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Cap-and-Trade Workshop
California Air Resources Board
1001 I Street,
Sacramento, CA 95814

Submitted via the Workshop Comment Submittal Form
and by email to ctworkshop@arb.ca.gov

Re: Comments on the CARB Public Workshop: Potential Amendments to the Cap-and-Trade Regulation

The Western States Petroleum Association (WSPA) appreciates the opportunity to comment on the California Air Resources Board's (CARB) Public Workshop: Potential Amendments to the Cap-and-Trade Regulation, hosted on November 16, 2023.¹ WSPA is a non-profit trade association that represents companies that import and export, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California and four other western states, and has been an active participant in air quality planning issues for over 30 years.

WSPA supports CARB's objective to adopt a 2030 reduction target for the Cap-and-Trade program that can maintain a steady and stable carbon market in California. Market-based approaches like the Cap-and-Trade program will help California make significant progress towards its emissions reduction goals while ensuring that these reductions are cost-effective. However, as WSPA has noted in comment letters for previous workshops, CARB's proposed updates to the Cap-and-Trade program must be consistent with rulemaking requirements under Assembly Bill (AB) 32, should integrate carbon-negative technologies, and should be aligned with other legislative programs seeking to mitigate consumer burdens related to petroleum and alternative transportation fuels.

AB 32, the California Global Warming Solutions Act of 2006, sets ambitious greenhouse gas (GHG) emission reduction goals that will continue to position the State as a global leader in green technologies. In carrying out these goals, AB 32 directs CARB to adopt regulations to achieve the maximum technologically feasible GHG emission reductions, but places key limits on CARB's broad authority to regulate emissions, requiring CARB to both minimize the leakage potential of the actions taken and ensure that the emissions reductions are technologically feasible *and* cost-effective.² In amending the Cap-and-Trade program, CARB is statutorily bound to carefully consider these factors. CARB's analysis to date has failed to appropriately quantify and assess potential consumer impacts or leakage risks under various proposed update scenarios.

CARB has also not taken sufficient action to integrate carbon-negative technologies into the Cap-and-Trade program framework. WSPA has repeatedly emphasized that CARB must incorporate mechanisms within the Cap-and-Trade program, including the supporting Mandatory Reporting Regulation (MRR), to support the successful development and deployment of carbon dioxide removal (CDR) technology, including carbon capture, utilization, and storage (CCUS). As CARB

¹ CARB. California Public Workshop: Potential Amendments to the Cap-and-Trade Regulation. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-11/nc-combinedSlides_Nov162023.pdf. Accessed: November 2023.

² AB 32. Available at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32. Accessed: October 2023.

itself has recognized, these technologies are necessary to achieving the State's decarbonization objectives. In the 2022 Scoping Plan for Achieving Carbon Neutrality, CARB found that it will not be possible to meet the 2045 carbon neutrality target without the deployment at scale of CDR and CCUS.³ The 2022 Scoping Plan Update set targets for 20 million metric tons of carbon dioxide equivalents (MMT_{CO₂e}) removal and capture by 2030 and 100 MMT_{CO₂e} by 2045. However, these targets are currently not feasible due to cost and regulatory barriers that delay even pilot projects. To address these barriers, CARB must incentivize research and investment to support deployment of CCUS and CDR technologies at the scales and expedited timelines required to meet the State's climate goals. Incorporating such mechanisms in the Cap-and-Trade program will make significant progress towards easing existing burdens and increase access to these critical technologies.

CARB has also failed to adequately assess how the proposed Cap-and-Trade program amendments align with other legislative programs seeking to minimize consumer burdens associated with transportation fuels. Senate Bill (SB) X1-2 (2023) directs State agencies to evaluate measures to ensure that petroleum and alternative transportation fuels are adequate, affordable, reliable, and equitable. CARB must therefore consider impacts to gasoline costs in updating the Cap-and-Trade Regulation, consistent with this legislative mandate.

Existing market challenges have already placed significant burdens on transportation fuels; the natural gas sector recently experienced supply constraints during periods of strong demand, which made it difficult for suppliers to deliver an adequate supply of affordable fuels and increased costs for California consumers. In addition, ongoing regulatory programs have exacerbated existing transportation fuel pressures by significantly increasing costs. According to the California Energy Commission, the existing Cap-and-Trade Regulation and the Low Carbon Fuels Standard (LCFS) together add approximately 39 cents per gallon to the cost of gasoline.⁴

Given these already-significant burdens, CARB's proposed amendments to the Cap-and-Trade program are likely to have an outsized cumulative impact on transportation fuel supply and costs. In particular, WSPA is concerned that the proposed amendments to the Regulation could exacerbate existing impacts by further compromising the supply reliability of critical transportation fuels, leading to increased energy costs and possibly further burdening California drivers. In enacting SB X1-2, the California legislature recognized the importance of ongoing supply constraints for transportation fuels, leading energy affordability to be a pressing priority for many Californians. Consistent with this clear legislative priority, CARB must ensure that its proposed Cap-and-Trade Regulation amendments do not result in substantial cost increases for California consumers.

In response to the November 16, 2023 workshop, WSPA strongly encourages CARB to increase the transparency of its modeling approach in order to solicit meaningful public feedback; incorporate impacts of CDR technologies, including CCUS, into the Cap-and-Trade modeling process; expand the Allowance Price Containment Reserve (APCR) to ensure carbon market

³ CARB. 2022 Scoping Plan for Achieving Carbon Neutrality. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed December 2023.

⁴ CEC. 2023. California Oil Refinery Cost Disclosure Act Monthly Report: Aggregated Data Reported. July. Available at: <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/california-oil-refinery-cost-disclosure>. Accessed: December 2023.

stability; and seek to expand cost-containment mechanisms, such as increasing the holding limit for covered entities.

Our detailed comments are provided below:

1. CARB must make the modeling inputs and assumptions used in the UC Davis study publicly available so that stakeholders can provide meaningful comment.

CARB contracted with the University of California (UC) Davis to provide initial estimates for allowance prices under different allowance budget scenarios. CARB provided an overview of initial results, but failed to explain key underlying inputs or assumptions that form the basis of these projections, even though CARB acknowledged that “every model has different sources of uncertainty, structural differences, and some different inputs.” CARB is relying on the UC Davis modeling results to inform Cap-and-Trade targets, price containment mechanisms, and other program specifications, and it is therefore critical that stakeholders have the ability to evaluate the modeling inputs to provide recommendations on how the Cap-and-Trade program features are being captured. Inadequate data prevents the public from meaningfully engaging in the regulatory development process at a stage where comments are better positioned to influence planning outcomes.

In particular, WSPA lacks the following key information needed to evaluate the allowance budget scenarios projected by the UC Davis modeling:

- What complementary measures are included in the model and what are the assumed emission reductions for each measure?
- How are the emission projections of complementary measures aligned with the 2022 Scoping Plan scenarios, as they are non-price responsive in the UC Davis study?
- What assumptions are built into the presented price responses and elasticities of demand of fuels in response to the changes in the price of carbon?
- Does the modeling consider potential leakage of emissions in response to price-driven allowance market changes or is the allowance market assumed to be completely elastic?

These questions are critical to WSPA’s ability to provide meaningful input on the proposed regulatory updates, as explained in more detail below:

First, WSPA cannot evaluate baseline emission reductions under various proposed Cap-and-Trade program update scenarios without information on how the implementation of individual complementary programs included in the 2022 Scoping Plan Update influence the modeling outcomes. Baseline emissions reductions are calculated using estimated reductions from these complementary programs. CARB has provided information on how the *overall* emissions reductions from these programs as a whole may influence modeling outcomes, but has failed to provide a breakdown of how varying levels of implementation for *each program* may impact total reductions achieved. Without access to information breaking down program-specific emissions reductions, WSPA cannot evaluate how different levels of implementation for each program could influence the modeled projections or the ability to meet climate targets with the Cap-and-Trade program.

Second, stakeholders cannot meaningfully evaluate the limitations in the modeling unless CARB and UC Davis provide information about the underlying data and assumptions used. In particular, WSPA is concerned about the model’s apparent presumption of relatively inelastic

transportation energy demand, which may significantly underestimate increased carbon costs, and the burden they would place on the State's economy.

Given that Cap-and-Trade is a market-based program that, by design, is intended to drive emission reductions through increased costs, it is important that the model fully consider the impact of those cost changes on consumer and industry demand. These impacts would be expected to drive the risk of leakage. If the price of allowances rises too rapidly or allowances become unavailable to covered entities, in-State businesses may become pressured to either shut down or relocate their facilities outside of the State, significantly increasing emissions leakage. CARB has a statutory obligation under AB 32 to minimize the leakage resulting from its programs. This obligation is particularly important in the context of the Cap-and-Trade program, which covers a wide range of industry and a significant majority of the State's GHG emissions and therefore runs a high risk of leakage should the mechanism run astray.

2. CARB should adjust its modeling to include reductions from CDR technologies, including CCUS.

CARB modeled various emission reduction scenarios based on GHG reduction targets in the Scoping Plan. These reduction targets almost uniformly require broad deployment of CDR technologies, including CCUS. While under Alternative 1, which is based on the 40% GHG reduction target for 2030, there is a reasonable likelihood that the necessary net emission reductions will be accomplished through the Cap-and-Trade program and complementary programs without CDR, the remaining scenarios project cumulative net emissions greater than what can be abated through these programs in over 50% of the model pulls. Nearly every alternative CARB is considering therefore depends on CDR technologies; however, CARB does not account for these technologies in its modeling.

The 2022 Scoping Plan Update set targets for 20 MMTCO₂e removal and capture by 2030 and 100 MMTCO₂e by 2045. If even a portion of this capacity is deployed on this schedule, the cumulative emission reductions would significantly shift the emissions inventory from what was projected under the modeling scenarios. Without accounting for CDR technologies, CARB's modeling results cannot project reasonable future reduction scenarios.

These scenarios also highlight the need for CARB to incentivize research, provide investments, and remove barriers such as permitting challenges for CDR technologies, including CCUS, to be deployed at the necessary scale. Otherwise, these reduction scenarios will not be feasible.

CARB must make efforts to develop parameters for CDR technologies, including CCUS, so that they can be included in future modeling efforts. As part of these efforts, CARB should evaluate a reasonable cost range for CDR technologies, including CCUS. The cost of these technologies is dependent on both the source of abatement and the type of technologies deployed, so would be better expressed as a range rather than a fixed value. While CARB indicated during the workshop that CCS is expected to cost \$60 per ton of carbon removed,⁵

⁵ CARB. Joint Cap-and-Trade Program Workshop. CARB staff stated that CCS is expected to cost about \$60 per ton of carbon during the public comment period of the Joint Cap-and-Trade Program Workshop on November 16, 2023.

CARB has not provided a source for this claim, and this value fails to account for the range of factors influencing costs.

3. CARB should evaluate an additional scenario (e.g., an Alternative 3c) based on expanding the APCR.

California Government Code § 11346.2(b)(4)(A) requires CARB to consider a reasonable range of alternatives in rulemaking, including “alternatives that are proposed as less burdensome and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the authorizing statute or other law being implemented or made specific by the proposed regulation.” AB 32 also requires CARB to ensure that the Cap-and-Trade program updates are cost-effective, technologically feasible, and will minimize leakage potential.

The current scenarios proposed by CARB are not cost-effective because there is an inherent mismatch between the pace of allocation reductions and the time needed to develop and deploy emission reduction technologies. Given the multi-year and high-capital investments necessary to implement projects such as CDR/CCUS, there will be a multi-year lag between the change in allowance prices and the time required to achieve actual emission reductions. Nearly every modeled scenario will therefore likely result in the price of allocations being driven to the price ceiling throughout a majority of the regulatory timeframe.

While allowance prices are at their maximum, many covered entities may be required to achieve emission reductions through an immediate reduction in production. Reduced in-State production creates a significant risk of leakage, where operators will shift production outside of California in order to minimize costs.

As noted in our previous comment letter dated August 17, 2023,⁶ WSPA recommends that CARB test a scenario that would move the proposed allowance reductions into an Allowance Price Containment Reserve (APCR) rather than simply removing them. This approach could still preserve the level of emissions reductions achieved through allowance removal but would provide a cost-containment mechanism tailored to longer-term investments. The APCR mechanism has proven effective and has been reviewed and supported by the Board in previous program iterations. Moving the allowances into APCR would help ensure that there is a stable carbon market pricing mechanism that will allow industries the time to adapt, innovate, and transition toward sustainable practices in the long-term, consistent with CARB’s rulemaking obligations.

4. CARB should consider revising the holding limit mechanisms within the Cap-and-Trade program such that covered entities can practically comply with the tighter proposed targets.

Under the current Cap-and-Trade program, the maximum number of allowances that entities are allowed to carry over is established by the holding limit, which is scaled to the annual allowance budget. Under the proposed Cap-and-Trade amendments, CARB plans to rapidly

⁶ WSPA. 2023. WSPA Comments on 7-27-2023 Cap-and-Trade Workshop. Available at: https://ww2.arb.ca.gov/system/files/webform/public_comments/5326/WSPA%20Cap-and-Trade%20July%202023%20Workshop%20Comments%208-17-2023.pdf. Accessed: December 2023.

decline the annual allowance budget to meet the 40%, 48%, or 55% reduction targets by 2030 and the 85% reduction target by 2045.⁷ Doing so would similarly reduce the holding limits.

WSPA is concerned that the current formula of the holding limits would undermine covered entities' abilities to achieve cost-effective emission reductions in-line with the targets that would be imposed. The holding limit is one of the critical cost-containment mechanisms within the program that encourages earlier emission reductions so that allowances can be banked in anticipation of year-over-year increases in allowance prices. According to the UC Davis modeling as presented to the stakeholders, the allowance prices are likely to surge to the price ceiling from 2030 through 2040 under a majority of the modeled scenarios.⁸ In light of this, CARB should be seeking to expand cost-containment mechanisms, which would require a revision to increase the holding limit for covered entities.

Covered entities and voluntarily associated entities (VAEs) serve different roles under the Cap-and-Trade program. Covered entities have a legal obligation to (collectively) reduce emissions and secure allowances to cover emissions. VAEs have been permitted to participate in the Cap-and-Trade allowance market by "facilitate[ing] the buying and selling of allowances between emitters and counterparties."⁹ UC Davis's modeling projects that carbon costs will continue to increase, making market liquidity increasingly important to the program. Given these very different market roles, WSPA recommends that CARB continue to monitor the need to adjust the holding limit requirements between covered entities and VAEs such that the mechanisms for these two groups facilitate cost-containment while maintaining market liquidity. One valid consideration would be to increase compliance entities holding limits. Moreover, CARB should avoid modifying banking rules in any other manner.

5. CARB should retain the offsets provisions under the Cap-and-Trade program and increase the limits to 6% in 2026 as directed by AB 398. This will be an important cost containment mechanism when the program cap becomes tighter.

The Compliance Offset Program¹⁰ is another important cost-containment mechanism that exists under the Cap-and-Trade program that will be increasingly important for maintaining the efficacy and cost-effectiveness of the program. AB 398 provides the current legislative directive for offsets, establishing an offset credit limit at 4% of a covered entity's compliance obligation from January 1, 2021, to December 31, 2025, which is to be increased to 6% beginning January 1, 2026.¹¹ WSPA encourages CARB to retain the scheduled increase in the offset limit and to consider expanding it in the post-2030 period.

⁷ CARB. 2023. Joint Cap-and-Trade Program Workshop. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-11/nc-combinedSlides_Nov162023.pdf. Accessed December 2023.

⁸ Ibid.

¹⁰ CARB. Compliance Offset Program. Available at: <https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program>

¹¹ AB 398; Chapter 135, Statutes of 2017. Available at: https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB398

Stakeholders have expressed concern regarding the expected increase in allowance costs under CARB's proposed scenarios. CARB has similarly recognized the need to bolster cost-containment under the Cap-and-Trade program, an effort which should begin with the preservation and expansion of the Compliance Offset Program.

6. CARB should not adjust allowance availability based on auction settlement price(s).

In Slide 59 of the November 16, 2023, Workshop,¹² CARB staff sought feedback from stakeholders on a potential mechanism that would increase allowance supply if the auction settlement price is high and reduce supply if the auction settlement prices were deemed low. WSPA opposes such a mechanism because it is redundant and risks undermining long-term planning efforts by covered entities. The Cap-and-Trade program already has *three* mechanisms in place to regulate allowance price and supply in response to market demand and price, which are better suited to these planning efforts.

First, the program's existing APCR backstop has proved effective in providing additional allowances when allowance demand and prices are high. Rather than rely on a new, untested mechanism, CARB should instead *expand* the current APCR, as discussed in Comment #3 and previous comment letters.¹³ This approach will provide a more stable carbon market and help reduce operational uncertainties of industries while supporting the State's long-term GHG reduction goals.

Second, the Cap-and-Trade program already includes an unsold allowance mechanism,¹⁴ which provides additional market stability while accounting for longer-term price signals. This mechanism is self-ratcheting, removing allowances that remain unsold at quarterly auctions from the market during periods of low demand, and then slowly reintroducing them in a period of high demand. This provision functions in a similar manner to the new mechanism described by CARB by helping reduce price volatility from changes in allowance demand but ensures that low demand for allowances in one auction does not suppress the long-term carbon price signal. As allowance caps become more stringent over time and allowances allocated to industrial facilities decrease, preserving covered entities' access to unsold allowances when demand is high is critical to the long-term efficacy of the carbon market and the Cap-and-Trade program.

Third, the existing Cap-and-Trade program already adjusts the Auction Reserve Price (i.e., floor price) in response to low demand. Specifically, § 95911(c) of the Cap-and-Trade Regulation specifies that the floor price would increase by 5% plus the inflation rate every

¹² CARB. California Public Workshop: Potential Amendments to the Cap-and-Trade Regulation, Slide 59. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-11/nc-combinedSlides_Nov162023.pdf. Accessed: November 2023.

¹³ WSPA. 2023. WSPA Comments on 7-27-2023 Cap-and-Trade Workshop. Available at: https://ww2.arb.ca.gov/system/files/webform/public_comments/5326/WSPA%20Cap-and-Trade%20July%202023%20Workshop%20Comments%208-17-2023.pdf. Accessed: December 2023.

¹⁴ CARB. 2021 Guidance on Treatment of Unsold Allowances Following an Undersubscribed Auction. Available at: https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/guidance/guidance_unsold_allowances.pdf. Accessed December 2023.

year.¹⁵ CARB's proposed additional adjustment mechanism would arbitrarily reduce auction supply above the regulatory floor prices and would contradict the purpose of this provision. Therefore, WSPA opposes any new allowance supply trigger based on auction settlement price(s). Rather than introducing a new a mechanism, WSPA encourages CARB to update the APCR and manage existing mechanisms in the Cap-and-Trade program to enhance its responsiveness during market demand fluctuation.

Thank you for considering our comments. We would welcome the opportunity to discuss these concerns in more detail. If you have any immediate questions, please feel free to contact me at tderivi@wspa.org. We look forward to working with you on these important issues.

Sincerely,



Tanya DeRivi

¹⁵ CARB. Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms, § 95915(f)(1)(B). Available at: https://ww2.arb.ca.gov/sites/default/files/2021-02/ct_reg_unofficial.pdf. Accessed December 2023.