. Don't count on it to last, *The Los Angeles Times* (Dec. 10, 2020); *see also* Pierre Friedlingstein et al. (2020), Global Carbon Budget 2020, *Earth Systems Science Data* 12: 3269-3340.

factors reinforce the importance of reviewing the cap-and-trade program's design to account for new information.

We are aware that some have argued allowance banking is not a problem because climate change is a function of cumulative pollution, not pollution levels in any one year. Others argue that allowance banking properly rewards "early action" on climate. These arguments miss the mark. For one thing, every marginal ton of pollution make the climate problem worse—California needs to cut pollution, not justify ongoing emissions. But early action doesn't account for why a large bank of allowances has developed.[21] One key reason is that the ARB has issued more than 200 million offset credits, which polluters can rely on to satisfy their near-term compliance obligations while banking allowances for future use.

Whatever the reason for the development of a bank of allowances, its emergence can render cap-and-trade ineffective at reducing future emissions—the very role the ARB assigned to the program in its 2017 Scoping Plan. As the IEMAC wrote in its 2020 Annual Report:

> "Translating a cumulative emissions budget into annual statewide emissions outcomes requires detailed assumptions about uncertain variables such as macroeconomic growth, technological change, non-covered emissions outside the cap-and-trade program, and allowance banking within the cap- and-trade program. If expectations about any of these variables turn out to be incorrect, changes to future cap-and-trade emissions budgets could be needed to recalibrate the system …."[22]

For these reasons, we urge you and your fellow Board members to prioritize a careful review of the evidence the November 2021 compliance event provides, consistent with the directives of Board Resolution 18-51 and Assembly Bill 398's instruction to address allowance overallocation concerns.

Finally, you might be aware that negotiations over last year's budget led to a letter from California Environmental Protection Agency Secretary Jared Blumenfeld, who promised additional engagement on the cap-and-trade program in the current Scoping Plan process.[23] In his letter, Secretary Blumenfeld committed to work with the ARB to ensure a "comprehensive review and consideration of … the extent to which the state's climate strategy should rely on the cap-and-trade program reductions relative to other approaches," consulting as appropriate with the Legislative

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[21] Mastrandrea et al. (2020), *supra* note 4 (finding that post-financial crisis recession effects and faster-than-expected changes in electricity supplies, including coal divestment, are the most relevant factors).

[22] IEMAC, 2020 Annual Report of the IEMAC (Dec. 30, 2020) at 21-22.

[23] Letter from CalEPA Secretary Jared Blumenfeld to Senator Bob Wieckowski (June 18, 2020); Rachel Becker, California re-evaluating its landmark climate strategy, *CalMatters* (June 24, 2020); Rachel Becker, California to review carbon trading program as part of climate roadmap, *CalMatters* (Feb. 16, 2021).

Analyst's Office and the IEMAC to ensure the technical rigor of any reform discussions. The IEMAC, in turn, produced a report to help frame the technical details of these important policy discussions.[24]

As you continue the Scoping Plan process, we urge you to follow through on the Secretary's commitments and review the appropriate role of the cap-and-trade program in achieving the state's 2030 limit on greenhouse gas pollution, as well as the consistency of the current program regulations with that desired role.

3. The carbon offsets program

California's carbon offsets program is commonly described as a small part of the cap-and-trade program,[25] but in fact its role is quite large. According to an analysis from UC Berkeley researcher Dr. Barbara Haya, if companies subject to the cap-and-trade program were to maximize their use of carbon offsets, then carbon offsets would account for more than 100% of the total reductions achieved by the cap-and-trade program through the end of 2020.[26] In practice, regulated companies have used between about half and three-quarters of their allowed limits, suggesting that the offsets program will be responsible for a large share of claimed emission reductions under cap-and-trade.[27]

The scale of the program can also be understood through a simpler comparison. The ARB has issued more than 222 million offset credits to date,[28] which is nearly equal to the 236 million tons of cumulative emission reductions the 2017 Scoping Plan expects from the cap-and-trade

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[24] IEMAC, 2020 Annual Report of the IEMAC (Dec. 30, 2020) at 21-24 (Chapter 5).

[25] A polluter can only use offsets to satisfy a certain percentage of its total compliance obligations under the cap-and-trade program. By regulation, that limit was 8% through the end of 2020; it was further limited by statute to 4% for emissions in years 2021 through 2025 and 6% for emissions in years 2026 through 2030. Cal. Code Regs., title 17, § 95854; *see also* Health and Safety Code § 38562(c)(2)(E) (added by Assembly Bill 398). Because these percentage numbers appear small, some parties, including the ARB, tend to describe the offsets program as playing only a "small" role in the program. *See*, *e.g.*, ARB, FAQ Cap-and-Trade Program (2021), https://ww2.arb.ca.gov/resources/documents/faq-cap-and-trade-program.

[26] Barbara Haya, California's Carbon Offsets Program — the Offset Limit Explained (Oct. 29, 2013), http://bhaya.berkeley.edu/docs/QuantityofAB32offsetscredits.xlsx.

[27] ARB, 2013-14 Compliance Report (finding that companies surrendered about 4.4% of their compliance obligations from carbon offsets, or more than half of the maximum 8% limit); ARB, 2015-17 Compliance Report (finding that companies surrendered about 6.4% of their compliance obligations from carbon offsets, or more than three-quarters of the maximum 8% limit). Data for the 2018-20 compliance period will be available following the November 2021 compliance event mentioned above in connection with ARB Board Resolution 18-51. Because Assembly Bill 398 limited the types of carbon offsets eligible for use in the market's post-2020 period, most observers expect companies to rely heavily on offsets in the November 2021 compliance event because many offset credits will not be as valuable in future compliance events.

[28] ARB, Offset Credit Issuance Table (July 14, 2021). For context, each offset credit is worth 1 ton of carbon dioxide equivalent—just as cap-and-trade allowances are as well.

program over the next decade.[29] Thus, for all the talk of the offsets program being "small," it is central to the single largest program in the state's climate policy portfolio.

State law imposes exacting requirements that must be met if carbon offsets are to be used in the cap-and-trade program. Specifically, under the terms of Assembly Bill 32, all carbon offset credits must be "real, permanent, quantifiable, verifiable, and enforceable" by the ARB.[30] All offset credits must also reflect climate benefits that are realized "in addition to … any other greenhouse gas emission reduction that would otherwise occur" in the absence of the carbon offset credit.[31] However, recent academic studies and reports from investigative journalists indicate that California's forest offsets program—which provides about 80% of total offset credits[32]—may not be achieving these legal requirements.

An in-depth report from journalists at *ProPublica* and *MIT Technology Review*—based in part on a study from researchers at CarbonPlan, UC Berkeley, UC Santa Barbara, the National Center for Atmospheric Research, the University of Utah, Stanford University, and Columbia University—found that between about 20% and 38% of forest offsets credits do not reflect "real" climate benefits, owing to what the researchers described as statistical and ecological errors in the design of the ARB's offsets protocol that offset project developers have exploited in practice.[33] If this reporting and analysis is correct, then it would appear that a significant share of the carbon offsets program does not meet the offset quality standards codified in Section 38562(d)(1) of the Health and Safety Code.

A follow-up story from the same pair of journalists also highlighted potentially significant problems with non-additional projects participating in the offsets program.[34] The statutory additionality requirement is essential because offset credits enable in-state polluters to emit more greenhouse gases (and local air pollutants) into the atmosphere on the basis that these offset credits caused reductions elsewhere that would not have otherwise occurred. In contrast, the journalists documented cases where nonprofit forest landowners appear to have earned credit for protecting

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[29] ARB, 2017 Climate Change Scoping Plan (Nov. 2017) at 26 (identifying needed reductions from 2021 through 2030 from the cap-and-trade program equal to a cumulative 236 million tCO_2e).

[30] Health and Safety Code § 38562(d)(1).

[31] *Id*. at § 38562(d)(2).

[32] ARB, Offset Credit Issuance Table (July 14, 2021) (reporting 182.9 million forest offset credits issued to date, or about 82.2% of the total 222.4 million offset credits across all offset protocols).

[33] Lisa Song and James Temple, The Climate Solution Actually Adding Millions of Tons of CO_2 Into the Atmosphere, *ProPublica* and *MIT Technology Review* (Apr. 29, 2021); Grayson Badgley et al., Systematic over-crediting in California's forest carbon offsets program, *bioRxiv* (Apr. 29, 2021), doi 10.1101/2021.04.28.441870.

[34] Lisa Song and James Temple, A Nonprofit Promised to Preserve Wildlife. Then It Made Millions Claiming It Could Cut Down Trees, *ProPublica* and *MIT Technology Review* (May 10, 2021).

forests that were not actually at imminent risk of being harvested—that is, the landowners appear to have claimed credit for conservation activities that reflected business-as-usual outcomes. This reporting builds on an in-depth review of one of the largest projects in California's offsets program[35] and extensive analysis from *Bloomberg Green* documenting similar practices in voluntary forest offset markets.[36] It has led to conservation scientists who have previously worked with and supported California's forest offsets program to question it.[37] If this line of reporting is correct, then it would appear that a significant number of forest offset projects in California's offsets program do not meet the additionality standard codified in Section 38562(d)(2) of the Health and Safety Code.

We understand that ARB staff reject these findings,[38] but are not convinced that they have addressed or even engaged the substance of the criticisms they received. Instead, staff misrepresent a key court case (*Our Children's Earth Foundation v. California Air Resources Board*) as having "upheld" the offsets program, apparently absolving the ARB of the need to engage new evidence about its performance.[39] That argument is wrong for two reasons.

First, *Our Children's Earth Foundation* applies only to the additionality standard under Section 38562(d)(2) of the Health and Safety Code—it does not address the legal requirements of Section 38562(d)(1).[40] Some of the concerns identified by researchers and journalists above do address additionality, but others, such as the recent over-crediting findings from CarbonPlan, directly implicate the requirements of Section 38562(d)(1).[41]

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[35] Paul Koberstein and Jessica Applegate, Carbon Conundrum, *Earth Island Journal* (Winter 2021).

[36] Ben Elgin, These Trees Are Not What They Seem, *Bloomberg Green* (Dec. 9, 2020); Ben Elgin and Zachary Mider, The Real Trees Delivering Fake Corporate Climate Progress, *Bloomberg Green* (Dec. 17, 2020).

[37] Charles D. Canham, Rethinking Forest Carbon Offsets, Cary Institute of Ecosystem Studies (May 19, 2021), https://www.caryinstitute.org/news-insights/feature/rethinking-forest-carbon-offsets.

[38] ARB, CARB responses to questions from ProPublica on California's Forest Offset Protocol, https://ww2.arb.ca.gov/sites/default/files/2021-04/nc-carb-response-to-propublica-forest-questions.pdf; *see also* Lisa Song and James Temple, The California Air Resources Board Challenges Our Carbon Credits Investigations. We Respond. *ProPublica* and *MIT Technology Review* (May 12, 2021).

[39] *Our Children's Earth Foundation v. California Air Resources Board* (2015) 234 Cal.App.4th 870; ARB, *supra* 38 at 2, 7, 9, 12-13, 22, 26-27 (arguing in each case that *Our Children's Earth Foundation* "upheld" the ARB's approach or otherwise insulates the offsets program from criticism).

[40] *Our Children's Earth Foundation*, 234 Cal. App.4th at 875 ("This section 38562(d)(2) 'additionality' requirement is the subject of this appeal.").

[41] For example, over-crediting from ecologically inappropriate baselines could lead to offset credits that are not "real," "quantifiable," or "verifiable," contrary to the requirements of Section 38562(d)(1) of the Health and Safety Code. As discussed further below, if the forest offset program fails to adequately anticipate wildfire risks, its credits could fail the "permanent" requirement of Section 38562(d)(1).

Second, staff have interpreted the case incorrectly. At issue was the ARB's decision to adopt a "standardized approach" to determining additionality, which was meant to improve on the widely criticized project-level approach taken in other jurisdictions.[42] As staff suggest, the court deferred to the agency's choice of a standardized approach to additionality; however, it specifically declined to review the statutory adequacy of the offset protocols themselves.[43] Thus, *Our Children's Earth Foundation* did not "uphold" the program as implemented, and gives staff no cover to ignore new evidence about its performance relative to statutory standards. As University of San Francisco School of Law Professor Alice Kaswan put it:

> "If there's new scientific information that suggests serious questions about the integrity of offsets, then, arguably, CARB has an ongoing duty to consider that information and revise their protocols accordingly. The agency's obligation is to implement the law, and the law requires additionality."[44]

We urge you to bring an open mind to this discussion and seek additional input, including from disinterested parties.

Finally, we want to highlight the risks of relying on forest carbon offsets in a changing climate. Although carbon dioxide emissions from fossil fuel use remain in the atmosphere for hundreds to thousands of years,[45] the ARB has defined the statutory requirement of "permanence" to require only 100 years of carbon storage.[46] Thus, forests that claim to protect carbon stored in trees for 100 years are deemed equivalent to ongoing emissions of carbon dioxide from power plants, oil refineries, and cars.

Setting aside concerns that a 100-year timeframe does not actually deliver "permanent" climate benefits, it appears that the ARB's approach to ensuring permanence falls short of its own definition. Climate change is accelerating the frequency and intensity of droughts and fires, as all of us in the state know all too well. But the forest offset program's "buffer pool" insurance program—which sets aside a share of forest offset credits to absorb any losses from drought, fire, and other "carbon reversals," in order to achieve the 100-year permanence requirement—was not designed

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[42] Barbara Haya et al., Managing uncertainty in carbon offsets: insights from California's standardized approach, *Climate Policy* 20: 1112-26 (2020).

[43] *Id.* at 892 ("Finally, appellant requests that this court independently evaluate the effectiveness of specific measures incorporated into several of the Compliance Offset Protocols. However, a court will not, 'in the guise of a challenge' to an agency's statutory authority, 'venture into an independent determination of the wisdom of the challenged regulation ….'") (citations omitted).

[44] Quoted in Lisa Song and James Temple, *supra* note 34.

[45] David Archer et al., Atmospheric Lifetime of Fossil Fuel Carbon Dioxide, *Annual Review of Earth and Planetary Sciences* 37: 117-34 (2009).

[46] Cal. Code Regs., title 17, § 95802 (see definition of "Permanent").

with climate change risks to forests in mind.[47] Last year's record fire season saw a major carbon offset project burn, with likely buffer pool impacts that, if regularly repeated, could bankrupt the buffer pool well before the end of 100 years.[48] Unfortunately, it is our understanding that another several large California forest offset projects appear to be affected by serious wildfires as of this writing.[49]

Several years ago, the IEMAC recommended the ARB evaluate the resilience of the forest offsets program in a warming climate.[50] Based on the wildfire experience since then and the serious concerns raised about whether the current program achieves the standards required by state law, we believe a broader review of the forest offsets program is warranted.

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[47] William R.L. Anderegg et al., Climate-driven risks to the climate mitigation potential of forests, *Science* 368: eaaz7005 (2020).

[48] Emily Pontecorvo and Shannon Osaka, This Oregon forest was supposed to store carbon for 100 years. Now it's on fire, *Grist* (Sept. 18, 2020); Claudia Herbert et al., Carbon offsets burning, CarbonPlan (Sept. 17, 2020), https://carbonplan.org/research/offset-project-fire.

[49] The Bootleg fire in Southern Oregon appears to be burning the Klamath East offset project (ACR273). Daniel Wolfe and Tal Yellin, Bootleg Fire is burning up carbon offsets, *CNN* (July 22, 2021); Debra Kahn, Wildfires rage and a tool to combat climate change goes up in smoke, *Politico* (July 27, 2021); *see also* CarbonPlan Forest Offsets Map, https://carbonplan.org/research/forest-offsets (providing a regularly updated map of offsets projects and official fire boundaries).

[50] IEMAC, 2018 Annual Report of the IEMAC (Oct. 22, 2018) at 42-48 (Chapter 5).

We hope the length and detail of this letter conveys the extent to which these three issues have become important priorities for state climate policy discussions—particularly over the last few years, prior to your appointment as Board Chair—and genuinely appreciate your willingness to engage with the Senate as the ARB continues its important mission under your leadership. Our goals in sharing a legislative perspective are both to provide context for how we look at the foundational laws informing the ARB's work, as well as to offer a roadmap for some of the key references and technical analyses that might inform your deliberations as you look to the future. We welcome the chance for additional dialog and encourage you to reach out to independent experts for their views about the critical challenges and opportunities before you and your colleagues on the Board.

Our firm belief is that cooperation between the ARB and the Legislature is needed to successfully implement the state's climate policy and air quality priorities. We appreciate your leadership and look forward to working together in the months and years ahead.

Sincerely,

ROBERT M. HERTZBERG
Senate Majority Leader
18th Senate District

JOSH BECKER
Joint Legislative Committee on
Climate Change Policy, Vice Chair
10th Senate District

BOB WIECKOWSKI
Senate Budget Subcommittee No.2, Chair
10th Senate District

ATTACHMENT B

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

May 20, 2021

Re: Item 21-4-2, Appointment of New Members to the Assembly Bill 32 Environmental Justice Advisory Committee

To Chair Randolph and the Air Resources Board,

As the public process for the 2022 Climate Change Scoping Plan update ("Scoping Plan") begins, it is imperative for the California Air Resources Board ("CARB") to commit to adhere to the Principles of Environmental Justice.[1] The California Environmental Justice Alliance ("CEJA") requests that CARB honor that commitment by providing greater weight to the recommendations of the Environmental Justice Advisory Committee ("EJAC"), as opposed to the complete disregard of that process in 2017.

In addition, this letter highlights the need to ensure meaningful community participation throughout the Scoping Plan process, and the following four key topics from the 2017 EJAC recommendations that are still overdue for implementation, and also required by law.

[1] Principles of Environmental Justice, *available at* https://www.ejnet.org/ej/principles.html.

1. Prioritize direct emission reductions, foremost, eliminating emissions through replacement with zero emission renewables, which is also necessary to meet climate and equity goals.
2. Evaluate the full social cost savings and benefits of greenhouse gas ("GHG") reduction measures.
3. Include direct regulation of GHGs and co-pollutants from refining and oil and gas production facilities, foremost a phaseout of oil extraction as directed by the Governor, in addition to planning decommissioning of oil refining.
4. Eliminate offsets.

CEJA is a statewide alliance of grassroots community-based organizations across California working together to advance environmental justice in state policy. Our member and partner organizations are the Asian Pacific Environmental Network, Communities for a Better Environment, Center for Community Action and Environmental Justice, the Center on Race, Poverty & the Environment, Environmental Health Coalition, People Organizing to Demand Environmental and Economic Rights, Central Coast Alliance United for a Sustainable Economy, Leadership Counsel for Justice and Accountability, Physicians for Social Responsibility – Los Angeles, Strategic Concepts in Organizing and Policy Education. We work directly with low-income communities and communities of color in some of the most polluted and socioeconomically burdened areas of our state.

This comment is also supported by the Central Valley Air Quality Coalition, the Central California Asthma Collaborative, the California Environmental Justice Coalition, Comite Civico del Valle, and Little Manila Rising.

I. Scoping Plan Process and Community Participation.

You will receive recommendations from environmental justice communities and organizations that can and must inform the Scoping Plan. The approach to this Scoping Plan update must depart starkly from the previous Scoping Plan's approach, which did not sufficiently—or at all—incorporate guidance received from environmental justice communities. There should be no doubt that the Scoping Plan will be co-designed and co-developed from the ground up with California's environmental justice communities. The Scoping Plan must be grounded upon the forthcoming guidance from these communities, who are innately and uniquely knowledgeable of the deficiencies in California's current climate policies, and can most accurately describe the realities of and needed improvements to California's climate mitigation, emissions reduction, and adaptation efforts.

II. Development of the Scoping Plan Must Give Meaningful Weight to the EJAC Recommendations.

Previously, our organizations participated in the development of the 2017 Climate Change Scoping Plan, and like many advocates across the state, were disappointed by the disregard of equity and the lack of *meaningful* community engagement in the results of that

process. Since then, CARB has also adopted Resolution 20-33, its Commitment to Racial Equity and Social Justice.[2] The Resolution finds that:

> Impacts from air pollutants and greenhouse gases disproportionally affect communities of color and CARB's mission includes reducing the harmful effects of these emissions where socioeconomic and racial disparities are most pronounced.[3]

The Resolution emphasizes CARB's "*mandate* to analyze *and reduce* air pollution and greenhouse gas emissions in disadvantaged communities and communities of color."[4] We request that the Board fulfill its commitment to racial and environmental justice by ensuring that staff provide greater weight to the recommendations of the EJAC in this Scoping Plan process.

A. In 2017, CARB Did Not Adopt Any of the EJAC's Recommendations.

The 2017 Scoping Plan EJAC was formed in December 2015. As illustrated in the following timeline, the EJAC invested significant time and effort in carrying out its responsibilities and developing recommendations to CARB in 2017. The recommendations, however, were largely disregarded—not one recommendation was incorporated into the 2017 Scoping Plan. It is critical for the Board to ensure a different outcome in this upcoming process in order to meet its Commitment to Racial Equity and Social Justice.

In July 2016, following committee meetings across the state, the EJAC initiated a robust community engagement process. The EJAC conducted nine community meetings and collected over 700 individual comments. In August 2016, the EJAC prepared initial recommendations, revised in December 2016 and then again in March 2017 following an additional six community meetings. The 2017 EJAC recommendations included:

- 32 Overarching Recommendations (detailing the need to center equity and coordination of strategies with environmental justice. In particular, one recommendation, which was *not* followed, requested that environmental justice considerations be included throughout the 2017 Scoping Plan and not only its Appendix).
- 20 Recommendations focused on Industry.
- 55 Recommendations focused on Energy, Green Buildings and Water.
- 36 Recommendations focused on Transportation.
- 33 Recommendations focused on Natural and Working Land, Agriculture and Waste.
- 22 Recommendations focused on California Climate Investments.

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[2] CARB Resolution 20-33, October 22, 2020, *available at* https://ww3.arb.ca.gov/board/res/2020/res20-33.pdf.
[3] *Id*. (This finding is a step forward from the prior 2017 Scoping Plan that stated "the exact relationship between GHGs and air pollutants is not clearly understood at this time." 2017 Scoping Plan at 38. The 2017 EJAC Recommendations requested removal of this phrase. 2017 EJAC Recommendations at 1, *available at* https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2030sp_appa_ejac_final.pdf)
[4] *Id*.

In sum, the 2017 EJAC provided 198 recommendations.

In April 2017, the EJAC provided CARB with a list of priority recommendations. CARB staff provided responses to these priority recommendations.[5] Although staff noted "general agreement on a majority of the recommendations," such agreement was either in principle alone, with no corresponding action, or worse, simply cosmetic and superficial. For instance, one recommendation requested that the 2017 Scoping Plan "include a moratorium on new or expanded fossil fuel infrastructure [and] limiting oil and gas exports."[6] CARB's response purported to agree with this recommendation, but then, in stark contrast to agreement, focused on limiting petroleum-based transportation fuels with the low carbon fuel standard,[7] dodging the essence of the recommendation that focused on oil production and the oil and gas exports loophole that fuel standards alone cannot control.

In November 2017, the EJAC produced its final recommendations, stating that the document "does not include the full list of recommendations, clarifying that "it is not the EJAC's intent to disregard those recommendations," and emphasizing a request to CARB staff to "review *every* recommendation we have made."[8] CARB staff never provided written responses to the full list of EJAC recommendations.

Subsequently, the 2017 Scoping Plan surprisingly lauded its environmental justice focus: "developing this Scoping Plan, there has been extensive outreach with environmental justice organizations and disadvantaged communities."[9] However, outreach absent action is inadequate. It is essential for the Board to course-correct at this critical climate and equity juncture and not repeat the same injustices by ensuring *meaningful* community engagement. Community engagement must not be a simple checkbox. Rather, one key Principle of Environmental Justice demands the right to participate as equal and meaningful partners in shared decision-making.[10]

Consequently, we respectfully request that CARB appoint the new EJAC members, but prior to the newly formed EJAC embarking on similar and significant efforts, CARB also formally acknowledge that the EJAC recommendations will receive greater weight in this and future iterations of the Scoping Plan.

B. CARB Must Implement Overdue Recommendations from the 2017 EJAC.

We request that CARB implement the following four overdue recommendations presented by the EJAC in 2017. These recommendations are more urgently needed now than when they were made in 2017 and furthermore, are required by law.

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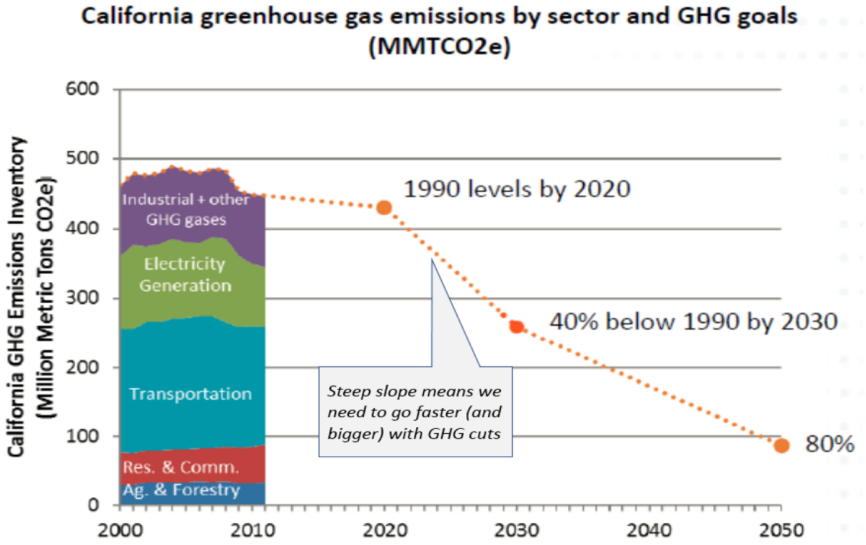
[5] Priority EJAC Recommendations and CARB Responses, *available at* https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2030sp_appa_ejac_final.pdf
[6] *Id.* at 4.
[7] *Id.*
[8] *Id.* (emphasis added)
[9] 2017 Scoping Plan at 105.
[10] *See* Principles of Environmental Justice, available at https://www.ejnet.org/ej/principles.html.

The chart below illustrates why CARB must aggressively pursue these measures, to cut sufficient GHGs to meet state requirements (and as the only means to meet equity goals by eliminating co-pollutants in environmental justice communities). California will need much steeper cuts by 2030 to meet the 40% cuts required, compared to the much easier 2020 target. This will necessitate elimination of many fossil fuel sources, which are also particularly concentrated in our communities. Consequently, in conjunction with other state agencies and in partnership with community members, CARB should detail in the Scoping Plan what transitions are needed across industries and sectors producing considerable amounts of California's GHGs, utilizing strategies that go beyond control technologies and derive emission reductions directly from improved or changed industrial practices.



Thus, the State's success in meeting overall GHG goals is inherently dependent on meeting equity goals. We highlight the following four overdue recommendations to meet those goals.

1. Prioritize Direct Emission Reductions.

> *2017 EJAC Recommendation*: In the Scoping Plan, demonstrate how direct emissions reductions from the largest sources are prioritized as directed by AB 197 . . . Ensure that there is coordination of AB 197, AB 398 and AB 617 implementation and enforcement, especially for EJ communities.[11]

This was the first in the list of "top recommendations" from the 2017 EJAC.[12] This recommendation is also mandated by law. The Scoping Plan "shall identify and make recommendations on direct emissions reduction measures."[13] Further, Assembly Bill ("AB") 197 requires CARB to

[11] *See* 2017 EJAC Recommendations, available at https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2030sp_appa_ejac_final.pdf
[12] *Id.*
[13] Cal. Health and Safety Code § 38561.

> prioritize . . . [e]mission reduction rules and regulations that result in direct emission reductions at large stationary sources of greenhouse gas emissions sources and direct emission reductions from mobile sources.[14]

CARB must first determine the direct emission reductions associated with a particular GHG reduction strategy, and then prioritize strategies based on those direct emission reductions.[15] CARB failed to comply with this law in its 2017 Scoping Plan. Instead, the 2017 Scoping Plan flipped the order: it first determined which GHG strategies to employ, and then estimated direct emission reductions from each measure.[16] *CARB has not prioritized action based on direct emission reductions at large stationary sources.* Surprisingly, the 2017 Scoping Plan even included cap-and-trade as a direct emission reduction measure based on co-pollutant reductions the Plan had also rejected.[17] Nevertheless, the cap-and-trade program does not directly reduce emissions, and if anything, through its accompanying offsets programs, actually attempts to achieve *in*direct reductions. We further note that CARB cannot rely on its AB 617 Community Air Protection Program for compliance with AB 197. Efforts under AB 617 and AB 197 must complement and not replace one another. Moreover, any health benefits that may eventually occur through AB 617 are similarly not achieved through the prioritization of GHG reduction measures based on direct emission reductions, as required by AB 197.

Increased reliance on direct emission reductions will decrease our reliance on the current cap-and-trade program and other strategies that undermine the Principles of Environmental Justice and hinder our progress to achieving our equity and climate goals.

The Board must ensure that this upcoming Scoping Plan complies with AB 197.

2. The Scoping Plan Must Include an Analysis of the Social Costs and Benefits of GHG Emission Reduction Methods.

> *2017 EJAC Recommendations*: [use] the social cost of carbon for all scenarios, which would include broadening the definition of economy to include costs to the public and health care costs of pollution.[18]
>
> Use the social cost of carbon to evaluate California's current carbon pricing and impacts.[19]
>
> Include health care costs in social cost of carbon.[20]

[14] Cal. Health and Safety Code § 38562.5.
[15] *Id.*
[16] *See eg.* 2017 Scoping Plan at 37.
[17] *See id.* at 34 (Table 4), 38 (Table 5).
[18] 2017 EJAC Recommendations at 4.
[19] *Id.* at 2.
[20] *Id.* at 5.

In examining cost-effectiveness, CARB must determine the full range of social costs and benefits of GHG reduction measures in the Scoping Plan. This assessment must go beyond the analysis of only avoided GHG emissions as analyzed in the 2017 Scoping Plan,[21] but also incorporate factors such as air and water quality and public health.

> Each scoping plan . . . shall identify for each emissions reduction measure . . .[t]he range of projected air pollution reductions that result from the measure . . . [and t]he cost-effectiveness, including avoided social costs, of the measure.[22]

> The state board shall evaluate the total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California's economy, environment, and public health.[23]

> [CARB shall] consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.[24]

> The state board shall evaluate the total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California's economy, environment, and public health.[25]

> In establishing the price ceiling, the state board shall consider . . . the full social cost associated with emitting a metric ton of greenhouse gases.[26]

> When adopting [climate change] rules and regulations . . . the state board shall . . . consider the social costs of the emissions of greenhouse gases, and prioritize [direct emission reductions].[27]

> In addition, the requirement to assess social costs of GHG reduction strategies must incorporate a full lifecycle assessment.[28] For example, analysis of GHG reduction measures through the production of dairy biomethane must include associated transportation-related emissions and air, water quality and other public health impacts of associated dairy expansions.

Finally, during the implementation of Senate Bill ("SB") 100, CARB has already committed to further develop this analysis of social costs. The SB 100 Joint Agency Report was

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[21] Cal. Health and Safety Code § 38562.7.
[22] Cal. Health and Safety Code § 38562.5.
[23] Cal. Health and Safety Code § 38561(d).
[24] Cal. Health and Safety Code § 38562 (b)(6)
[25] Cal. Health and Safety Code § 38561(d)
[26] Cal. Health and Safety Code § 38562 (c)(2)(A)(III).
[27] Cal. Health and Safety Code § 38562.5
[28] EO B-30-15: Order #6: "State agencies shall take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives."

a preliminary step to develop the upcoming Scoping Plan, and includes the following commitment to assess social costs:

> The joint agencies [including CARB] will continue evaluating available modeling tools and metrics to capture non-energy benefits and social costs in future SB 100 analyses, including those for land-use impacts, public health and air quality, water supply and quality, economic impacts, resilience.[29]

To the extent that the Scoping Plan relies upon SB 100 to meet the State's climate targets, the Scoping Plan must include this analysis of social costs and benefits.

3. The Scoping Plan Should Include the Phase Out of Oil and Gas Production and Refining.

> *2017 EJAC Recommendations*: Commit to reducing oil. This includes a moratorium on new or expanded fossil fuel infrastructure, limiting oil and gas exports now to close that loophole, and placing quality controls on feedstocks so as to not import extreme oil.[30]
>
> Reduce fossil fuel use (extraction, operations, supply, feedstock source).[31]
>
> Set goal of 50% emissions reduction in Oil and Gas sectors by 2030.[32]
>
> Set a moratorium on new oil and gas operations (refineries, power plants, fracking wells, etc.).[33]

The Governor recently directed the Department of Conservation's Geologic Energy Management Division to initiate regulatory action to end the issuance of new permits for hydraulic fracturing by January 2024. At the same time, the Governor requested that CARB analyze pathways to phase out oil extraction across the state by no later than 2045.[34] The Scoping Plan should include a pathway to accomplish this directive that starts immediately. CARB is not limited in its authority to do so.

Importantly, nothing prohibits CARB from "adjusting any of its regulations to achieve greater emission reductions from the oil and gas industry if necessary to achieve the 2030 target."[35] Furthermore, CARB has the duty to reduce public health impacts due to emissions of

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[29] 2021 Joint Agency Report, *available at* https://efiling.energy.ca.gov/EFiling/GetFile.aspx?tn=237167&DocumentContentId=70349
[30] 2017 EJAC Recommendations at 4.
[31] *Id.* at 5.
[32] *Id.*
[33] *Id.* at 8.
[34] Governor Newsom Takes Action to Phase Out Oil Extraction in California (April 23, 2021), *available at* https://www.gov.ca.gov/2021/04/23/governor-newsom-takes-action-to-phase-out-oil-extraction-in-california/
[35] Assembly Floor Analysis of AB 398 (July 17, 2017), *available at* https://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=201720180AB398.

toxics and ensure that activities undertaken pursuant to the state's climate policy complement, and do not interfere with, efforts to reduce toxic air contaminant emissions.[36] The largely uncontrolled emissions of toxic pollutants from oil extraction is well documented. It is incumbent on CARB to aggressively meet the Governor's directive on oil extraction and determine how that phase out begins *now*.

The Scoping Plan must similarly achieve emission reductions in the refinery sector and include a plan for phase out and ultimate decommissioning. When CARB approved the 2017 Scoping Plan, the accompanying resolution clarified:

> the Board hereby directs the Executive Officer to continue to evaluate and explore opportunities to achieve significant cuts in greenhouse gas emissions from <u>*all*</u> sources, including supply-side opportunities to reduce production of energy sources, that contribute to climate change, air pollution, and other environmental and health hazards.[37]

Certainly, "refineries and hydrogen production represent the largest individual source [of GHGs] in the industrial sector, contributing 34 percent of the sector's total emissions."[38] In addition, as other segments of the industrial sector have reduced emissions since 2017, "refining and hydrogen production sector [GHG] emissions have *remained relatively constant in the past few years*."[39] At the same time, we see refineries proposing to switch feedstocks to process higher climate-intensive and polluting biofuels.

Furthermore, new conditions since the 2017 Scoping Plan elevate the need for phaseout planning. A silver lining in the tragic pandemic meant that oil refinery production was reduced, and even the oil industry has acknowledged accelerated transitions to renewable energy. But such changes have been spotty and temporary, requiring statewide planning to lock in any benefits. According to oil industry literature, Alan Gelder, VP, Wood Mackenzie described industry reaction to the pandemic: "some refineries will close, albeit temporarily. . . . Since 1980, global refining has increased by 25%, but that *growth has varied markedly by region*. Investment has slowed where oil demand growth or imports of refined products have been strong; elsewhere, capacity has been either rationalized or closed."[40]

One California refinery did close but others expanded, exacerbating uncertainty and risks particularly in certain EJ communities. Replacement proposals include unjust options for switching to petrochemical production. Thus, a statewide phaseout plan is necessary to reflect

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[36] Cal. Health and Safety Code § 38562(b)(4); *see also* "For air toxic control measures that apply to stationary sources, the districts typically adopt the State control measure into their own rules" https://ww3.arb.ca.gov/regact/2010/capandtrade10/capv6appp.pdf at P-18.

[37] CARB 2017 Climate Change Scoping Plan Update, Resolution 17-46 (December 14, 2017), *available at* (https://ww3.arb.ca.gov/board/res/2017/res17-46.pdf) (emphasis added).

[38] California Greenhouse Gas Emissions for 2000 to 2018, Trends of Emissions and Other Indicators, *available at* https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf at 14

[39] *Id.* (emphasis added)

[40] Hydrocarbon Processing, 4/8/2020, Covid-19 crisis lays bare refining sector's challenges, *available at* https://www.hydrocarbonprocessing.com/news/2020/04/covid-19-crisis-lays-bare-refining-sector-s-challenges (emphasis added).

the reality of the shifting industry. The Scoping Plan must reflect, support, and further these efforts by including an orderly and predictable ramp down in refinery production and emissions, accelerating the deployment of zero-emission transportation options, electrification of the freight transportation system and goods movement sector, and to overall, further an equitable, just transition from fossil fuels. This kind of planning is normal for electricity, but sadly deficient for the oil industry.

With the likelihood of increasing GHG emissions and accompanying significant co-pollution, CARB should regulate the refinery and associated hydrogen production sectors in order to meet its climate goals. Also, to meet its equity goals and the commitments in Resolution 20-33, CARB must include direct regulation of these sectors in the upcoming Scoping Plan as continued inaction continues to harm refinery fenceline communities with associated co-pollutant public health impacts.

4. The Scoping Plan Must Eliminate Offsets, Retire Excess Allowances, and Reassess Inflated Credit Values.

Eliminate Offsets

2017 EJAC Recommendation: eliminate offsets.[41]

CARB's climate regulations must be feasible and cost-effective.[42] CARB has broad authority to meet these mandates,[43] and must ensure that activities taken to comply with these regulations do not disproportionately impact low-income communities.[44]

Currently, CARB's offset regulations allow a polluter to increase GHG emissions in exchange for removing carbon dioxide from the atmosphere in a different location. For instance, an oil refinery can purchase an offset credit that has been issued to a forest owner who agrees to reduce or delay a timber harvest.[45] The oil refinery can then increase GHG emissions by the equivalent amount that the forest is calculated to remove from the atmosphere.

The resulting impact of increased pollution in environmental justice communities internationally and those that live, work, or play in close proximity to domestic large stationary sources of GHGs is well documented. In addition to those significant and disproportionate impacts, the following two recent developments highlight the infeasibility and significant costs of the offsets program, warranting its elimination. CARB must eliminate offsets as they are neither a feasible nor cost-effective means of reducing GHGs.

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[41] 2017 EJAC Recommendations at 4, 5, 6, 8.
[42] Cal. Health and Safety Code § 38560.5 (c).
[43] Cal. Health and Safety Code § 39600 and 39601: CARB has the power to adopt standards, rules and regulations "as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law."
[44] Cal. Health and Safety Code § 38652(b).
[45] *See* Systematic Over-Crediting of Forest Offsets (April 29, 2021), *available at* https://carbonplan.org/research/forest-offsets-explainer

Furthermore, the cap-and-trade program's reliance on offsets along with other unjust trading mechanisms perpetuates disproportionate impacts in low-income communities of color.[46] This reinforces the need for the Scoping Plan to develop strategies that reduce reliance on cap-and-trade and ultimately lead to phasing out the program as currently conceived.

(i) Compliance Offset Protocol Task Force Members' Resignation Highlights the Need to Eliminate This Program.

Recently, both the environment and environmental justice representatives of the Compliance Offset Protocol Task Force resigned. These representatives' reasons for resignation were clear and detailed that the recommendations from the taskforce "contradict the interests of the environmental and environmental justice communities."[47]

The members' resignation also detailed that other members of the taskforce had "a vested interest in expanding the use of offsets or have ties to industries and organizations that stand to benefit financially from offsets."[48] As such, CARB should consider the taskforce's recommendations with great skepticism and examine the negative impacts of the offset program independently and objectively.

(ii) Over-Crediting of Forest Management Offset Projects is Evidence for Eliminating the Offset Program.

The resigning members' observations are consistent with the findings of the recent report, Systematic Over-Crediting in California's Forest Carbon Offsets Program ("Over-Crediting Report").[49] That report examines California's forest carbon offsets program, in particular the standardized approach that CARB takes to quantify the amount of carbon removed from the atmosphere through "improved forest management" offset projects, or said another way, the amount of carbon stored by forests through forest management practices, similar to the oil refinery example detailed above.

The Over-Crediting Report finds that the bulk of offset credits issued for these projects are from "upfront" credits. Those credits are calculated by the difference between initial on-site carbon stocks (measured by field surveys) and the 100-year average carbon stock in projects' baseline scenarios (as modeled by project developers).[50] CARB has set a floor for these baseline calculations. This floor varies depending on the geographic location of the forests where projects are located. Different geographic locations often include different types of forests, some

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[46] Cal. Health and Safety Code § 38652(b).
[47] Resignation letter of Brian Nowicki, February 2021, *available at* https://ww2.arb.ca.gov/sites/default/files/2021-02/nowicki_brian_offsets_task_force_letter_020821.pdf. (See also Resignation letter of Neil Tangri, February 2021, *available at* https://ww2.arb.ca.gov/sites/default/files/2021-02/tangri_neil_offsets_task_force_letter_020821.pdf ("a majority of task force members (or the organizations they represent) stand to benefit financially from the adoption of new offset protocols.")
[48] *Id.*
[49] *Supra* fn. 45.
[50] *Id.* at 4.

more capable of storing carbon than others. CARB however, averages the amount of carbon each type of forest can store within each designated geographic location.

There is an incentive for project developers to have this baseline as low as possible, or as close to the floor as possible, in order to obtain the most upfront credits. There is also an incentive for project developers to select geographic sites where they can get the most "bang for their buck," namely those geographic sites that include forests that absorb more carbon than the average calculated for that site. This results in "systematic over-crediting."[51]

> Across the [offset] program as a whole, we find evidence of systematic over-crediting. Of the 102.1 million tCO2e worth of upfront credits for which we have sufficient data to analyze, we estimate net over-crediting of 30.0 million tCO2etotal . . . or 29.4% of the credits we analyzed. At recent market prices of $13.67 per offset credit, these excess credits are worth $410 million.[52]

Evidently, offsets are not cost-effective, especially in light of these findings. CARB must eliminate the program and include a schedule for doing so in the Scoping Plan.

Market Mechanism Design Shortfalls Undermine Climate and Equity Policies

CARB must assess the role of allowances in achieving GHG reductions, and the role of allowances in reducing the benefit and impact of GHG emission reduction strategies. We are particularly concerned about excess allowances artificially deflating the cost of emissions along with other components of the current cap-and-trade program.

Additionally, CARB must reassess the calculation of carbon intensity values associated with the Low Carbon Fuel Standard, in particular, the carbon intensity values (and thus credit value) associated with energy derived from dairy digesters for biomethane production. Lack of regulatory approaches to dairy methane inflate the value attributed to credits, as does failure to consider the availability of alternative methane management, and failure to consider the lifecycle emissions of dairy gas production.

[51] *Id.* at 8.
[52] *Id.*

III. Conclusion

We look forward to collaborating with the EJAC to develop additional recommendations for the Scoping Plan. We request that CARB appoint the new members to the EJAC, provide greater weight to their future recommendations, ensure meaningful community participation throughout the Scoping Plan process, and implement prior EJAC recommendations from 2017 that are overdue and mandated by the State's climate and equity policies.

Respectfully submitted,

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