CRPE

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California Air Resources Board
1001 I Street, Sacramento, CA 95814
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Re: Draft 2022 Climate Change Scoping Plan

I. Introduction.

Our communities live alongside the state's largest polluters, including oil refineries, oil & gas production wells, dirty power plants, transportation hubs, and industrial agriculture's massive pesticide and fertilizer use, all of which pollute our communities and climate. The impacts of climate change and pollution falls most significantly and disparately on communities of color, particularly Black, Brown, Indigenous, Asian, Pacific Islander, and low-income communities.

The 2022 Draft Scoping Plan Update has appropriated our language and our narrative for a just and equitable climate future in California. But the Plan does not deliver for our communities. The actual strategies in the Plan continue the same environmental and structural racism that has allowed our communities to suffer by relying on policies like Cap and Trade that benefit the largest polluters, especially the oil industry for which the Plan requires *no other measures*. At the same time, the Governor has declared a "climate damn emergency." CARB's lofty rhetoric is meaningless because the Plan does not show it will meet any of the targets in 2030, 2035, or 2045 without heavy reliance on Cap and Trade and the "Black Box."[1]

We ask Governor Newsom, the Legislature, and the CARB Board to show the leadership this moment demands. We ask that you reject market mechanisms like Cap and Trade; that you

1 We use the term "Black Box" to refer to the Plan's reliance on Carbon Capture and Sequestration and Carbon Dioxide Removal (or Direct Air Capture). "Black Box" as a term of art originates from the Clean Air Act section 182(e)(5) mechanism that CARB has deftly used to avoid difficult ozone pollution reductions in the San Joaquin Valley and the South Coast air basins, both of which have failed to attain either the original 1-hour ozone national ambient air quality standard and are poised to fail attainment of the 1997 8-hour ozone standard. The Los Angeles Times editorial board recently drew the connection between the Draft Scoping Plan and the failed Black Box and questioned CARB's mettle by describing the Draft Scoping Plan as less than adequate. *See* Los Angeles Times, EDITORIAL: CALIFORNIA NEEDS TO SLASH CARBON POLLUTION. ITS PIE-IN-THE-SKY PLAN FALLS SHORT, June 2, 2022, available at https://www.latimes.com/opinion/story/2022-06-03/california-climate-plan-net-zero-emissions (last visited June 8, 2022).

amend the Plan, and if necessary the law, to provide CARB the authority to achieve direct emissions reductions from all sectors, including the oil industry, without reliance on unproven, undeveloped, and unwise Black Box technologies; and that you ensure agricultural sources achieve mandatory, meaningful, net reductions instead of voluntary offsets sold into pollution trading schemes like Cap and Trade and the Low Carbon Fuel Standard. We are at a critical juncture. Our communities deserve far better than this after decades of neglect, pollution, and racial injustice.

II. Cap and Trade Has No Place in an Environmentally Just Climate Future.

Our climate and environmental justice goals should put people and planet first, not the politically powerful oil industry. And the Draft Scoping Plan should lead the way by leaving Cap and Trade behind as a relic that interferes with, and does not advance, those goals. The Schwarzenegger Administration adopted its Cap and Trade policy under the original AB 32 framework a decade and half ago to help achieve 1990 emissions levels by 2020. About ten years later, the Brown Administration collaborated with the oil industry for an extension of Cap and Trade to 2030 despite the mounting evidence of market collapse and its disparate harm to low-income communities and communities of color. In both 2006 and again in 2017, Governors Schwarzenegger and Brown, respectively, sacrificed environmental justice and civil rights for climate policy the oil industry would accept. Now, our climate and environmental justice goals have progressed so far beyond the original 2020 target that we all agree that a fossil fuel-based economy will not stabilize our climate.

The Draft Scoping Plan's cognitive dissonance calls for clean energy yet does nothing to limit the oil industry. The Plan acknowledges the undeniable fact that California must transition our economy from fossil fuel-based transportation and energy. And the Plan proposes direct emissions reduction measures for cars, heavy duty trucks, buildings, and electricity to do just that. Rather than a transition away from Cap and Trade, which has allowed oil industry GHG emissions to increase, the Plan doubles down and relies on that policy to close a *huge* shortfall – over one-third – of needed reductions to meet the 2030 target. This reliance persists in the face of overwhelming evidence of an allowance glut and pervasive environmental racism.

For measures after 2030, when Cap and Trade sunsets and does not legally exist, the Draft Scoping Plan recommends nothing for the oil industry except an assumption and the Black Box. The Plan assumes oil industry emissions will decrease as California's in-state fossil fuel use declines, and proposes that the Black Box will control any remaining climate emissions. However, oil companies and their California refineries have been exporting refined fuels, and increasing those exports. The Plan not only ignores this, but in a footnote explicitly says it does not assume fuel exports will occur. Thus, in-state oil production and refining may continue while oil companies export fuels and pollute our communities.

The Draft Scoping Plan also ignores the environmental racism caused and exacerbated by Cap and Trade. Despite the Plan's lofty environmental justice rhetoric and the Legislature's clear statutory direction, the Plan does not disclose or discuss Cap and Trade sources' on-going air pollution in communities or what reductions (if any) occur as a result of Cap and Trade. The Plan's silence on this point is deafening given the data that have become available since CARB adopted Cap and Trade in 2011. CARB must confront the undeniable facts that emissions of GHGs and co-pollutants have *increased* in the oil refining and oil & gas production sectors, that the oil refining sector is the largest consumer of offsets to avoid on-site reductions, and that CARB has allowed racial discrimination in violation of state and federal civil rights laws, all

while the oil industry benefits the most from Cap and Trade. CARB must acknowledge that Cap and Trade should be discarded, that it holds a duty under civil rights laws to do much, much better than this, and that it should revise the Scoping Plan to identify the policies the environmental justice movement and the EJAC have proposed that will support achieving our climate and environmental justice goals.

A. The CARB Board and Governor Newsom Should Provide the Leadership to Move Past Cap and Trade.

Governor Newsom and the CARB Board have this opportunity to acknowledge the mistakes of prior administrations and move California forward. This is important because the Governor calls our situation a "climate damn emergency."[2] The Draft Scoping Plan claims that CARB "need[s] to ensure [CARB's] actions allow these communities to not only have a seat at the table, but also inform and shape the policies to ensure their communities thrive."[3] Unfortunately, the EJAC, environmental justice organizations, and community leaders have been saying that for years and CARB has ignored and continues to ignore us.

In 2006, Governor Schwarzenegger sought a mandate for Cap and Trade in AB 32, but environmental justice advocates and aligned legislators pushed back. Ultimately, AB 32 gave CARB discretion to include Cap and Trade as climate policy.[4] The first Scoping Plan – unopposed by the oil industry – chose to proceed with Cap and Trade even though the Plan gave no meaningful consideration of other alternatives.[5]

The EJAC and the California environmental justice movement have consistently called for direct emissions reductions instead of pollution trading schemes like Cap and Trade. At the same time, the movement has sought to redress disparate impacts while re-directing Cap and Trade revenue to support communities in need of infrastructure, environmental "goods," and improved air quality, among other things. Because AB 32 only authorized Cap and Trade through 2020, Governor Brown sought, and environmental justice organizations opposed, an extension of Cap and Trade beginning in 2015 and culminating in 2017.[6]

Through that three-year process, the oil industry managed to secure an even more oily version of Cap and Trade. On the last day of the 2016 legislative year, the oil industry announced it would pursue special concessions from the recently enacted Senate Bill 32 (and joined Assembly Bill 197) mandate to achieve greenhouse gas emissions 40 percent below 1990 levels by 2030 ("the 2030 target"). The Legislature was deliberating dairy industry demands for special treatment in Senate Bill 1383 and the oil industry opposed that exemption. According to the lobbyist for the Western States Petroleum Association, the dairy industry should not have received an exemption from SB 32 that other industries did not enjoy, and the Legislature should have rejected such

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2 Rachel Becker, 'DEBATE IS OVER,' CALIFORNIA'S GOVERNOR SAYS. 'THIS IS A CLIMATE DAMN EMERGENCY,' Cal Matters, September 11, 2020, available at https://calmatters.org/environment/2020/09/california-governor-climate-emergency/ (last visited June 8, 2022).

3 2022 Draft Scoping Plan Update at 221.

4 Health & Safety Code § 38562(c)(2).

5 *See Association of Irritated Residents v. California Air Resources Board* (2012) 206 Cal.App.4th 1487, 1492-1494.

6 *See* Tracy E. Perkins, Evolution of a Movement: Four Decades of California Environmental Justice Activism, University of California Press (2022).

treatment because if it did not, then the other industries would return to the Legislature in 2017 with their exemption demands.[7] SB 1383 passed and the oil industry sought and got its exemption when it partnered with the Brown Administration to pass Assembly Bill 398, the bill that extended Cap and Trade.[8] The oil industry support of AB 398 was ultimately instrumental in building the coalition that delivered the two-thirds majority vote Governor Brown needed to pass the Cap and Trade extension.[9]

Pursuant to AB 398, the Draft Scoping Plan identifies Cap and Trade as the only greenhouse gas rule applicable to oil refineries and oil & gas production facilities. But that does not mean that CARB, showing the environmental justice commitment it professes to have adopted, cannot call on the Legislature to end the Cap and Trade charade. The following sections first show how the Scoping Plan must be revised to provide meaningful information to enable the CARB Board and the Legislature to understand the magnitude of the problem that Cap and Trade presents, especially with regard to the oil industry. Then, these comments will discuss why such a pivot should occur.

B. The Draft Scoping Plan Does Not Explain How Cap and Trade Will Close a Huge Emissions Reduction Shortfall in 2030 and Simultaneously Fails to Discuss or Disclose Cap and Trade's Projected Greenhouse Gas Emissions or Air Pollution Reductions.

A revised Scoping Plan would facilitate meaningful public participation and informed decision-making. The Draft Scoping Plan faces a large shortfall in 2030 and relies on Cap and Trade to close the gap.[10] The Plan, without discussing the greenhouse gas or co-pollutant reductions from Cap and Trade, quickly pivots to non-binding targets in 2035 and 2045 set by executive orders. CARB must do better, especially given the absence of any other control strategy for the oil industry and the imperative to, at a minimum, ensure that California will achieve the 2030 target.

Relying on an updated inventory in the Reference Scenario,[11] the Draft Scoping Plan identifies a 2030 target of 260 million metric tons of carbon dioxide equivalent emissions (MMTCO2e) and claims that Cap and Trade will "fill the gap" with an estimated 44 MMTCO2e

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7 Assembly Natural Resources Committee, Hearing on Senate Bill 1383, available at http://calchannel.granicus.com/MediaPlayer.php?view_id=23&clip_id=4009 (beginning at hour 1:12) (last visited June 7, 2022).

8 *See* Assembly Bill 398, § 10, codified at Health & Safety Code § 38592.5(a)(1) (CARB "shall designate [Cap and Trade] as the rule for petroleum refineries and oil and gas reduction facilities to achieve their greenhouse gas emissions reductions."); Assembly Bill 398 § 12, codified at Health & Safety Code § 38594(b) (local air districts shall not adopt carbon dioxide limits on stationary sources subject to Cap and Trade).

9 *See*, e.g., Ruairí Arrieta-Kenna, CALIFORNIA JUST GOT BIPARTISAN SUPPORT TO EXTEND ITS CAP AND TRADE PROGRAM TO 2030, Vox, available at https://www.vox.com/energy-and-environment/2017/7/15/15955756/california-climate-brown-ab398-cap-and-trade (last visited June 7, 2022).

10 Draft Scoping Plan at 86-91.

11 The Reference Scenario is the term that CARB has chosen to describe the total annual greenhouse gas emissions as a starting point, and subtracting from that "baseline" the estimated reductions from already-adopted measures.

by 2030.[12] With the Plan estimating that non-Cap and Trade reductions will lower the inventory to 304 MMTCO2e in 2030, the gap that Cap and Trade must fill amounts to 36.3 percent of the reductions needed from 2021 emissions levels.[13] Figure 2-10 graphically illustrates this inventory, showing that in 2021 the inventory is 381 MMTCO2e, non-Cap and Trade reductions lower the inventory to 304 MMTCO2e, and Cap and Trade must cover the remaining 44 MMTCO2e shortfall.[14]

Cap and Trade is thus responsible for over *one-third* of the needed reductions for the 2030 target. To complicate things, the Plan acknowledges 310 million of "unused allowances in circulation" but neither explains the significance of that allowance glut nor whether the glut will impede Cap and Trade from achieving the 44 (or more) MMTCO2e reductions needed.[15] The Independent Market Advisory Committee earlier this year found that the amount of banked allowances "is larger than the contribution CARB projected would be needed from the cap-and-trade program over the period 2021-2030, raising questions about the ability of the program to act as a 'backstop' policy as currently designed."[16] It makes no difference that CARB claims it will use modeling for the Final 2022 Scoping Plan to assess any potential changes to Cap and Trade, because CARB has effectively excluded the public and its own Environmental Justice Advisory Committee from any kind of meaningful analysis and opportunity to comment on how and whether Cap and Trade will deliver more than a third of the needed reductions. Apparently, CARB will only share those details in the final plan presented to the Board for adoption with little opportunity for changing course.[17]

Furthermore, CARB has a *duty* required by law to disclose projected greenhouse gas reductions and air pollution reductions from Cap and Trade specifically, but the Draft Scoping Plan fails to disclose this information. Assembly Bill 197 requires that the Scoping Plan "shall identify for each . . . market-based compliance mechanism" the range of projected greenhouse gas and air pollution reductions "that result from the measure."[18] The six pages discussing Cap and Trade lack any of these data.[19] Nor does the AB 197 analysis purporting to meet this

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12 Draft 2022 Scoping Plan Update at 90, Table 2-4. CARB needs to explain and update the inventory discrepancy identified by Danny Cullenward where the Reference Scenario is between 15 and 27 MMTCO2e *lower* than CARB's actual greenhouse gas inventory, which makes the 2030 shortfall and amount of reductions Cap and Trade must deliver even greater. *See* Danny Cullenward, California's draft climate change scoping plan is incomplete, available at https://carbonplan.org/blog/scoping-plan-comments (May 19, 2022) (last visited June 7, 2022).

13 Draft Scoping Plan Update at 90; AB 32 GHG Inventory Sectors Modeling Data Spreadsheet, available at https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

14 Draft Scoping Plan Update at 90, Figure 2-10.

15 Draft Scoping Plan Update at 87.

16 2021 Annual Report of the Independent Emissions Market Advisory Committee at 16, January 20, 2022, available at https://calepa.ca.gov/wp-content/uploads/sites/6/2022/01/2021-IEMAC-Annual-Report.a.pdf (last visited June 7, 2022) ("Finding #3: The extent of observed private banking is larger than the contribution CARB projected would be needed from the cap-and-trade program over the period 2021-2030, raising questions about the ability of the program to act as a "backstop" policy as currently designed.").

17 Draft 2022 Scoping Plan Update at 87.

18 Health & Safety Code §§ 38562.7(a), (b).

19 Draft 2022 Scoping Plan Update at 86-91.

mandate elsewhere in the Scoping Plan discuss climate or air pollution from Cap and Trade. Instead, CARB presents data from six broad categories of measures, none of which comply with the plain language of AB 197 to discuss "each . . . market-based compliance mechanism."[20] CARB's choice to disclose aggregated data in broad categories, rather than for Cap and Trade specifically, fails to do that which the Legislature carefully included in the legislation designed to hold CARB accountable. The Draft Scoping Plan unfortunately ignores this important accountability mechanism.

CARB must do better than this. The 2030 target is required by law, CARB must achieve this target through the adoption of the maximum technologically feasible and cost-effective greenhouse gas emissions reductions, and CARB must adopt a scoping plan to identify and make recommendations for such reductions.[21] CARB must also analyze and disclose the climate and air pollution reductions attributable to Cap and Trade.[22] CARB should not withhold key data, analysis, and recommendations until the last minute when adoption of the Scoping Plan with a Cap and Trade program awash in hundreds of millions in "unused allowances" will be a fait accompli. This is especially important given the oil industry's emissions increases under Cap and Trade, as discussed more fully in the following sections.

C. The Most Recent Data Show that Cap and Trade Inflicts Disparate Impacts.

The Draft Scoping Plan uses lofty rhetoric and frequent citations to EJAC recommendations to describe CARB's environmental justice priority. But when the rubber meets the road, CARB dismisses environmental justice concerns with Cap and Trade, the use of offsets, and health impacts from avoided on-site reductions as "highly variable by sector and pollutant."[23] But when it comes to oil refining and oil & gas production, the data overwhelmingly demonstrate that Cap and Trade is neither reducing greenhouse gases nor co-pollutants in these sectors, and racial disparities persist.

Earlier this year, the Office of Environmental Health Hazard Assessment (OEHHA) published its second analysis of Cap and Trade.[24] OEHHA analyzed emissions changes in high CalEnviroScreen ("CES") communities and found that GHGs and PM2.5 increased in the oil refining sector while air toxics increased in the oil production sector.[25] While the Scoping Plan looks at state-wide data, disparities persist for facilities in high-scoring CES communities compared to low-scoring CES communities.[26] Black Californians experience *twice* the PM2.5 burden of white Californians from Cap and Trade facilities, while "Black Californians

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20 *Id*.; Draft 2022 Scoping Plan Update at 111, Table 3-4; Appendix C.

21 Health & Safety Code §§ 38561, 38566.

22 Health & Safety Code § 38562.7.

23 Draft 2022 Scoping Plan Update at 86.

24 Office of Environmental Health Hazard Assessment, Impact of Greenhouse Gas Emission Limits within Disadvantaged Communities: Progress Toward Reducing Inequities, February 2022, available at https://oehha.ca.gov/media/downloads/environmental-justice/impactsofghgpoliciesreport020322.pdf.

25 *Id*. at 38.

26 *Id*. at 39.

experience PM2.5 concentrations from refineries that are three times greater than all other stationary source sectors combined that are covered by the Cap-and-Trade Program.[27]

While the Scoping Plan discounted environmental justice advocates "concerns" about the role of offsets as "highly variable by sector and pollutant," OEHHA fully acknowledged that reality. OEHHA found that the majority of GHG and PM2.5 emissions in Cap and Trade originated from facilities that use offsets.[28] Not surprisingly, the facilities that used the most offsets had the most PM2.5 emissions, and the oil industry led the way in offset use. Specifically, four of the top five offset users were oil companies with at least one facility in a high PM2.5 area. Of those four, Chevron, Tesoro, and Shell all used the maximum 8% offset use limit for their compliance obligation.[29]

Overall, OEHHA found that Cap and Trade facilities "have a disproportionate impact on vulnerable communities" and communities with high CES scores and high percentages of people of color are more likely suffering that impact.[30] OEHHA notes improvement in GHGs, PM2.5, and air toxics in the study period, that improvement is from diesel heavy duty vehicle reductions while "the pace from is [sic] stationary source is nearly flat compared to the improvement from [diesel particulate matter]." OEHHA also noted that the oil industry leads the way in pollution causing a disparate impact.

> Our work also finds that refineries are the top contributor to the inequitable burden of PM2.5 exposure, especially for Black Californians. Moreover, we find that refineries are also owned by parent companies that are among the highest users of offset credits to comply with the Cap and Trade Program.[31]

The recent analysis Up in the Air further demonstrates disparities.[32] In this paper, researchers followed-up on a previous analysis that showed pollution increased in areas with a higher share of people of color or a higher CES score. Up in the Air again finds Cap and Trade continues to have disparate outcomes.

> Specifically, we show that there is a pattern where the deepest reductions in GHG and co-pollutant emissions are occurring in higher socioeconomic status neighborhoods, and that there is less improvement and often worsening of pollutant emissions in neighborhoods that have higher shares of residents of color

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27 *Id*. at 40.

28 *Id*. at 42.

29 *Id*. We note that AB 398 reduced the offset use limit to 4% before 2026 and 6% between 2026 and 2030. Health & Safety Code § 38562(c)(2)(E)(i). Based on these data, we expect these corporations to continue to pursue offsets in lieu of direct, on-site emissions reductions.

30 *Id*. at 45.

31 *Id*. at 46. OEHHA notes that Black Californians experienced a four-fold greater reduction in PM2.5 exposure, but again, these data are mixed with diesel particulate matter data and do not erase the disparity in exposure.

32 Manuel Pastor, Michael Ash, Lara Cushing, Rachel Morello-Frosch, Edward-Michael Muna, and James Sadd, UP IN THE AIR: REVISITING EQUITY DIMENSIONS OF CALIFORNIA'S CAP-AND-TRADE SYSTEM, February 2022, available at https://dornsife.usc.edu/assets/sites/1411/docs/CAP_and_TRADE_Updated_2020_v02152022_FINAL.pdf (last visited June 9, 2022).

and/or are defined by CES as "disadvantaged communities" (or DACs).[33]

Again, the oil industry remains a persistent area where emissions have increased. In both the oil & gas production sector and the oil refinery sector, greenhouse gas emissions have *increased* between 2011 and 2017.[34] Any decreases under Cap and Trade as a whole largely originate from the electricity sector where out of state coal-powered electricity imports were replaced by natural gas generation.[35] Up in the Air ultimately concludes that communities with higher shares of people of color, people living below 200 percent of the poverty level, and higher CES scores are more likely to live near Cap and Trade facilities and also "less likely to have seen improvements in pollution emissions."[36]

D. CARB Has a Duty to Prevent the Disparate Impacts from Cap and Trade.

CARB has an affirmative duty under California and federal law to do better and cannot simply ignore reality. While California law has a long history of protecting the civil rights of Californians, CARB does not. One state law mandates agencies like CARB to ensure that their policies do not disproportionately impact residents on the basis of race, color, national origin, or ethnic group identification.[37] This prohibition on discrimination applies to the Scoping Plan and Cap and Trade because they meet the criteria of a program that is "conducted, operated, or administered" by CARB, a California state agency.[38] Another state law prohibits activities that limit housing opportunities for members of protected classes, including activities and programs that interfere with the use and enjoyment of one's dwelling or that results in the location of toxic, polluting, and/or hazardous land uses in a manner that adversely impacts the enjoyment of residence, land ownership, tenancy, or any other land use benefit related to residential use.[39] Federal law also compels CARB to prevent disparate impacts. The state is subject to the prohibitions included in the Fair Employment and Housing Act.[40] Title VI of the Civil Rights Act of 1964 and its implementing regulations prohibit recipients of federal funds from engaging in racial discrimination, including policies that result in disparate impacts.[41] As a recipient of federal funding, CARB remains subject to Title VI.[42] In 2012, environmental justice

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33 *Id*. at 6.

34 *Id*. at 14.

35 *Id*.

36 *Id*. at 33.

37 Government Code § 11135.

38 *Id*.

39 Government Code § 12955.

40 CA Legis. 352 (2021), CAL. LEGIS. SERV. CH. 352 (A.B. 948), amending Government Code § 12955; 2 Cal. Code Regs. § 12005(v); 2 Cal. Code Regs. § 12060.

41 42 U.S.C. § 2000d; 40 C.F.R. part 7.

42 CARB receives tens of millions of dollars in substantial federal financial assistance to implement the Clean Air Act. *See* https://www.usaspending.gov/search/?hash=012e762e5caea2debee24864f739fd50 (last visited June 9, 2022). For example, EPA has provided $20.3 million over the period from October 1, 2018 to September 30, 2022 to CARB for "strategic planning and evaluation, developing state implementation plans, monitoring air and

organizations filed an administrative Title VI civil rights complaint with the U.S. EPA alleging that CARB violated Title VI of the Civil Rights Act when it adopted Cap and Trade.[43] EPA dismissed the complaint on ripeness grounds, decided that the allegations "are speculative in nature and anticipate future events that may not occur."[44] Those data have since developed to demonstrate a violation of Title VI, and the Draft Scoping Plan makes no effort to acknowledge, discuss, or otherwise resolve these important issues except to appropriate the environmental justice narrative. In other words, the Plan claims to give communities "a seat at the table"[45] but they are still on the menu.

The data discussed above, especially with respect to oil refining and oil & gas production, warrant CARB and the Legislature to move beyond the special treatment given to the oil industry. Assembly Bill 398 and the Brown Administration's abdication do not absolve CARB of its obligations under civil rights law, nor should the Legislature allow the special treatment given to the oil and gas industry as the price of a two-thirds majority vote to remain in place given these disparate impacts. The Draft Scoping Plan offers absolutely no basis on which the public or decision-makers can plausibly rely on the ability of Cap and Trade to deliver more than one-third of needed reductions to achieve the 2030 target especially when the program itself has a glut of hundreds of millions of unused allowances.

III. The "Black Box" Violates Scoping Plan Requirements and Will Lead to Failure.

While appropriate and permanent Natural Working Lands ("NWL") policies can sequester carbon and build soil health, capturing greenhouse gases from fossil fuels or from the ambient air should not substitute for leadership and clean energy. CARB's wishful thinking in engineered Carbon Capture and Sequestration ("CCS") and Carbon Dioxide Removal/Direct Air Capture ("CDR") (collectively "the Black Box") capitulates, once again, to the oil industry. Rather than recommend direct emissions reductions for the oil industry, the Plan relies on the Black Box.

First, the Scoping Plan concedes the Black Box is, as the Los Angeles Times aptly describes it, a pie-in-the-sky fantasy.[46] On several occasions, the Plan recognizes that the Black Box calls for CCS and CDR that do not actually exist.

> The other side of the equation is a re-envisioning of our forests, shrublands/chaparral, croplands, wetlands, and other lands—what we call Natural and Working Lands—to ensure that they play as robust a role as possible in incorporating and storing more carbon in the trees, plants, soil, and wetlands that

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emissions, rulemaking, operating permits and all other program related activities to reduce risks to human health and the environment." *See* FAIN 00901319.

43 *See Coalition for a Safe Environment v. California Air Resources Board*, No. 09R-12-R9, available at https://www.epa.gov/sites/default/files/2014-06/documents/09r-12-r9_complaint_redacted.pdf (last visited June 9, 2022).

44 Letter from Rafael DeLeon, Director of the U.S. EPA's Office of Civil Rights, to Mary Nichols, CARB Board Chair, July 12, 2012, available at https://www.epa.gov/sites/default/files/2014-06/documents/09r-12-r9_reject_rcpt_redaction.pdf (last visited June 14, 2022).

45 2022 Draft Scoping Plan Update at 221.
46 Los Angeles Times, *supra*, note 1.

> cover 90 percent of the state's 105 million acres. And since the goal is to balance carbon output with carbon sequestration, *we will need to research, develop, and deploy additional methods of capturing CO_2* that include pulling it from the smokestacks of facilities, or drawing it out of the atmosphere itself and then safely and permanently storing it.[47]

The Proposed Scenarios calls for CCS in the cement and petroleum refinery sectors.[48] CARB later concedes that CCS is not feasible, at least with respect to oil refineries in the pre-2030 timeframe. "While the modeling included CCS as being available in the first half of this decade, implementation barriers now indicate that is unlikely, and those emissions will be emitted into the atmosphere."[49] CARB proposes to capture 90% from refineries facility-wide, which would involve multiple capture apparatuses functioning at a far greater efficiency than has ever been observed in practice. From a practical standpoint, the equipment required for this type of efficiency is infeasible at many California refineries such as the Chevron facility in Richmond, CA which simply does not have the space needed to add capture equipment at the scale required.

Nothing in the Scoping Plan indicates that CCS is feasible for cement plants either, stating "the Proposed Scenario assumes CCS for cement plants."[50] CDR likewise lacks any foundation in reality. "As is the case with CCS, mechanical CDR technologies will need government or other incentive support to get over technology and market barriers."[51] The Black Box thus does not meet the maximum feasible and cost-effective reductions in greenhouse gas emissions standard.[52]

CARB, in relying on the Black Box, appears to reject other measures that could achieve reductions as not technologically feasible or cost-effective under the current AB 32 standard for scoping plan measures.[53] This does not mean that the Black Box represents a reasonable interpretation, but rather calls for CARB to change its interpretation of technical feasibility and cost-effectiveness to allow for the Plan to meet required reduction goals. If CARB does not act to amend the maximum feasible and cost-effective reductions of greenhouse gas emissions standard, then the Legislature should ensure CARB has the authority and duty to adopt sufficient measures.

ARB has also understated the reductions the Proposed Scenario assigns to the Black Box because the Draft Scoping Plan does not model for the export of refined fossil fuels. With respect to the refinery and oil & gas production sectors, the Draft Scoping Plan calls for no other

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47 2022 Draft Scoping Plan Update at ES-i.

48 *Id*. at 67-68.

49 *Id*. at 68.

50 *Id*.

51 *Id*. at 73

52 Health & Safety Code § 38561(b).

53 *See* Health & Safety Code § 38561.

reduction measures for the post-2030 period after Cap and Trade sunsets.[54] CARB instead assumes that emissions from oil refining and oil & gas production will decrease 85 percent in line with the reduction in demand for in-state on-road fossil fuel demand.[55] But nowhere in the Plan does CARB discuss the role and manner in which in-state oil refineries currently refine and export fuels to other states and nations.[56] Nor does the Plan model or discuss the emissions from in-state oil production and refining to produce fuels for export which, according to the Communities for a Better Environment analysis, has steadily increased while in-state demand has fallen.[57] The Scoping Plan even concedes that it excluded the role of refined fuel exports. "This reduction in demand does not assume any need for ongoing operations to support exports to neighboring states."[58] CARB staff have thus ignored the emissions related to in-state oil production and refining that would support fuel exports and in doing so have significantly underestimated the emissions reductions the Black Box must solve.

The CARB Board and the Legislature should not allow CARB to continue on this path into the Black Box because when law makers have allowed such measures, they have explicitly authorized them. The Global Warming Solutions Act has no such provision. The Clean Air Act authorizes states to rely on undeveloped future technology in plans to meet ozone national ambient air quality standards.[59] And CARB has liberally used the Black Box in the San Joaquin Valley and the South Coast air basins in the plans to meet the ozone standards.[60] In contrast, the Legislature has not authorized CARB to use undeveloped, futuristic technologies for the state's climate policies.

IV. CARB Should Not Rely on Carbon Capture and Sequestration Technology

Engineered CCS is a means of delaying meaningful climate action and increasing our investments in fossil fuel and other hydrocarbon infrastructure at a time when we should be phasing out these old fuels that continue to drive the climate crisis and poison frontline communities. So far, all CCS projects worldwide have failed to live up to promised climate

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54 2022 Draft Scoping Plan Update at 59, Table 2-2; Health & Safety Code § 38562(c)(2) (authority to implement Cap and Trade only through December 31, 2030).

55 2022 Draft Scoping Plan Update at 79, 83.

56 *See* Communities for a Better Environment, NEW CLIMATE THREAT: WILL OIL REFINERIES MAKE CALIFORNIA THE GAS STATION OF THE PACIFIC RIM? (2019), available at https://www.cbecal.org/wp-content/uploads/2019/09/New-climate-threat%e2%80%93Will-oil-refineries-make-California-the-gas-station-of-the-Pacific-Rim.pdf (last visited June 10, 2022).

57 *Id*.

58 2022 Draft Scoping Plan Update at 84 n.150.

59 *See* Clean Air Act section 182(e)(5), 42 U.S.C. § 7511a(e)(5).

60 *See*, *e.g.*, Proposed 8-Hour Ozone State Implementation Plan Revisions and Technical Revisions to the PM2.5 State Implementation Plan Transportation Conformity Budgets for the South Coast and San Joaquin Valley Air Basins at 3-4, available at https://ww3.arb.ca.gov/planning/sip/2007sip/2011_ozone_sip_staff_report_with_appendices.pdf (last visited June 10, 2022). Whether these plans will deliver air quality that meets the 1997 8-hour standard remains to be see, since both air basins have design values well above attainment through 2021, and the attainment year is next year. *See* Ozone Design Values, 2021 Report at Table 3c, available at https://www.epa.gov/air-trends/air-quality-design-values#report (last visited June 10, 2022).

benefits, and a majority have been net carbon emitters in a lifecycle analysis that considers upstream and downstream emissions. Further, most engineered carbon capture increases air pollution, water pollution, and other harms for frontline communities, and the risks of transporting and storing carbon dioxide include immediate death and hospitalization, spoiling aquifers, degrading soil, and increased seismicity. Over 80% of captured carbon from CCS globally is used for enhanced oil recovery (EOR), reversing any paper climate benefits and further harming frontline communities with the impacts of new EOR.

CCS projects are only financially viable when funded by massive subsidies, which will accrue to benefit polluting industries such as the fossil fuel industry. Indeed, CCS is an expensive boondoggle without public benefit, but with clear private gain. This unwise investment comes with the opportunity cost of what those taxpayer dollars could otherwise be used to fund, such as increased renewable energy infrastructure and ecosystem restoration. Any CCS technology allowed by the state at the very least must provide strong protections for communities so that impacts associated with this misguided approach is borne evenly rather than shouldered disproportionately by environmental justice communities who will bear the brunt of these projects' local harms.

A carbon dioxide pipeline ruptured in Satartia, Mississippi, hospitalizing dozens. There are no appropriate safeguards in place for the safe transportation of carbon dioxide, as the federal Pipeline and Hazardous Materials Safety Administration (PHMSA) has admitted in response to that disaster. Indeed, PHMSA recently announced that it is initiating a new rulemaking because of the vulnerability of people and communities who happen to live within a few miles of a carbon pipeline. Our existing infrastructure is inadequate to the task of safely transporting carbon dioxide, and we haven't even begun investigating what improvements are needed to do so.

Amidst over a century of environmental racism, communities of color and low-income communities bear disproportionate burdens from existing pollution. Yet, CCS would double down on current infrastructure and thus also current inequities. We should all be able to agree that CCS should not be allowed to increase pollution and other harms in frontline communities. However, there is no current mechanism to prevent such pollution increases or any regulations to prevent harm in our communities. Likewise, there are no mechanisms currently in place to ensure that companies that do CCS are accountable and liable for any failures in perpetuity, that pipelines are not allowed to run near environmental justice communities, that storage projects do not increase risks of earthquakes, that projects themselves are not vulnerable to earthquakes causing ruptures and leakage of deadly carbon dioxide, and that we do not use captured carbon to increase oil and gas extraction through enhanced oil recovery and thus both reverse any purported climate benefits while also contributing to the harms of enhanced oil recovery.

Over 80% of CCS projects in the U.S. have shut down prematurely or never operated. Of those that remain, none have met their promised reductions, and the vast majority have net positive carbon emissions. And 80% of those projects that make it to operation are used for enhanced oil recovery. When CCS is used for enhanced oil recovery, it emits about four times more carbon than it captures. That also means that less than 4% of proposed CCS projects in the nation even potentially reduce net emissions, which equates with a failure rate of at least 96%. Mechanical CCS technology is a climate dead end on the path to decarbonizing California's economy and building community health, resilience, and safety. It was designed to perpetuate the fossil fuel industry, not to stop climate change or protect public health, and it will continue to harm communities living on the frontlines of pollution. CCS will increase health harms to our communities at every stage of capture, transport, utilization, and storage of CO2, compounding

the existing health harms to low-income communities and communities of color, where oil infrastructure is currently placed.

V. Agriculture Must Play a Significant and Mandatory Role in the Scoping Plan.

The Draft Scoping Plan should mandate reductions at agricultural sources. Agricultural sources account for 8 percent of total statewide greenhouse gas emissions.[61] And the dairy sector – primarily the industrial dairy operations in the San Joaquin Valley that confine thousands of cows without pasture access and liquefy manure – emits 44 percent of California's total methane emissions.[62] The intentional management practice involving manure liquefication at these dairy operations account for the largest single methane-generating activity in California and represent a quarter of the state's methane impact on our climate.[63] Given the significance of agricultural emissions and the dairy sector's emissions specifically, the Scoping Plan should mandate meaningful and direct emissions reductions from these sources without allowing the reductions to serve as offsets or credits within the state's pollution trading schemes.

A. Climate Smart Agriculture should be Mandatory and not Provide Offsets for Cap and Trade.

The Scoping Plan should reject voluntary "Climate Smart Agriculture" measures for croplands, which could be implemented in a manner that would rely on market-based mechanisms for incentive funds.[64] Climate smart practices, according to the Plan, can improve public health by reducing fertilizer and pesticide use, increase soil health, and protect pollinators, among many benefits for communities and farm workers.[65] But these practices should not generate offsets that industrial sources, including the oil industry, utilize to emit more greenhouse gases and co-pollutants in other California communities and which inflict disparate impacts.[66] The Plan should further reject financing Climate Smart Agriculture with carbon markets because these schemes inherently do not achieve any net reductions. Instead, the reductions from Climate Smart Agriculture measures sold as offsets end up substituting for reductions that industrial sources could have implemented on-site, and this concentrates pollution in communities near those industrial sources. And as discussed above, this is especially true for oil refineries. Simply put, no net benefit to the climate accrues when offsets merely transfer the emissions reduction from an agricultural source to allow an industrial source to emit more. California's climate policy should demand more from agricultural sources *and* the oil industry

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61 2022 Draft Scoping Plan Update at 34.

62 2022 Draft Scoping Plan Update at 181.

63 *Id*.

64 CNRA, Natural and Working Lands Climate Smart Strategy, April 22, 2022 https://resources.ca.gov/Initiatives/Expanding-Nature-Based-Solutions at 20, 107 (last visited June 10, 2022). Discussing funding mechanisms, the Strategy specifically references Cap and Trade offsets as a current source of incentive funding. "California aims to make climate smart land management cost-effective through the implementation of market mechanisms." Strategy at 20.

65 2022 Draft Scoping Plan Update at 207.

66 Section II.C, *supra*. We note again that Cap and Trade sunsets after 2030, so the Plan should carefully acknowledge that this particular offset mechanism cannot provide offset-based financing beyond 2030 and should not allow funding for Climate Smart Agriculture to justify another extension of Cap and Trade.

given our climate crisis and the massive shortfall that the Plan leaves to the Black Box.[67] California can and should do much better than simply moving pollution between two politically powerful sectors of our economy without benefiting our climate or communities.

B. Methane Reductions from Industrial Dairy Operations should be Mandatory and not Provide Offsets or Low Carbon Fuel Standard Credits.

The Scoping Plan should recommend mandatory reductions from industrial dairy operations. These measures would track closely with Alternative 1 which would involve ending anaerobic digester subsidies, ending pollution trading of offsets and Low Carbon Fuel Standard ("LCFS") credits derived from factory farm gas, reduce the state's dairy herd, and manage manure without causing methane emissions in the first instance.[68] The Draft Scoping Plan limits its strategy for dairy methane to the 2030 reduction target required by Senate Bill 1383, with no further recommendations for the sector to contribute *any* reductions towards the 2035 and 2045 goals.[69] Moreover, implementation of SB 1383 to date has relied upon public funds for, and claimed reductions from, the Dairy Digester Research and Development Program for anaerobic digesters, several privately funded digester projects, and assumed statewide dairy herd size shrinkage. CARB then claims a 20 percent reduction by 2030, or approximately half of the SB 1383 "up to 40 percent" manure methane target.[70]

The Scoping Plan should recommend more stringent and mandatory reductions from the dairy sector. For the purposes of achieving the 2030 target, CARB should adopt the regulations authorized by SB 1383 to mandate the maximum 40 percent reductions through direct emissions reduction measures rather than continuing to use public funds in support of a voluntary strategy.[71] The Draft Scoping Plan's failure to recommend *any* additional industrial dairy methane or nitrous oxide measures after 2030 represents another instance of CARB failing to propose reductions for a politically powerful sector absent the Legislature's direction.[72] The

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67 The Scoping Plan asks CDR – the Black Box – to compensate for the lack of meaningful agricultural action. 2022 Draft Scoping Plan Update at 73.

68 The term "factory farm gas" describes the current strategy CARB, the dairy industry, and the oil & gas industry favor which involves anaerobic digesters to capture intentionally created methane from liquefied manure at industrial, full confinement dairy operations. *See* 2022 Draft Scoping Plan Update at 186-187. California has heavily subsidized factory farm gas projects through the Dairy Digester Research & Development Program ("DDRDP") and the opportunity to sell offsets and credits into pollution trading schemes. The factory farm gas is typically combusted for electricity or as a transportation fuel, and is dirty energy and a false climate solution that incentivizes manure generation and exacerbates associated air and groundwater pollution impacts. *See* Petition for Rulemaking to Exclude All Fuels Derived from Biomethane from Dairy and Swine Manure from the Low Carbon Fuel Standard ("LCFS Petition"), available at https://food.publicjustice.net/wp-content/uploads/sites/3/2021/10/Factory-Farm-Gas-Petition-FINAL.pdf; Petition for Reconsideration of the Denial of the Petition for Rulemaking to Exclude All Fuels Derived from Biomethane from Dairy and Swine Manure from the Low Carbon Fuel Standard ("LCFS Petition for Reconsideration"), available at https://www.foodandwaterwatch.org/wp-content/uploads/2022/03/2022-03-28-Petition-for-Reconsideration-TOC-Updated.pdf (last visited June 15, 2022).

69 2022 Draft Scoping Plan Update at 186-187.

70 CARB, Analysis of Progress toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target Final at 9-12, March 28, 2022, available at https://ww2.arb.ca.gov/sites/default/files/2022-03/final-dairy-livestock-SB1383-analysis.pdf (last visited June 15, 2022).

71 *See* Health & Safety Code § 39730.7(b)(1).

72 The PATHWAYS modeling for Alternative 3 (the Preferred Alternative) appears to contain significant modeling errors that are inconsistent with the SB 1383 up to 40 percent by 2030 reduction requirement for manure-based

Plan's failure to propose more stringent measures for California's largest source of methane places greater burdens on other sources to reduce emissions and, for post-2030 activities, greater amounts of needed reductions from the Black Box. In addition, CARB's failure misses the opportunity to benefit San Joaquin Valley communities who bear a significant burden from ozone-forming pollution, fine particulate matter-forming pollution, and groundwater pollution from industrial dairies.

The Scoping Plan should also recommend that CARB amend the LCFS to exclude factory farm gas from the LCFS.[73] In addition to the issues raised in the LCFS Petition and the LCFS Petition for Reconsideration, reliance on factory farm gas in the LCFS represents another instance where the Scoping Plan calls for voluntary reductions in the agricultural sector to allow for continued climate and air pollution from the oil industry. As described above, the oil industry should not benefit from pollution trading schemes enabling their operations that yield no net climate benefit.

Finally, CARB must ensure that the Scoping Plan does not double-count methane reductions from the dairy sector. The Draft Scoping Plan includes the LCFS as part of the reference scenario and part of the Proposed Scenario.[74] The Plan also includes already achieved reductions claimed towards compliance with SB 1383 as part of the reference scenario and recommends to "increase landfill and dairy digester methane capture" as part of SB 1383 compliance in the Proposed Scenario.[75] CARB must carefully ensure that it does not attribute methane reductions from projects receiving DDRFP funding and credited towards SB 1383 reductions and simultaneously allowing those same projects to generate LCFS credits that would count towards the LCFS reduction target.

VI. Conclusion and Recommendations for Scoping Plan Revisions and Action by the Legislature.

CARB should revise the Draft Scoping Plan to correct the issues identified above with respect to Cap and Trade, use of the Black Box, and agricultural and industrial dairy operation measures. In addition, the Legislature must provide CARB the authority and direct the agency to adopt a Scoping Plan and implement regulations to achieve the maximum direct emissions reductions to achieve the 2030 target from all sectors; rescind the outdated maximum feasible and cost-effective greenhouse gas emission reductions standard in Health & Safety Code § 38561; rescind CARB's authority to implement market-based compliance mechanisms; and set mandatory targets for the years 2035, 2040, 2045, and 2050 to ensure sufficient progress with an

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methane and the lack of post-2030 reductions. The modeling states a 2022 inventory for "Agriculture: enteric and manure" of 21.34 MMTCO2e and a 2030 inventory of 10.4566, which represents a 49 percent reduction and exceeds the SB 1383 requirement of 40 percent. Moreover, the modeling spreadsheet also claims reductions in the post-2030 period to achieve 9.3896 MMTCO2e in 2035 and 7.2556 MMTCO2e in 2045 even though the Plan does not propose any post-2030 measures. *See* AB 32 GHG Inventory Sectors Modeling Data Spreadsheet, Non-Energy GHGs Detailed, Alternative 3, available at https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp-PATHWAYS-data-E3.xlsx (last visited June 15, 2022). These data show the modeling is projecting a 66 percent decrease in enteric and manure methane between 2022 and 2045 but the Draft Scoping Plan lacks any measures that would support such a projection. CARB should revisit this modeling and data to correct any errors as well as revisit any aggregate dairy herd shrinkage the modeling assumes which may be accounting for these errors.

73 *See* LCFS Petition and LCFS Petition for Reconsideration.

74 2022 Draft Scoping Plan Update at 56, 62.

75 2022 Draft Scoping Plan Update at 56, 63.

adequate margin of safety without reliance on any Black Box.

Sincerely,

Caroline Farrell
Executive Director