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California State Senate

SENATOR ROBERT M. HERTZBERG
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AUDIT COMMITTEE

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