



**Tanya DeRivi**

Senior Director, California Climate and Fuels

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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](mailto: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: Cap-and-Trade Program Workshop, hosted on May 31, 2024.<sup>1</sup> 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. It is also important to provide entities with regulatory and legal certainty as these proposed amendments impact auction activities in 2025 and beyond. 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 more cost-effective. However, WSPA reiterates, as noted in comment letters for previous workshops, that CARB's proposed updates to the Cap-and-Trade program must be consistent with requirements under Assembly Bill (AB) 32, AB 398, and Senate Bill (SB) 32; should integrate carbon-negative technologies; and should limit cost impacts consistent with other legislative programs seeking to mitigate consumer burdens related to petroleum and alternative transportation fuels.

CARB's authority to adopt and implement the Cap-and-Trade program is governed by AB 32, SB 32, and AB 398. 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 minimize the leakage potential of the actions taken, ensure that the emissions reductions are technologically feasible *and* cost-effective, and ensure that any reductions achieved are real, permanent, quantifiable, verifiable, and enforceable.<sup>2</sup> SB 32, the California Global Warming Solutions Act of 2016, builds on and expands the requirements in AB 32, but reiterates that reduction measures must be technologically feasible and cost-effective.<sup>3</sup> AB 398 (2017) outlines specific requirements for the Cap-and-Trade program through 2030 intended to limit the program's cost impacts for consumers and industry, including a price ceiling, price containment points, and industry assistance factors.<sup>4</sup> In particular, in setting a price ceiling, CARB must

<sup>1</sup> CARB. Cap-and-Trade Program Workshop. 2024. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-05/nc\\_CapTradeWorkshop\\_May3124.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-05/nc_CapTradeWorkshop_May3124.pdf). Accessed June 2024.

<sup>2</sup> AB 32. Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=200520060AB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32). Accessed: June 2024. See Attachment A.

<sup>3</sup> *Ibid.*

<sup>4</sup> California Legislative Information. Assembly Bill No. 398. Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB398](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB398). Accessed June 2024. See Attachment A.

consider any adverse impacts on businesses, 2020 tier prices of the allowance price containment reserve, leakage potential, the auction reserve price, and the cost per metric ton of greenhouse gas emissions reductions, among other factors. Therefore, in amending the Cap-and-Trade program, CARB is statutorily bound to carefully consider these factors and to account for these legislative priorities. CARB's analysis to date has failed to appropriately quantify and assess potential consumer impacts or leakage risks under various proposed update scenarios, in violation of CARB's statutory mandate.

CARB has also not taken sufficient action to integrate carbon-negative technologies into the Cap-and-Trade program. WSPA has repeatedly emphasized that CARB must incorporate mechanisms within the Cap-and-Trade program to support the successful development and deployment of carbon dioxide removal (CDR) technology, including carbon capture, utilization, and storage (CCUS). As CARB itself has recognized, these technologies are necessary to achieve 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 deploying CDR and CCUS at scale.<sup>5</sup> Indeed, the 2022 Scoping Plan Update set targets for 20 million metric tons of carbon dioxide equivalents (MMT<sub>CO<sub>2</sub>e</sub>) removal and capture by 2030 and 100 MMT<sub>CO<sub>2</sub>e</sub> by 2045. However, these targets are currently infeasible 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. One potential pathway would be to include CCUS and CDR technologies in the Mandatory GHG Reporting Regulation (MRR) program, which would allow entities to reduce their compliance obligations or generate tradable credits under the Cap-and-Trade program. By doing so, CARB would incentivize long-term investments in these critical technologies while facilitating substantial future emission reductions, consistent with statewide goals. Without incentives, companies may be reluctant to incur the high up-front costs required to develop these technologies. Incorporating such mechanisms into the Cap-and-Trade program will ease existing burdens and increase access to these critical technologies.

CARB has also failed to address potential conflicts between the proposed Cap-and-Trade amendments and other legislative programs seeking to minimize consumer burdens associated with transportation fuels. Senate Bill X1-2 (2023) directs State agencies to evaluate measures to ensure that petroleum and alternative transportation fuels are adequate, affordable, reliable, and equitable. However, according to the California Energy Commission, the existing Cap-and-Trade Regulation and the Low Carbon Fuel Standard (LCFS) together add approximately 42-43 cents per gallon to the cost of gasoline.<sup>6</sup> As currently proposed, CARB's amendments to the Cap-and-Trade program are likely to increase these already-significant burdens, and potentially conflict with SB X1-2. 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. CARB must consider impacts to gasoline costs in updating the Cap-and-Trade Regulation and seek to minimize costs, consistent with SB X1-2's legislative mandate. 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.

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<sup>5</sup> CARB. 2022 Scoping Plan for Achieving Carbon Neutrality. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed June 2024.

<sup>6</sup> CEC. 2024. California Oil Refinery Cost Disclosure Act Monthly Report: Aggregated Data Reported. April. Available at: <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/california-oil-refinery-cost-disclosure>. Accessed: June 2024.

In response to the May 31, 2024, workshop, WSPA offers the following comments:

**1. CARB must provide additional information on its proposed approach to allocations for crude oil extraction, and cannot finalize a new single benchmark without providing additional opportunity for public comment.**

CARB is proposing to apply a “one-product, one-benchmark” approach to industrial allocation that would unify the benchmarks for crude oil extraction using thermal production and non-thermal production. CARB explained at its May 31 workshop that this approach is “technology-agnostic” and could include newly calculated single benchmarks.<sup>7</sup> While CARB suggested that these principles have underlaid output-based industrial allocation “since program inception,” CARB’s “one-product, one-benchmark” approach is *not* part of the current Cap-and-Trade Regulation, and would require significant public input and development before it could be incorporated into the Cap-and-Trade program. CARB has not provided sufficient information for the public to meaningfully engage with any new single benchmarks developed under this approach. Without information on proposed calculation methods and data sources, CARB cannot meaningfully solicit public feedback in accordance with its statutory requirements.<sup>8</sup> While WSPA supports CARB’s proposal to delay implementation of a “one-product, one-benchmark” for crude until at least vintage 2031, this delayed implementation cannot cure a deficient public review period where stakeholders have not had access to information necessary to understand and evaluate the method’s validity and impacts.

Based on the limited information provided to date, WSPA offers the following initial suggestions to guide CARB’s proposed development of new single benchmarks for crude oil extraction in accordance with a “one-product, one-benchmark” approach:

*First*, CARB must ensure that industries can account for GHG reduction benefits from carbon dioxide removal technology, including CCUS, in accordance with SB 905 (2022). In developing benchmarks, CARB must recognize that delays in CCUS and CDR programs have effectively limited the industry’s ability to decarbonize and comply with the more stringent targets under the proposed Cap-and-Trade Regulation amendments. CARB’s progress in developing a CCUS and CDR strategy in accordance with SB 905 has already been delayed. These technologies are expected to account for 40 MMTCO<sub>2e</sub> of targeted emission reductions by 2030; however, without a framework to achieve the reductions, these reductions will likely be delayed, which will significantly constrain near-term reductions.

*Second*, CARB’s proposed “technology agnostic” methodology may be flawed. While WSPA in general supports technology-neutral approaches, in this instance, the methodology neglects technology differences needed for certain processes under a large product category. Before proceeding with this methodology, CARB must, at minimum, consider the specific industrial sectors affected by these proposed benchmark changes and ensure that any changes are equitably applied across all industrial sectors.

The crude oil industrial sector is likely to be particularly harmed by this flawed methodology. CARB claims that “[c]rude oil extraction is not clearly bimodal in practice or in emissions intensity.”<sup>9</sup> However, there are significant distinctions between different types of crude and

<sup>7</sup> CARB. Cap-and-Trade Program Workshop. Slide 32. 2024. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-05/nc\\_CapTradeWorkshop\\_May3124.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-05/nc_CapTradeWorkshop_May3124.pdf). Accessed June 2024.

<sup>8</sup> CA Health & Safety Code § 38561(g). See Attachment A.

<sup>9</sup> CARB. Cap-and-Trade Program Workshop. Slide 31. 2024. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-05/nc\\_CapTradeWorkshop\\_May3124.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-05/nc_CapTradeWorkshop_May3124.pdf). Accessed June 2024.

crude production processes, and a simple aggregation of all types of oil extraction processes into a single benchmark could potentially harm in-state fuel supplies:<sup>10</sup>

- California is the only State to maintain data on the carbon intensity of crude production. By contrast, estimates for out-of-state crude production are not reliable. Carbon intensity calculations for crude imported from many other countries are similarly unreliable due to inaccurate data on the range of production techniques used, the lack of confidence in the accuracy of data reported for specific production techniques, and out-of-date emission factors for production and transportation techniques. As a result, out-of-state data may significantly *underestimate* carbon intensity, putting California crude production at a disadvantage under a single benchmark because of these untrustworthy data and modeling assumptions. If CARB has data supporting the carbon intensity calculations for out-of-state crude production, CARB should release said data to stakeholders sooner than the 45-day package, in a clean and easily digestible format, such that stakeholders can properly review and provide meaningful comments prior to the finalization of the regulatory package.
- A single benchmark would neglect the distinctions between different types of crude oil and crude production processes and deemphasize thermal enhanced recovery techniques. CARB's approach would discourage in-state production, raising concerns about the potential for emissions leakage to out-of-state entities where emissions cannot be accurately measured. Under AB 32, CARB has an obligation to minimize leakage resulting from its regulatory activities.<sup>11</sup> Therefore, CARB should conduct a leakage analysis under this proposed update to understand its potential leakage risks, and also account for these leakage impacts in conducting its California Environmental Quality Act analysis.<sup>12</sup>

## **2. CARB must provide additional information on its proposed approach to allocations for transportation fuel production using a “liquid hydrocarbon fuel” framework.**

Under the current Cap-and-Trade program, petroleum refineries receive allocation for the activity of “petroleum refining” using complexity weighted barrel (CWB) as the output metric. CARB is proposing to replace the current CWB metric with a new “liquid hydrocarbon fuel” framework, including developing a liquid hydrocarbon fuel benchmark which facilities that process 100% petroleum feedstocks, co-process renewable and petroleum feedstocks, and process 100% renewable feedstocks would utilize for direct allocation of Cap-and-Trade allowances to these entities. WSPA supports the need to ensure that industries with leakage risk are provided cost protection through the distribution of allowances as AB 32 identified. Additionally, WSPA recognizes the need to develop additional benchmarks for industrial processes that are new to California – like renewable fuel production – are also afforded cost protection through the distribution of allowances. These needs are critically important to ensure California’s decarbonization efforts are done in a cost-effective manner.

The information CARB shared during the May 31 workshop is limited and highly conceptual; without information on proposed calculation methods and data sources, CARB cannot meaningfully solicit public feedback in accordance with its statutory requirements.<sup>13</sup> Before developing a liquid hydrocarbon fuel framework further, WSPA recommends that CARB

<sup>10</sup> 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](https://ww2.arb.ca.gov/system/files/webform/public_comments/5326/WSPA%20Cap-and-Trade%20July%202023%20Workshop%20Comments%208-17-2023.pdf). Accessed: June 2024. See Attachment A.

<sup>11</sup> CA Health & Safety Code § 38562(b)(8). See Attachment A.

<sup>12</sup> California Code of Regulations Title 17, § 60004.2. Environmental Impact Analysis. Available at: <https://www.law.cornell.edu/regulations/california/17-CCR-60004.2>. Accessed: June 2024. See Attachment A.

<sup>13</sup> CA Health & Safety Code § 38561(g). See Attachment A.

provide stakeholders with additional details, such as illustrative examples and calculations to show how this new framework will operate both on a per-entity basis and holistically within the transportation fuels industry. More clarity on the specifics of the new “liquid hydrocarbon fuel” framework, and its underlying calculation methods, will enable industries to better evaluate potential impacts.

Based on the limited information CARB provided, WSPA provides the following initial comments on CARB’s proposed “liquid hydrocarbon fuel” framework:

- WSPA is concerned that CARB’s liquid hydrocarbon fuel framework could create complex and costly impacts for fuel production facilities. There are wide differences in the production of liquid hydrocarbon fuels that include a variety of feedstocks (e.g., light/heavy crudes, vegetable oils, waste oils and fats), different processing configurations (i.e., stand-alone, co-processing), different site configurations, and varying on-site and off-site energy requirements. Petroleum refining, standalone renewable fuel production, and co-processing include different process steps and have distinct energy requirements and GHG intensities.
- CARB must ensure that a single liquid hydrocarbon fuel benchmark provides a similar level of allowances to petroleum refining as if petroleum refineries were still to utilize the CWB. Additionally, CARB must ensure new production processes such as renewable fuels production are provided a similar level of allowances under a single liquid hydrocarbon fuel benchmark than if separate benchmarks for renewable fuel production and co-processing were developed.
- CARB must provide further information on how this new framework will operate both on a per-entity basis and holistically within the transportation fuel industry. The “liquid hydrocarbon fuel” framework needs to include all energy-intensive products produced by a facility. This is because the existing CWB approach does not utilize product production; rather, it uses inputs to specific petroleum refinery process units that may produce different products like natural gas liquids, gasoline, jet fuel, and diesel in a hydrocracker. For this reason, a comprehensive list of products must be included if CARB is to create a combined benchmark. Importantly, even if a products’ combustion emissions are not obligated under the Cap-and-Trade program (e.g., jet fuel, Sustainable Aviation Fuel, exported fuels, etc.) the product must be counted. An example of a list CARB may seek to utilize is the on-site production volumes identified in the Petroleum Refinery Product Data Report, MRR Section 95113(I)(1).
- Given these, WSPA supports CARB’s proposal that the current CWB metric be retained for petroleum refineries through at least vintage 2030 and possibly beyond. WSPA also recommends that the phase-in of any proposed changes be scheduled at the end of the compliance period to support entities’ compliance strategies and true-ups. Additionally, WSPA supports changes to allocation processes established in or prior to the 2018 Cap-and-Trade Regulation amendments be phased in gradually to allow entities sufficient time to adjust and ensure a smoother transition. This approach will help mitigate potential disruptions and provide a more manageable adaptation period for all stakeholders involved.

**3. CARB should revise its proposed method for reporting fuel ethanol denaturant to accurately account for emissions from transportation fuels and mitigate undue reporting burdens.**

Under the existing Cap-and-Trade program, all ethanol blended in transportation fuels are reported as 100% biogenic ethanol such that all associated CO<sub>2</sub> emissions are exempt under

the Cap-and-Trade program and the MRR. CARB is now proposing a change to this method to report GHG from fuel ethanol as 2.5% fossil denaturant by default.<sup>14</sup> The initial concept for this proposal would include amending the MRR so that the appropriate volume of fossil fuel denaturant from supplied fuel ethanol is counted and removing the exemption for ethanol CO<sub>2</sub> emissions under the Cap-and-Trade program.<sup>15</sup>

While WSPA appreciates CARB's proposal to update the reporting method with a default rate that is consistent with Federal limits, WSPA recommends the following updates:

- CARB's proposed default rate of 2.5% is equivalent to the *maximum allowable* level of denaturants under the Federal limits. This approach would likely *overestimate* the GHG emissions from transportation fuels. WSPA encourages CARB to allow for a supplier to choose a standard 2.5%, or an alternative approach that uses verifiable information to demonstrate the amount of denaturant in the supplier's ethanol.
- Otherwise, CARB's proposed default calculation method will make reporting even more challenging and require a shift in protocol to include out-of-state entities.
- CARB's proposed updates will likely double count emissions. Ethanol denaturants have been included in the Low Carbon Fuel Standard's (LCFS) CA-GREET modeling dating back to at least 2015.<sup>16</sup> The proposed changes to the Cap-and-Trade program would unnecessarily double count and double regulate these emissions.
- CARB must ensure that the proposed changes do not affect the current and future exemption status of CO<sub>2</sub>e emissions from other biogenic fuels from Cap-and-Trade obligations, including renewable gasoline, renewable propane, to name a few, irrespective of the feedstock used for biogenic fuel production. Exempting biogenic fuels from the Cap-and-Trade program and MRR encourages the continued development of low-carbon and carbon-negative technologies and is also consistent with existing State programs seeking to expand carbon reduction potentials in natural and working lands. Biogenic fuels are sufficiently regulated by the California LCFS program, which addresses emissions from the production and use of biogenic fuels in the transportation sector.<sup>17</sup>

#### **4. WSPA reaffirms the need for carbon negative technologies under Cap-and-Trade and MRR to achieve the 2045 target for carbon neutrality under the 2022 Scoping Plan Update.**

As WSPA has pointed out in its previous comment letters,<sup>18,19</sup> CCUS and CDR technologies will be critical to the overall success of the 2022 Scoping Plan Update to achieve carbon neutrality by 2045. Therefore, WSPA recommends that CARB amend the Cap-and-Trade Regulation to include a mechanism for reducing Cap-and Trade compliance obligations based on emissions reductions achieved by CDR technology, including CCUS, and amend the MRR parallelly to include a mechanism for tracking and reporting these emission reductions. Such

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<sup>14</sup> CARB. Cap-and-Trade Program Workshop. Slide 40. 2024. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-05/nc\\_CapTradeWorkshop\\_May3124.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-05/nc_CapTradeWorkshop_May3124.pdf). Accessed June 2024.

<sup>15</sup> *Ibid.*

<sup>16</sup> CARB. CA-GREET 2.0 Supplemental Document and Tables of Changes. Page 44. Available at: [https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/ca-greet/ca-greet2-suppdoc-060415.pdf?\\_ga=2.187462315.2097013215.1718233402-591690338.1695900805](https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/ca-greet/ca-greet2-suppdoc-060415.pdf?_ga=2.187462315.2097013215.1718233402-591690338.1695900805). Accessed June 2024.

<sup>17</sup> WSPA. WSPA Cap-and-Trade October 2023 Workshop Comments 10-26-2023. 2023. Available at: [https://ww2.arb.ca.gov/system/files/webform/public\\_comments/6456/WSPA%20Cap-and-Trade%20October%202023%20Workshop%20Comments%2010-26-2023.pdf](https://ww2.arb.ca.gov/system/files/webform/public_comments/6456/WSPA%20Cap-and-Trade%20October%202023%20Workshop%20Comments%2010-26-2023.pdf). Accessed June 2024. See Attachment A.

<sup>18</sup> *Ibid.*

<sup>19</sup> WSPA. WSPA Cap-and-Trade April Workshop Comment Letter 5-8-2024. Available at: [https://ww2.arb.ca.gov/system/files/webform/public\\_comments/10651/WSPA%20Cap-and-Trade%20April%20Workshop%20Comment%20Letter%205-8-2024.pdf](https://ww2.arb.ca.gov/system/files/webform/public_comments/10651/WSPA%20Cap-and-Trade%20April%20Workshop%20Comment%20Letter%205-8-2024.pdf). Accessed June 2024. See Attachment A.

a mechanism would provide incentive for companies to take on the long-term, costly investments and implementation uncertainty associated with these technologies, while facilitating substantial emissions reductions in future years. CARB has already established a placeholder for such a concept in California Code Regulations title 17 Section 95852(g), and WSPA encourages CARB to finalize this concept.

WSPA also encourages CARB to utilize existing market-based regulatory programs, such as Cap-and-Trade and MRR, to support a robust CDR program, rather than pursue a parallel—and potentially duplicative—rulemaking process, such as that proposed under SB 308 (2023).<sup>20</sup> This new legislation would require CARB to establish a separate CDR market rather than retain flexibility to incorporate CDR rules into the existing Cap-and-Trade framework. The addition of CDR to Cap-and-Trade would provide entities with another tool to achieve the emission reductions necessary to meet the State’s climate goals and further develop Cap-and-Trade as an economy-wide emissions reduction program. Creating an additional market when a successful market currently exists would be duplicative and would create an unnecessary compliance obligation secondary to the existing Cap-and-Trade requirements, further burdening emitting entities.

**5. WSPA supports the proposed provision for exemption of emergency electricity generation during State of Emergency events and requests that CARB clarify that the provision would apply to all energy generators and provide clear guidance for how the exempted emissions should be measured.**

WSPA strongly supports CARB’s proposal to exempt emissions from electricity generation during an emergency. This exemption would only apply when the Governor has declared a State of Emergency and the electric grid requires stable electricity supply to prevent outages. WSPA recommends that CARB broaden its exemption to include all regulated entities under the Cap-and-Trade program with capabilities to provide electricity to the California grid. By limiting the exemption to only those facilities that are *not* covered by the Cap-and-Trade program, CARB would restrict California’s ability to utilize needed available generation resources in an emergency. Electric grid reliability remains a pressing concern as the State moves toward increased electrification under the 2022 Scoping Plan Update, which will result in significant increases in electricity demand. At the same time, an aging grid, limited infrastructure, and inadequate supply will likely threaten energy security for Californians.

The Governor’s Executive Order N-14-22 recognizes the need for grid reliability and energy supply during extreme heat events in California, by temporarily suspending permitting requirements during such emergency conditions. Consistent with this Executive Order, CARB should similarly exempt emergency electric generation from Cap-and-Trade requirements during such periods. CARB should therefore broaden its proposed exemption to align with this executive direction.

As CARB further develops this exemption, it is important that CARB develop a clear accounting methodology for entities to follow during an emergency event that will allow for electricity generators to exempt GHG emissions during the emergency event.

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<sup>20</sup> California Legislature. 2022. Senate Bill 308, Carbon Dioxide Removal Market Development Act. February 2. Available at: [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=202320240SB308](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB308). Accessed: June 2024. See Attachment A.

**6. WSPA supports the administrative changes outlined for Emission-Intensive, Trade-Exposed electricity allocations.**

WSPA agrees with CARB's proposal to transfer responsibility from the California Public Utilities Commission to CARB for providing leakage protection to industrial entities for their electricity-related carbon costs. CARB's administration of that allocation process should also extend to facilities served by publicly owned utilities.

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  
Senior Director, California Climate and Fuels





**ATTACHMENT A**

## Senate Bill No. 32

### CHAPTER 249

An act to add Section 38566 to the Health and Safety Code, relating to greenhouse gases.

[Approved by Governor September 8, 2016. Filed with  
Secretary of State September 8, 2016.]

#### LEGISLATIVE COUNSEL'S DIGEST

SB 32, Pavley. California Global Warming Solutions Act of 2006: emissions limit.

(1) The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions.

This bill would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

(2) This bill would become operative only if AB 197 of the 2015–16 Regular Session is enacted and becomes effective on or before January 1, 2017.

*The people of the State of California do enact as follows:*

SECTION 1. The Legislature finds and declares all of the following:

(a) The California Global Warming Solutions Act of 2006 (Division 25.5 (commencing with Section 38500) of the Health and Safety Code) authorizes the State Air Resources Board to adopt regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions.

(b) The California Global Warming Solutions Act of 2006 (Division 25.5 (commencing with Section 38500) of the Health and Safety Code) requires the State Air Resources Board to reduce statewide emissions of greenhouse gases to at least the 1990 emissions level by 2020 and to maintain and continue reductions thereafter.

(c) Continuing to reduce greenhouse gas emissions is critical for the protection of all areas of the state, but especially for the state's most disadvantaged communities, as those communities are affected first, and, most frequently, by the adverse impacts of climate change, including an

increased frequency of extreme weather events, such as drought, heat, and flooding. The state's most disadvantaged communities also are disproportionately impacted by the deleterious effects of climate change on public health.

(d) The State Air Resources Board shall achieve the state's more stringent greenhouse gas emission reductions in a manner that benefits the state's most disadvantaged communities and is transparent and accountable to the public and the Legislature.

SEC. 2. Section 38566 is added to the Health and Safety Code, to read:

38566. In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.

SEC. 3. This act shall become operative only if Assembly Bill 197 of the 2015–16 Regular Session is enacted and becomes effective on or before January 1, 2017.

## Assembly Bill No. 398

### CHAPTER 135

An act to amend, repeal, and add Sections 38501, 38562, and 38594 of, and to add and repeal Sections 38505.5, 38590.1, 38591.1, 38591.2, 38591.3, 38592.5, and 38592.6 of, the Health and Safety Code, to add Section 4213.05 to, to add Article 3 (commencing with Section 4229) to Chapter 1.5 of Part 2 of Division 4 of, and to repeal Chapter 1.5 (commencing with Section 4210) of Part 2 of Division 4 of, the Public Resources Code, and to amend Section 6377.1 of the Revenue and Taxation Code, relating to public resources, and declaring the urgency thereof, to take effect immediately.

[Approved by Governor July 25, 2017. Filed with  
Secretary of State July 25, 2017.]

#### LEGISLATIVE COUNSEL'S DIGEST

AB 398, Eduardo Garcia. California Global Warming Solutions Act of 2006: market-based compliance mechanisms: fire prevention fees: sales and use tax manufacturing exemption.

(1) The California Global Warming Solutions Act of 2006 establishes the State Air Resources Board as the state agency responsible for monitoring and regulating sources emitting greenhouse gases. The act requires the state board to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to ensure that statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030. The act authorizes the state board to include the use of market-based compliance mechanisms.

The act requires the state board to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions and to update the scoping plan at least once every 5 years.

The act authorizes the state board to adopt a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases, applicable from January 1, 2012, to December 31, 2020, inclusive, as specified.

This bill would require the state board, no later than January 1, 2018, to update the scoping plan, as specified. The bill would require all greenhouse gas rules and regulations adopted by the state board to be consistent with the scoping plan.

This bill would, until January 1, 2031, extend the applicability of a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases to December 31, 2030.

This bill would, until January 1, 2031, require the state board to include specified price ceilings, price containment points, offset credit compliance limits, and industry assistance factors for allowance allocation as part of a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases from January 1, 2021, to December 31, 2030, inclusive. The bill, until January 1, 2031, additionally would require the state board to develop approaches to increase offset projects in the state and to make specified reports to the Legislature as part of that regulation.

This bill would, until January 1, 2031, establish the Compliance Offsets Protocol Task Force, with a specified membership, to provide guidance to the state board in approving new offset protocols for a market-based compliance mechanism for the purposes of increasing offset projects with direct environmental benefits in the state while prioritizing disadvantaged communities, Native American or tribal lands, and rural and agricultural regions.

This bill would, until January 1, 2031, establish the Independent Emissions Market Advisory Committee with a specified membership and would require the advisory committee to at least annually hold a public meeting and report to both the state board and the Joint Legislative Committee on Climate Change Policies on the environmental and economic performance of a specified market-based compliance mechanism and other relevant climate policies.

This bill would, until January 1, 2031, require the California Workforce Development Board, in consultation with the state board, to submit a specified report to the Legislature, no later than January 1, 2019, on the need for increased education, career technical education, job training, and workforce development resources or capacity to help industry, workers, and communities transition to economic and labor-market changes related to specified statewide greenhouse gas emissions reduction goals.

This bill would, until January 1, 2031, require the Legislative Analyst's Office to annually report to the Legislature on the economic impacts and benefits of specified greenhouse gas emissions targets.

(2) Existing law requires all moneys, except for fines and penalties, collected by the state board as part of a market-based compliance mechanism to be deposited in the Greenhouse Gas Reduction Fund and to be available upon appropriation. Existing law continuously appropriates 60% of the annual proceeds of the fund for transit, affordable housing, sustainable communities, and high-speed rail purposes.

This bill would declare the intent of the Legislature that moneys collected pursuant to the market-based compliance mechanism be appropriated in accordance with a specified order of priorities.

(3) Existing law provides that the California Global Warming Solutions Act of 2006 does not limit or expand the existing authority of air pollution control and air quality management districts.

This bill instead would, until January 1, 2031, prohibit an air district from adopting or implementing an emission reduction rule for carbon dioxide

from stationary sources that are also subject to a specified market-based compliance mechanism.

(4) Existing law provides that the state has the primary financial responsibility for preventing and suppressing fires in areas that the State Board of Forestry and Fire Protection has determined are state responsibility areas, as defined. Existing law requires that a fire prevention fee be charged on each habitable structure on a parcel that is within a state responsibility area, to be used for specified fire prevention activities.

This bill, until January 1, 2031, would suspend the fire prevention fee. The bill would declare that it is the intent of the Legislature that moneys derived from the auction or sale of allowances pursuant to the market-based compliance mechanism described under (1) replace the fire prevention fee to continue the funding of the fire prevention activities. The bill would repeal those provisions requiring the payment of the fire prevention fee on January 1, 2031.

(5) Existing law, commencing July 1, 2017, provides that the California Department of Tax and Fee Administration is responsible for the administration of the Sales and Use Tax Law, which was previously administered by the State Board of Equalization.

Existing sales and use tax laws impose taxes on retailers measured by the gross receipts from the sale of tangible personal property sold at retail in this state, or on the storage, use, or other consumption in this state of tangible personal property purchased from a retailer for storage, use, or other consumption in this state, and provide various exemptions from those taxes.

Existing law exempts from those taxes, on and after July 1, 2014, and before July 1, 2022, the gross receipts from the sale of, and the storage, use, or other consumption of, qualified tangible personal property purchased by a qualified person for use primarily in manufacturing, processing, refining, fabricating, or recycling of tangible personal property, as specified; qualified tangible personal property purchased for use by a qualified person to be used primarily in research and development, as provided; qualified tangible personal property purchased for use by a qualified person to be used primarily to maintain, repair, measure, or test any qualified tangible personal property, as provided; and qualified tangible personal property purchased by a contractor purchasing that property for use in the performance of a construction contract for the qualified person, that will use that property as an integral part of specified processes.

This bill would, on and after July 1, 2014, and before July 1, 2030, additionally exempt from those taxes qualified tangible personal property purchased for use by a qualified person to be used primarily in the generation or production, as defined, or storage and distribution, as defined, of electric power or purchased for use by a contractor for the qualified person, as specified. The bill, on and after January 1, 2018, and until July 1, 2030, would also exempt from those taxes special purpose buildings and foundations used for the generation or production or storage and distribution of electric power. The bill, on and after January 1, 2018, and until July 1, 2030, would expand the definition of qualified person to include, among

others, a person primarily engaged in the business of electric power generation.

Under existing law, no later than each March 1 next following a calendar year for which these provisions provide an exemption, the California Department of Tax and Fee Administration is required to provide to the Joint Legislative Budget Committee a report of the total dollar amount of exemptions taken for the immediately preceding calendar year.

This bill would require the department to also provide that exemption report to the Department of Finance. The bill would require the total dollar amount, as reported by the department, with the concurrence of the Department of Finance, to be transferred from the Greenhouse Gas Reduction Fund to the General Fund, as provided.

This bill would also make various nonsubstantive and conforming changes and would repeal this exemption on January 1, 2031.

(6) This bill would declare that it is to take effect immediately as an urgency statute.

*The people of the State of California do enact as follows:*

SECTION 1. Section 38501 of the Health and Safety Code is amended to read:

38501. The Legislature finds and declares all of the following:

(a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

(b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state.

(c) California has long been a national and international leader on energy conservation and environmental stewardship efforts, including the areas of air quality protections, energy efficiency requirements, renewable energy standards, natural resource conservation, and greenhouse gas emission standards for passenger vehicles. The program established by this division will continue this tradition of environmental leadership by placing California at the forefront of national and international efforts to reduce emissions of greenhouse gases.

(d) National and international actions are necessary to fully address the issue of global warming. However, action taken by California to reduce

emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act.

(e) By exercising a global leadership role, California will also position its economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases. More importantly, investing in the development of innovative and pioneering technologies will assist California in achieving statewide greenhouse gas emissions targets established by this division and will provide an opportunity for the state to take a global economic and technological leadership role in reducing emissions of greenhouse gases.

(f) It is the intent of the Legislature that the State Air Resources Board coordinate with state agencies, as well as consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing this division.

(g) It is the intent of the Legislature that the State Air Resources Board consult with the Public Utilities Commission in the development of emissions reduction measures, including limits on emissions of greenhouse gases applied to electricity and natural gas providers regulated by the Public Utilities Commission in order to ensure that electricity and natural gas providers are not required to meet duplicative or inconsistent regulatory requirements.

(h) It is the intent of the Legislature that the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases established pursuant to this division in a manner that minimizes costs and maximizes benefits for California's economy, improves and modernizes California's energy infrastructure and maintains electric system reliability, maximizes additional environmental and economic cobenefits for California, and complements the state's efforts to improve air quality.

(i) It is the intent of the Legislature that the State Air Resources Board extend the market-based compliance mechanism adopted pursuant to subdivision (c) of Section 38562 from January 1, 2021, to December 31, 2030, inclusive, in a manner that effectively reduces greenhouse gas emissions; minimizes any adverse impacts on state consumers, businesses, and the economy; and continues elements of the current program that protect state utility ratepayers.

(j) It is the intent of the Legislature that the Climate Action Team established by the Governor to coordinate the efforts set forth under Executive Order S-3-05 continue its role in coordinating overall climate policy.

(k) This section shall remain in effect only until January 1, 2031, and as of that date is repealed.

SEC. 2. Section 38501 is added to the Health and Safety Code, to read:

38501. (a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the



exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

(b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state.

(c) California has long been a national and international leader on energy conservation and environmental stewardship efforts, including the areas of air quality protections, energy efficiency requirements, renewable energy standards, natural resource conservation, and greenhouse gas emission standards for passenger vehicles. The program established by this division will continue this tradition of environmental leadership by placing California at the forefront of national and international efforts to reduce emissions of greenhouse gases.

(d) National and international actions are necessary to fully address the issue of global warming. However, action taken by California to reduce emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act.

(e) By exercising a global leadership role, California will also position its economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases. More importantly, investing in the development of innovative and pioneering technologies will assist California in achieving the 2020 statewide limit on emissions of greenhouse gases established by this division and will provide an opportunity for the state to take a global economic and technological leadership role in reducing emissions of greenhouse gases.

(f) It is the intent of the Legislature that the State Air Resources Board coordinate with state agencies, as well as consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing this division.

(g) It is the intent of the Legislature that the State Air Resources Board consult with the Public Utilities Commission in the development of emissions reduction measures, including limits on emissions of greenhouse gases applied to electricity and natural gas providers regulated by the Public Utilities Commission in order to ensure that electricity and natural gas providers are not required to meet duplicative or inconsistent regulatory requirements.

(h) It is the intent of the Legislature that the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases established pursuant to this division in a manner that

minimizes costs and maximizes benefits for California’s economy, improves and modernizes California’s energy infrastructure and maintains electric system reliability, maximizes additional environmental and economic cobenefits for California, and complements the state’s efforts to improve air quality.

(i) It is the intent of the Legislature that the Climate Action Team established by the Governor to coordinate the efforts set forth under Executive Order S-3-05 continue its role in coordinating overall climate policy.

(j) This section shall become operative on January 1, 2031.

SEC. 3. Section 38505.5 is added to the Health and Safety Code, to read: 38505.5. (a) “District” has the same meaning as in Section 39025.

(b) This section shall remain in effect only until January 1, 2031, and as of that date is repealed.

SEC. 4. Section 38562 of the Health and Safety Code is amended to read:

38562. (a) On or before January 1, 2011, the state board shall adopt greenhouse gas emissions limits and emissions reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

(b) In adopting regulations pursuant to this section and Part 5 (commencing with Section 38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions.

(2) Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.

(3) Ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions.

(4) Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.

(5) Consider cost-effectiveness of these regulations.

(6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.

(7) Minimize the administrative burden of implementing and complying with these regulations.

(8) Minimize leakage.

(9) Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

(c) (1) Unless otherwise required by context, terms in this subdivision shall have the definitions that apply pursuant to Section 95802 of Title 17 of the California Code of Regulations, as they read on January 1, 2017.

(2) The state board may adopt a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases, applicable from January 1, 2012, to December 31, 2030, inclusive, that the state board determines will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources. In adopting a regulation applicable from January 1, 2021, to December 31, 2030, inclusive, pursuant to this subdivision, the state board shall do all of the following:

(A) (i) Establish a price ceiling. In establishing the price ceiling, the state board shall consider, using the best available science, all of the following:

(I) The need to avoid adverse impacts on resident households, businesses, and the state's economy.

(II) The 2020 tier prices of the allowance price containment reserve.

(III) The full social cost associated with emitting a metric ton of greenhouse gases.

(IV) The auction reserve price.

(V) The potential for environmental and economic leakage.

(VI) The cost per metric ton of greenhouse gas emissions reductions to achieve the statewide emissions targets established in Sections 38550 and 38566.

(ii) To implement the price ceiling, the state board shall develop a mechanism that consists of both of the following:

(I) Allowances remaining in the allowance price containment reserve as of December 31, 2020, shall be utilized solely for the purpose of sale at the price ceiling established by this section.

(II) If the allowances from the allowance price containment reserve are exhausted, the state board shall offer covered entities additional metric tons at the price ceiling if needed for compliance. All moneys generated pursuant to this clause shall be expended by the state board to achieve emissions reductions, on at least a metric ton for metric ton basis, that are real, permanent, quantifiable, verifiable, enforceable by the state board and in addition to any greenhouse gas emission reduction otherwise required by law or regulation and any other greenhouse gas emission reduction that otherwise would occur.

(B) Establish two price containment points at levels below the price ceiling. The state board shall offer to covered entities nontradable allowances for sale at these price containment points. The price containment points shall be established using two-thirds, divided equally, of the allowances in the allowance price containment reserve as of December 31, 2017.

(C) Require that current vintage allowances designated by the state board for auction that remain unsold in the auction holding account for more than 24 months to be transferred to the allowance price containment reserve.

(D) Evaluate and address concerns related to overallocation in the state board's determination of the number of available allowances for years 2021 to 2030, inclusive, as appropriate.

(E) (i) Establish offset credit limits according to the following:

(I) From January 1, 2021, to December 31, 2025, inclusive, a total of 4 percent of a covered entity's compliance obligation may be met by surrendering offset credits of which no more than one-half may be sourced from projects that do not provide direct environmental benefits in state.

(II) From January 1, 2026, to December 31, 2030, inclusive, a total of 6 percent of a covered entity's compliance obligation may be met by surrendering offset credits of which no more than one-half may be sourced from projects that do not provide direct environmental benefits in the state.

(ii) For purposes of this subparagraph, "direct environmental benefits in the state" are the reduction or avoidance of emissions of any air pollutant in the state or the reduction or avoidance of any pollutant that could have an adverse impact on waters of the state.

(F) Develop approaches to increase offset projects in the state considering guidance provided by the Compliance Offsets Protocol Task Force, established pursuant to Section 38591.1.

(G) Set industry assistance factors for allowance allocation commencing in 2021 at the levels applicable in the compliance period of 2015 to 2017, inclusive. The state board shall apply a declining cap adjustment factor to the industry allocation equivalent to the overall statewide emissions declining cap using the methodology from the compliance period of 2015 to 2017, inclusive.

(H) Establish allowance banking rules that discourage speculation, avoid financial windfalls, and consider the impact on complying entities and volatility in the market.

(I) Report to the Legislature, by December 31, 2025, on the progress toward meeting the greenhouse gas emissions reduction targets established pursuant to Sections 38550 and 38566 and the leakage risk posed by the regulation. The state board shall include recommendations to the Legislature on necessary statutory changes to the program to reduce leakage, including the potential for a border carbon adjustment, while maintaining the state's ability to reach its targets.

(J) (i) Report to the Legislature, in consultation with the Independent Emissions Market Advisory Committee, established pursuant to Section 38591.2, if two consecutive auctions exceed the lower of the price containment levels established pursuant to subparagraph (B). The report shall assess the potential for allowance prices to reach the price ceiling for multiple auctions.

(ii) A report submitted to the Legislature pursuant to this section shall be submitted in compliance with Section 9795 of the Government Code.

(K) Report to the relevant fiscal and policy committees of the Legislature, including the Joint Committee on Climate Change Policies, on all of the following:

(i) Updates to the scoping plan prepared pursuant to Section 38561 prior to adopting the update.

(ii) Updates on the implementation of the scoping plan prepared pursuant to Section 38561.

(iii) Updates on the implementation of the market-based compliance mechanism adopted pursuant to this subdivision.

(d) Any regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570) shall ensure all of the following:

(1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.

(2) For regulations pursuant to Part 5 (commencing with Section 38570), the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.

(3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

(e) The state board shall rely upon the best available economic and scientific information and its assessment of existing and projected technological capabilities when adopting the regulations required by this section.

(f) The state board shall consult with the Public Utilities Commission in the development of the regulations as they affect electricity and natural gas providers in order to minimize duplicative or inconsistent regulatory requirements.

(g) The state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.

(h) This section shall remain in effect only until January 1, 2031, and as of that date is repealed, unless a later enacted statute which is enacted before that date, deletes or extends that date.

SEC. 5. Section 38562 is added to the Health and Safety Code, to read:

38562. (a) On or before January 1, 2011, the state board shall adopt greenhouse gas emissions limits and emissions reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

(b) In adopting regulations pursuant to this section and Part 5 (commencing with Section 38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs

and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions.

(2) Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.

(3) Ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions.

(4) Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.

(5) Consider cost-effectiveness of these regulations.

(6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.

(7) Minimize the administrative burden of implementing and complying with these regulations.

(8) Minimize leakage.

(9) Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

(c) In furtherance of achieving the statewide greenhouse gas emissions limit, the state board may adopt a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases, applicable from January 1, 2012, to December 31, 2020, inclusive, that the state board determines will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources.

(d) Any regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570) shall ensure all of the following:

(1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.

(2) For regulations pursuant to Part 5 (commencing with Section 38570), the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.

(3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

(e) The state board shall rely upon the best available economic and scientific information and its assessment of existing and projected technological capabilities when adopting the regulations required by this section.

(f) The state board shall consult with the Public Utilities Commission in the development of the regulations as they affect electricity and natural gas providers in order to minimize duplicative or inconsistent regulatory requirements.

(g) The state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.

(h) This section shall become operative on January 1, 2031.

SEC. 6. Section 38590.1 is added to the Health and Safety Code, to read:

38590.1. (a) It is the intent of the Legislature that moneys collected from the auction or sale of allowances pursuant to a market-based compliance mechanism established pursuant to the California Global Warming Solutions Act of 2006 (Division 25.5 (commencing with Section 38500)) shall be appropriated to include, but need not be limited to, the following priorities at the time an expenditure plan is adopted:

- (1) Air toxic and criteria air pollutants from stationary and mobile sources.
- (2) Low- and zero-carbon transportation alternatives.
- (3) Sustainable agricultural practices that promote the transitions to clean technology, water efficiency, and improved air quality.
- (4) Healthy forests and urban greening.
- (5) Short-lived climate pollutants.
- (6) Climate adaptation and resiliency.
- (7) Climate and clean energy research.

(b) This section shall remain in effect only until January 1, 2031, and as of that date is repealed unless a later enacted statute that is enacted on or before that date deletes or extends that date.

SEC. 7. Section 38591.1 is added to the Health and Safety Code, to read:

38591.1. (a) The Compliance Offsets Protocol Task Force is hereby established to provide guidance to the state board in approving new offset protocols for a market-based compliance mechanism for the purposes of increasing offset projects with direct environmental benefits in the state while prioritizing disadvantaged communities, Native American or tribal lands, and rural and agricultural regions. The state board shall appoint members to the Compliance Offsets Protocol Task Force to include a representative from each stakeholder group, including, but not limited to, all of the following:

- (1) Scientists.
- (2) Air pollution control and air quality management districts.
- (3) Carbon market experts.
- (4) Tribal representatives.
- (5) Environmental Justice advocates.
- (6) Labor and Workforce representatives.
- (7) Forestry experts.
- (8) Agriculture experts.
- (9) Environmental advocates.
- (10) Conservation advocates.
- (11) Dairy experts.

(b) This section shall remain in effect only until January 1, 2031, and as of that date is repealed.

SEC. 8. Section 38591.2 is added to the Health and Safety Code, to read:

38591.2. (a) The Independent Emissions Market Advisory Committee is hereby established within the California Environmental Protection Agency.

(b) (1) (A) The committee shall be composed of at least five experts on emissions trading market design appointed according to the following:

- (i) Three members appointed by the Governor.
- (ii) One member appointed by the Senate Committee on Rules.
- (iii) One member appointed by the Speaker of the Assembly.

(B) The committee shall include a representative from the Legislative Analyst's Office.

(2) The committee members shall meet all of the following requirements:

(A) Have academic, nonprofit, and other relevant backgrounds.

(B) Lack financial conflicts of interest with entities subject to the regulation adopted by the state board pursuant to subdivision (c) of Section 38562.

(c) The committee, at least annually, shall hold a public meeting and report to both the state board and the Joint Legislative Committee on Climate Change Policies on the environmental and economic performance of the regulation adopted by the state board pursuant to subdivision (c) of Section 38562 and other relevant climate policies.

(d) This section shall remain in effect only until January 1, 2031, and as of that date is repealed.

SEC. 9. Section 38591.3 is added to the Health and Safety Code, to read:

38591.3. (a) No later than January 1, 2019, the California Workforce Development Board, in consultation with the state board, shall report to the Legislature on the need for increased education, career technical education, job training, and workforce development resources or capacity to help industry, workers, and communities transition to economic and labor-market changes related to statewide greenhouse gas emissions reduction goals, pursuant to Sections 38550 and 38566, and the scoping plan, adopted pursuant to Section 38561. The California Workforce Development Board shall ensure that the report aligns, as appropriate, with California's Unified Strategic Workforce Development Plan, developed by the California Workforce Development Board. The California Workforce Development Board and the state board shall work in consultation with all of the following:

- (1) State Department of Education.
- (2) California Community Colleges.
- (3) Trustees of the California State University.
- (4) Regents of the University of California.
- (5) Governor's Office of Business and Economic Development.
- (6) Interested stakeholders.

(b) The report to the Legislature shall address all of the following:

(1) Creating and retaining jobs and stimulating economic activity in the state.

(2) Imbedding workforce training and employment services in infrastructure investments so that services more directly connect to the jobs created.

(3) The use of community benefits agreements, community workforce agreements, and project labor agreements that connect workforce services and job training directly to jobs impacted or jobs created.



(4) Preparing the state's students with relevant career technical education that responds to business and industry demands.

(5) Developing worker retraining programs to assist the existing workforce with the necessary tools to upgrade their skills.

(6) Responding to the job creation and workforce needs of the state's new and emerging industries, including emerging technologies that will result in greater greenhouse gas emissions reductions.

(7) Developing job training programs to assist specific populations, such as at-risk youth, displaced workers, veterans, the formerly incarcerated, and others facing barriers to employment.

(8) Opportunities for community-based organizations to partner with local workforce agencies to improve the labor-market outcomes of targeted disadvantaged populations.

(9) Targeting workforce development programs and activities in disadvantaged communities, as identified pursuant to Section 39711, and communities that are located near entities regulated by the state board pursuant to this division.

(10) Identifying and leveraging state and federal funding resources to implement the recommendations made in the report consistent with the regulatory purposes of this division.

(c) This section shall remain in effect only until January 1, 2031, and as of that date is repealed.

SEC. 10. Section 38592.5 is added to the Health and Safety Code, to read:

38592.5. (a) (1) No later than January 1, 2018, the state board shall update the scoping plan, prepared pursuant to Section 38561, to achieve the greenhouse gas emissions reductions required pursuant to Section 38566. The state board shall designate the market-based compliance mechanism adopted pursuant to subdivision (c) of Section 38562 as the rule for petroleum refineries and oil and gas production facilities to achieve their greenhouse gas emissions reductions.

(2) All greenhouse gas rules and regulations adopted by the state board shall be consistent with the updated scoping plan.

(3) Nothing in this section shall limit the state board's authority to adopt, maintain, or revise any other measure, including, but not limited to, any of the following:

(A) Measures governing methane and fugitive emissions at refineries and oil and gas facilities.

(B) Advanced clean cars program adopted by the state board.

(C) Low-Carbon Fuel Standard regulations (Subarticle 7 (commencing with Section 95480) of Article 4 of Subchapter 10 of Chapter 1 of Division 3 of Title 17 of the California Code of Regulations).

(D) Regulations addressing short-lived climate pollutants.

(E) Implementation of the sustainable freight action plan released in July 2015 pursuant to Executive Order B-32-15.

(b) This section shall remain in effect only until January 1, 2031, and as of that date is repealed, unless a later enacted statute, which is enacted before January 1, 2031, deletes or extends that date.

SEC. 11. Section 38592.6 is added to the Health and Safety Code, to read:

38592.6. (a) The Legislative Analyst's Office shall, until January 1, 2030, annually report to the Legislature on the economic impacts and benefits of the greenhouse gas emissions targets established pursuant to Sections 38550 and 38566.

(b) This section shall remain in effect only until January 1, 2031, and as of that date is repealed, unless a later enacted statute, which is enacted before January 1, 2031, deletes or extends that date.

SEC. 12. Section 38594 of the Health and Safety Code is amended to read:

38594. (a) Except as provided in subdivision (b), nothing in this division shall limit or expand the existing authority of any district.

(b) A district shall not adopt or implement an emission reduction rule for carbon dioxide from stationary sources that are also subject to a market-based compliance mechanism adopted by the state board pursuant to subdivision (c) of Section 38562.

(c) Nothing in this section affects in any manner the authority of a district to adopt or implement, as applicable, any of the following:

(1) A rule, regulation, standard, or requirement authorized or required for a district to adopt under Division 26 (commencing with Section 39000) for purposes other than to reduce carbon dioxide from sources subject to a market-based compliance mechanism adopted by the state board pursuant to subdivision (c) of Section 38562.

(2) A rule, regulation, standard, or requirement authorized pursuant to a law affecting emissions associated with landfills, refrigerants, natural gas or methane, volatile organic compounds, or a rule required to comply with the federal Clean Air Act (42 U.S.C. Sec. 7401 et seq.) or regulations implementing that act.

(3) A rule, regulation, standard, or requirement authorized pursuant to a law to reduce vehicle trips, vehicle miles traveled, parking, or vehicular air emissions, including, but not limited to, a rule adopted pursuant to Chapter 728 of the Statutes of 2008.

(4) A rule, regulation, standard, or requirement established pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code).

(5) A rule, regulation, standard, or requirement adopted by any state agency.

(d) This section shall become inoperative if the state board repeals the market-based compliance mechanism adopted by the state board pursuant to subdivision (c) of Section 38562. The state board shall notify the Secretary of State if this section becomes inoperative.

(e) This section shall remain in effect only until January 1, 2031, and as of that date is repealed.

SEC. 13. Section 38594 is added to the Health and Safety Code, to read: 38594. (a) Nothing in this division shall limit or expand the existing authority of any district, as defined in Section 39025.

(b) This section shall become operative on January 1, 2031.

SEC. 14. Section 4213.05 is added to the Public Resources Code, to read:

4213.05. (a) Commencing with the 2017–18 fiscal year, the fire prevention fee imposed pursuant to Section 4212 shall be suspended, effective July 1, 2017. Any moneys held in reserve in the State Responsibility Area Fire Responsibility Fund shall be appropriated by the Legislature in a manner consistent with subdivision (d) of Section 4214.

(b) It is the intent of the Legislature that moneys derived from the auction or sale of allowances pursuant to a market-based compliance mechanism established pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code shall be used to replace the moneys that would have otherwise been collected under Section 4212 to continue fire prevention activities.

(c) This section shall become inoperative on January 1, 2031.

SEC. 15. Article 3 (commencing with Section 4229) is added to Chapter 1.5 of Part 2 of Division 4 of the Public Resources Code, to read:

#### Article 3. Repeal

4229. This chapter shall remain in effect only until January 1, 2031, and as of that date is repealed, unless a later enacted statute that is enacted on or before January 1, 2031, deletes or extends that date.

SEC. 16. Section 6377.1 of the Revenue and Taxation Code is amended to read:

6377.1. (a) Except as provided in subdivision (e), on or after July 1, 2014, and before July 1, 2030, there are exempted from the taxes imposed by this part the gross receipts from the sale of, and the storage, use, or other consumption in this state of, any of the following:

(1) Qualified tangible personal property purchased for use by a qualified person to be used primarily in any stage of the manufacturing, processing, refining, fabricating, or recycling of tangible personal property, beginning at the point any raw materials are received by the qualified person and introduced into the process and ending at the point at which the manufacturing, processing, refining, fabricating, or recycling has altered tangible personal property to its completed form, including packaging, if required.

(2) Qualified tangible personal property purchased for use by a qualified person to be used primarily in research and development.

(3) Qualified tangible personal property purchased for use by a qualified person to be used primarily to maintain, repair, measure, or test any qualified tangible personal property described in paragraph (1) or (2).

(4) Qualified tangible personal property purchased for use by a contractor purchasing that property for use in the performance of a construction contract for the qualified person, that will use that property as an integral part of the manufacturing, processing, refining, fabricating, or recycling process, the generation or production, or storage and distribution, of electric power, or as a research or storage facility for use in connection with those processes.

(5) Qualified tangible personal property purchased for use by a qualified person to be used primarily in the generation or production, or storage and distribution, of electric power.

(b) For purposes of this section:

(1) “Department” means the California Department of Tax and Fee Administration.

(2) “Fabricating” means to make, build, create, produce, or assemble components or tangible personal property to work in a new or different manner.

(3) “Generation or production” means the activity of making, producing, creating, or converting electric power from sources other than a conventional power source, as defined in Section 2805 of the Public Utilities Code.

(4) “Manufacturing” means the activity of converting or conditioning tangible personal property by changing the form, composition, quality, or character of the property for ultimate sale at retail or use in the manufacturing of a product to be ultimately sold at retail. Manufacturing includes any improvements to tangible personal property that result in a greater service life or greater functionality than that of the original property.

(5) “Primarily” means 50 percent or more of the time.

(6) “Process” means the period beginning at the point at which any raw materials are received by the qualified person and introduced into the manufacturing, processing, refining, fabricating, or recycling activity of the qualified person and ending at the point at which the manufacturing, processing, refining, fabricating, or recycling activity of the qualified person has altered tangible personal property to its completed form, including packaging, if required. Raw materials shall be considered to have been introduced into the process when the raw materials are stored on the same premises where the qualified person’s manufacturing, processing, refining, fabricating, or recycling activity is conducted. Raw materials that are stored on premises other than where the qualified person’s manufacturing, processing, refining, fabricating, or recycling activity is conducted shall not be considered to have been introduced into the manufacturing, processing, refining, fabricating, or recycling process.

(7) “Processing” means the physical application of the materials and labor necessary to modify or change the characteristics of tangible personal property.

(8) (A) “Qualified person” means:

(i) Prior to January 1, 2018, a person that is primarily engaged in those lines of business described in Codes 3111 to 3399, inclusive, 541711, or 541712 of the North American Industry Classification System (NAICS)

published by the United States Office of Management and Budget (OMB), 2012 edition.

(ii) On and after January 1, 2018, and before July 1, 2030, a person that is primarily engaged in those lines of business described in Codes 3111 to 3399, inclusive, 22111 to 221118, inclusive, 221122, 541711, or 541712 of the North American Industry Classification System (NAICS) published by the United States Office of Management and Budget (OMB), 2012 edition.

(B) Notwithstanding subparagraph (A), “qualified person” shall not include either of the following:

(i) Prior to January 1, 2018, an apportioning trade or business that is required to apportion its business income pursuant to subdivision (b) of Section 25128 or a trade or business conducted wholly within this state that would be required to apportion its business income pursuant to subdivision (b) of Section 25128 if it were subject to apportionment pursuant to Section 25101.

(ii) On and after January 1, 2018, and before July 1, 2030, an apportioning trade or business, other than a trade or business described in paragraph (1) of subdivision (c) of Section 25128, that is required to apportion its business income pursuant to subdivision (b) of Section 25128, or a trade or business, other than a trade or business described in paragraph (1) of subdivision (c) of Section 25128, conducted wholly within this state that would be required to apportion its business income pursuant to subdivision (b) of Section 25128 if it were subject to apportionment pursuant to Section 25101.

(9) (A) “Qualified tangible personal property” includes, but is not limited to, all of the following:

(i) Machinery and equipment, including component parts and contrivances such as belts, shafts, moving parts, and operating structures.

(ii) Equipment or devices used or required to operate, control, regulate, or maintain the machinery, including, but not limited to, computers, data-processing equipment, and computer software, together with all repair and replacement parts with a useful life of one or more years therefor, whether purchased separately or in conjunction with a complete machine and regardless of whether the machine or component parts are assembled by the qualified person or another party.

(iii) Tangible personal property used in pollution control that meets standards established by this state or any local or regional governmental agency within this state.

(iv) (I) Prior to January 1, 2018, special purpose buildings and foundations used as an integral part of the manufacturing, processing, refining, fabricating, or recycling process, or that constitute a research or storage facility used during those processes. Buildings used solely for warehousing purposes after completion of those processes are not included.

(II) On and after January 1, 2018, and before July 1, 2030, special purpose buildings and foundations used as an integral part of the manufacturing, processing, refining, fabricating, or recycling process, or that constitute a research or storage facility used during those processes, or the generation

or production or storage and distribution of electric power. Buildings used solely for warehousing purposes after completion of those processes are not included.

(B) “Qualified tangible personal property” shall not include any of the following:

(i) Consumables with a useful life of less than one year.

(ii) Furniture, inventory, and equipment used in the extraction process, or equipment used to store finished products that have completed the manufacturing, processing, refining, fabricating, or recycling process.

(iii) Tangible personal property used primarily in administration, general management, or marketing.

(10) “Refining” means the process of converting a natural resource to an intermediate or finished product.

(11) “Research and development” means those activities that are described in Section 174 of the Internal Revenue Code or in any regulations thereunder.

(12) “Storage and distribution” means storing or distributing through the electric grid, but not transmission of, electric power to consumers regardless of source.

(13) (A) “Useful life” for tangible personal property that is treated as having a useful life of one or more years for state income or franchise tax purposes shall be deemed to have a useful life of one or more years for purposes of this section. “Useful life” for tangible personal property that is treated as having a useful life of less than one year for state income or franchise tax purposes shall be deemed to have a useful life of less than one year for purposes of this section. For the purposes of this paragraph, tangible personal property that is deducted under Sections 17201 and 17255 or Section 24356 shall be deemed to have a useful life of one or more years.

(B) The board shall cancel any outstanding and unpaid deficiency determination and any related penalties and interest and shall not issue any deficiency determination or notice of determination, with respect to unpaid sales and use tax on qualified property with a useful life, as defined in subparagraph (A), that was purchased or leased on or after July 1, 2014, and before January 1, 2018. Any amounts paid by a qualified person pursuant to such determination shall be refunded by the department to the qualified person. Any cancellation or refund described in this subparagraph is contingent upon a qualified person making a request to the department, in a manner prescribed by the department, by June 30, 2018.

(c) An exemption shall not be allowed under this section unless the purchaser furnishes the retailer with an exemption certificate, completed in accordance with any instructions or regulations as the department may prescribe, and the retailer retains the exemption certificate in its records and furnishes it to the department upon request.

(d) (1) Notwithstanding the Bradley-Burns Uniform Local Sales and Use Tax Law (Part 1.5 (commencing with Section 7200)) and the Transactions and Use Tax Law (Part 1.6 (commencing with Section 7251)), the exemption established by this section shall not apply with respect to any

tax levied by a county, city, or district pursuant to, or in accordance with, either of those laws.

(2) Notwithstanding subdivision (a), the exemption established by this section shall not apply with respect to any tax levied pursuant to Section 6051.2, 6051.5, 6201.2, or 6201.5, pursuant to Section 35 of Article XIII of the California Constitution, or any tax levied pursuant to Section 6051 or 6201 that is deposited in the State Treasury to the credit of the Local Revenue Fund 2011 pursuant to Section 6051.15 or 6201.15.

(e) (1) The exemption provided by this section shall not apply to either of the following:

(A) Any tangible personal property purchased during any calendar year that exceeds two hundred million dollars (\$200,000,000) of purchases of qualified tangible personal property for which an exemption is claimed by a qualified person under this section. For purposes of this subparagraph, in the case of a qualified person that is required to be included in a combined report under Section 25101 or authorized to be included in a combined report under Section 25101.15, the aggregate of all purchases of qualified personal property for which an exemption is claimed pursuant to this section by all persons that are required or authorized to be included in a combined report shall not exceed two hundred million dollars (\$200,000,000) in any calendar year.

(B) The sale or storage, use, or other consumption of property that, within one year from the date of purchase, is removed from California, converted from an exempt use under subdivision (a) to some other use not qualifying for exemption, or used in a manner not qualifying for exemption.

(2) If a purchaser certifies in writing to the seller that the tangible personal property purchased without payment of the tax will be used in a manner entitling the seller to regard the gross receipts from the sale as exempt from the sales tax, and the purchase exceeds the two-hundred-million-dollar (\$200,000,000) limitation described in subparagraph (A) of paragraph (1), or within one year from the date of purchase, the purchaser removes that property from California, converts that property for use in a manner not qualifying for the exemption, or uses that property in a manner not qualifying for the exemption, the purchaser shall be liable for payment of sales tax, with applicable interest, as if the purchaser were a retailer making a retail sale of the tangible personal property at the time the tangible personal property is so purchased, removed, converted, or used, and the cost of the tangible personal property to the purchaser shall be deemed the gross receipts from that retail sale.

(f) This section shall apply to leases of qualified tangible personal property classified as “continuing sales” and “continuing purchases” in accordance with Sections 6006.1 and 6010.1. The exemption established by this section shall apply to the rentals payable pursuant to the lease, provided the lessee is a qualified person and the tangible personal property is used in an activity described in subdivision (a).

(g) (1) Upon the effective date of this section, the Department of Finance shall estimate the total dollar amount of exemptions that will be taken for

each calendar year, or any portion thereof, for which this section provides an exemption.

(2) (A) No later than each March 1 next following a calendar year for which this section provides an exemption, the department shall provide to the Joint Legislative Budget Committee and to the Department of Finance a report of the total dollar amount of exemptions taken under this section for the immediately preceding calendar year. The report shall compare the total dollar amount of exemptions taken under this section for that calendar year with the department's estimate for that same calendar year. If that total dollar amount taken is less than the estimate for that calendar year, the report shall identify options for increasing exemptions taken so as to meet estimated amounts.

(B) No later than June 30 of that same calendar year, that total dollar amount, notwithstanding subparagraph (A) of paragraph (13) of subdivision (b), as reported by the department, with the concurrence of the Department of Finance, shall be transferred from the Greenhouse Gas Reduction Fund to the General Fund.

(h) This section is repealed on January 1, 2031.

SEC. 17. This act is an urgency statute necessary for the immediate preservation of the public peace, health, or safety within the meaning of Article IV of the California Constitution and shall go into immediate effect. The facts constituting the necessity are:

To secure a greater reduction in greenhouse gas emissions to prevent catastrophic climate change, it is necessary for this act to take effect immediately.




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### HEALTH AND SAFETY CODE - HSC

**DIVISION 25.5. CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006 [38500 - 38599.11]** ( *Division 25.5 added by Stats. 2006, Ch. 488, Sec. 1.* )

**PART 4. GREENHOUSE GAS EMISSIONS REDUCTIONS [38560 - 38568]** ( *Part 4 added by Stats. 2006, Ch. 488, Sec. 1.* )

**[38560.](#)** The state board shall adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources or categories of sources, subject to the criteria and schedules set forth in this part.

*(Added by Stats. 2006, Ch. 488, Sec. 1. Effective January 1, 2007.)*

**[38560.5.](#)** (a) On or before June 30, 2007, the state board shall publish and make available to the public a list of discrete early action greenhouse gas emission reduction measures that can be implemented prior to the measures and limits adopted pursuant to Section 38562.

(b) On or before January 1, 2010, the state board shall adopt regulations to implement the measures identified on the list published pursuant to subdivision (a).

(c) The regulations adopted by the state board pursuant to this section shall achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from those sources or categories of sources, in furtherance of achieving the statewide greenhouse gas emissions limit.

(d) The regulations adopted pursuant to this section shall be enforceable no later than January 1, 2010.

*(Added by Stats. 2006, Ch. 488, Sec. 1. Effective January 1, 2007.)*

**[38560.7.](#)** The state board shall create, and maintain on its internet website, a greenhouse gas emissions dashboard that provides updated publicly available information regarding how the state is progressing toward meeting its statewide climate change goals.

*(Added by Stats. 2022, Ch. 366, Sec. 1. (SB 1145) Effective January 1, 2023.)*

**[38561.](#)** (a) On or before January 1, 2009, the state board shall prepare and approve a scoping plan, as that term is understood by the state board, for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from sources or categories of sources of greenhouse gases by 2020 under this division. The state board shall consult with all state agencies with jurisdiction over sources of greenhouse gases, including the Public Utilities Commission and the State Energy Resources Conservation and Development Commission, on all elements of its plan that pertain to energy-related matters including, but not limited to, electrical generation, load based-standards or requirements, the provision of reliable and affordable electrical service, petroleum refining, and statewide fuel supplies to ensure the greenhouse gas emissions reduction activities to be adopted and implemented by the state board are complementary, nonduplicative, and can be implemented in an efficient and cost-effective manner.

(b) The plan shall identify and make recommendations on direct emissions reduction measures, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and nonmonetary incentives for sources and categories of sources that the state board finds are necessary or desirable to facilitate the achievement of the maximum feasible and cost-effective reductions of greenhouse gas emissions by 2020.

(c) In making the determinations required by subdivision (b), the state board shall consider all relevant information pertaining to greenhouse gas emissions reduction programs in other states, localities, and nations, including the northeastern states of the United States, Canada, and the European Union.

(d) The state board shall evaluate the total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California's economy, environment, and public health, using the best available economic models, emission estimation techniques, and other scientific methods.

(e) In developing its plan, the state board shall take into account the relative contribution of each source or source category to statewide greenhouse gas emissions, and the potential for adverse effects on small businesses, and shall recommend a de minimis threshold of greenhouse gas emissions below which emissions reduction requirements will not apply.

(f) In developing its plan, the state board shall identify opportunities for emissions reduction measures from all verifiable and enforceable voluntary actions, including, but not limited to, carbon sequestration projects and best management practices.

(g) The state board shall conduct a series of public workshops to give interested parties an opportunity to comment on the plan. The state board shall conduct a portion of these workshops in regions of the state that have the most significant exposure to air pollutants, including, but not limited to, areas designated as federal extreme nonattainment that have communities with minority populations, communities with low-income populations, or both.

(h) The state board shall update its plan for achieving the maximum technologically feasible and cost-effective reductions of greenhouse gas emissions at least once every five years.

*(Amended by Stats. 2022, Ch. 361, Sec. 3. (SB 1020) Effective January 1, 2023.)*

**38561.2.** (a) (1) By July 1, 2023, the state board shall develop a comprehensive strategy for the state's cement sector to achieve net-zero emissions of greenhouse gases associated with cement used within the state as soon as possible, but no later than December 31, 2045.

(2) To ensure adequate progress is made toward achieving the goal established in paragraph (1), the state board shall establish interim targets for reductions in the greenhouse gas intensity of cement used within the state relative to the average greenhouse gas intensity of cement used within the state during the 2019 calendar year, with the goal of reducing the greenhouse gas intensity of cement used within the state to 40 percent below the 2019 average levels by December 31, 2035.

(3) When determining the greenhouse gas intensity of cement, the state board shall not include greenhouse gas emissions reductions attributable to activities or offsets that are unrelated to the raw materials, fuels or other energy sources, processes, or transportation involved in making or using cement or its inputs.

(4) (A) By July 1, 2028, the state board shall evaluate the feasibility of achieving the interim targets established under paragraph (2) and may adjust the interim targets upward or downward to reflect technological advancements and progress in addressing barriers to the deployment of greenhouse gas emissions reduction technologies and processes, including those barriers for which measures have been identified pursuant to paragraph (7) of subdivision (b).

(B) If the state board makes a downward adjustment to any interim target established under paragraph (2), the state board shall document the feasibility constraints the state board has identified and recommend measures and actions, including proposed statutory changes, necessary to overcome those constraints to enable the cement sector to achieve net-zero emissions of greenhouse gases as soon as possible, but no later than December 31, 2045.

(b) In developing the comprehensive strategy pursuant to subdivision (a), the state board shall do all of the following:

(1) Define a metric for greenhouse gas intensity and evaluate the data submitted by cement manufacturing plants to the state board for the 2019 calendar year and other relevant data about emissions of greenhouse gases for cement that was imported into the state to establish a baseline from which to measure greenhouse gas intensity reductions.

(2) Assess the effectiveness of existing measures, identify any modifications to existing measures, and evaluate new measures to overcome the market, statutory, and regulatory barriers inhibiting achievement of the objectives described in this section.

(3) Identify actions that reduce adverse air quality impacts and support economic and workforce development in communities neighboring cement plants.

(4) Include provisions to minimize and mitigate potential leakage and account for embedded emissions of greenhouse gases in imported cement in a similar manner to emissions of greenhouse gases for cement produced in the state, such as through a border carbon adjustment mechanism.

(5) Coordinate and consult with other state agencies, districts, and experts in academia, industry, and public health, and with local communities.

(6) Prioritize actions that leverage state and federal incentives, where applicable, to reduce costs of implementing greenhouse gas emissions reduction technologies and processes and to increase economic value for the state.

(7) Evaluate measures to support market demand and financial incentives to encourage the production and use of cement with low greenhouse gas intensity, including, but not limited to, consideration of all of the following measures:

(A) Measures to expedite the adoption for use in projects undertaken by state agencies, including the Department of Transportation, of Portland limestone cement and other blended cements.

(B) Measures to provide financial support and incentives for research, development, and demonstration of technologies to mitigate emissions of greenhouse gases from the production of cement with the objective of accelerating industry deployment of those technologies.

(C) Measures to facilitate fuel switching.

(D) Measures to create incentives and remove obstacles for energy efficiency improvements and waste heat recovery at cement manufacturing facilities.

(c) The state board shall implement the strategy developed pursuant to this section, upon appropriation by the Legislature.

*(Added by Stats. 2021, Ch. 246, Sec. 2. (SB 596) Effective January 1, 2022.)*

**38561.3.** (a) By December 31, 2026, the state board, in consultation with relevant stakeholders, including, but not limited to, the California Building Standards Commission, the Department of Housing and Community Development, and the State Energy Resources Conservation and Development Commission, shall develop a framework for measuring the average carbon intensity of the materials used in the construction of new buildings, including those for residential uses.

(b) The state board shall also develop, by December 31, 2028, a comprehensive strategy for the state's building sector to achieve a 40-percent net reduction in greenhouse gas emissions of building materials as soon as possible, but no later than December 31, 2035. The baseline for the 40-percent net reduction shall be established based on an industry average of environmental product declarations reported for the 2026 calendar year, or the most relevant, up-to-date data that is available, as determined by the state board.

(c) The framework developed pursuant to subdivision (a) shall include both of the following:

(1) A requirement for the submission by an entity undertaking the construction of a project with a minimum size of five new residential units or 10,000 square feet of nonresidential building space of a life-cycle assessment, as defined in the International Organization for Standardization (ISO) 14040 series of standards with a focus on the Product Stage phases (A1-A3), to determine the carbon intensity of the materials used in new residential and nonresidential buildings.

(2) A requirement for the submission by the manufacturer of a building material of an Environmental Product Declaration, Type III, as defined by the International Organization for Standardization (ISO) Standard 14025, or similarly robust material life-cycle assessment approaches that have uniform standards in data collection consistent with ISO Standard 14025, industry acceptance, and integrity for construction materials used for the building. The state board shall determine how to proceed in the event that insufficient material life-cycle assessments or Environmental Product Declarations exist, or in the event of significant supply chain issues.

(d) The framework developed pursuant to subdivision (a) may include a tracking and reporting mechanism in order to facilitate the reporting of data to the state board on the carbon intensity of buildings, and that would also allow tracking of progress toward the carbon intensity reduction targets set forth in this section. Except for a fee to reimburse the state board for any administrative costs incurred in administering the reporting mechanism, the state board shall not impose any other charges on the participants in the reporting mechanism authorized under this subdivision.

(e) Based on the information submitted by an entity undertaking the construction of a covered project pursuant to paragraph (2) of subdivision (i), as well as other relevant information as determined by the state board, the state board shall evaluate the cost impact and feasibility of implementation of the strategy developed pursuant to subdivision (b), for the purpose of developing recommendations for addressing known cost impact and feasibility issues in strategy implementation. This subdivision does not affect the project's status as deemed to comply with the applicable target based on the finding made solely by the entity undertaking the construction of a project pursuant to paragraphs (1) and (2) of subdivision (i).

(f) As used in this section the following terms have the following meanings:

(1) "Feasibility," in regard to the use of a material, means all of the following:

(A) The material is capable of being installed in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

(B) The material does not harm the health or safety of those who install the materials or occupy the building.

(C) The building using the material can be designed to provide an equivalent function and, at a minimum, the same useful life, performance, and durability as the building made with baseline materials.

(D) The material is commercially available to the region of the project.

(E) The material has not been involved in a claim for a construction or design defect, breach of express or implied warranty, fraud, or misrepresentation.

(F) The material provides an equivalent function and at least the same useful life, performance, and durability as the baseline material.

(2) (A) "Cost impact" means a significant overall material or operational cost increase or schedule delay resulting from incorporating the lower carbon material.

(B) As used in subparagraph (A), "significant" means an increase of 5 percent or more in the operational or overall material cost at the location of the project or time schedule delay that is attributable to incorporating a lower carbon material compared to the baseline material for which it is a substitute in the project. For purposes of this paragraph, the baseline material shall be the material that would have been used by the entity undertaking the construction of the project if this section did not apply to the project at the time the application for the building permit is submitted for a model home or project, as applicable.

(g) The state board shall allow the entity undertaking the construction of a project to use the same persons as those responsible for the Certificate of Installation pursuant to paragraph (3) of subdivision (a) of Section 10-103 of Title 25 of the California Code of Regulations in submitting, reporting, notifying, tracking, or otherwise conveying information to the state board.

(h) The targets established by this section shall begin to apply no sooner than January 1, 2027, and two years after the baseline is established. The applicable target for each residential unit built within a project shall be the target that applied at the time the application was submitted for a building permit of the first model home in the project. For projects that do not use model homes, the applicable target shall be the target in effect at the time of submission of the application for the building permit.

(i) (1) For buildings covered by this section, the incorporation of lower carbon materials shall be limited or excluded to the extent that it has a cost impact or is unfeasible.

(2) An entity undertaking the construction of a project may seek to achieve the applicable target through the use of materials or methods pursuant to this section and, if an embodied carbon trading system is established or other alternative compliance method, pursuant to Section 38561.6, separately or in combination, as determined by the available compliance methods. If the entity undertaking the construction of a project uses materials or methods described in this section, Section 38561.6, or both, subject to the feasibility criteria and up to the cost impact limit, and the entity finds that it is still unable to achieve the applicable target due to unfeasibility or cost impact, then the project shall be deemed to comply with the applicable target. In that case, the entity undertaking the construction of a project shall provide the state board with documentation that shall be specified in the reporting and recordkeeping regulations that will be established by the state board.

(3) The state board shall consult experts, including, but not limited to, building product manufacturers, builders, and design professionals, to advise the state board on methods to reduce the carbon intensity of building materials and covered projects, while maintaining the avoidance of cost impact and their feasibility.

(4) The state board shall not have the authority to approve, deny, or delay the planning, use, development, design, or construction of a project.

(5) Manufacturers of building materials shall be required to report data to the state board to ensure that their products comply with applicable reduction targets in accordance with reporting and compliance requirements that will be established by the state board.

(j) This section does not apply to appliances.

(k) For purposes of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), no adverse environmental impact associated with the manufacture of building materials may be attributed, directly or indirectly, to the project incorporating the building material. This subdivision does not relieve the entity undertaking the construction of a covered project from complying with any other provision within this section.

(l) In developing the strategy pursuant to subdivision (b), the state board shall do all of the following:

(1) Research and prioritize actions and provisions that leverage state and federal incentives, where applicable, to reduce costs of implementing greenhouse gas emissions reduction technologies, processes, and materials used in construction-related projects for the construction industry, homeowners, and developers, and to increase economic value for the state.

(2) Evaluate measures to support market demand and financial incentives to encourage the production and use of materials used in construction-related projects with low greenhouse gas intensity, including, but not limited to, consideration of the following measures:

(A) Measures to expedite the adoption for use in projects undertaken by state agencies, including the Department of Transportation and the Department of General Services.

(B) Measures to provide financial support and incentives for research, development, and demonstration of technologies to mitigate emissions of greenhouse gases from the manufacture of materials used in construction-related projects, with the objective of accelerating commercial availability of those technologies.

(C) Measures to provide consumer access to building material embodied carbon data reported to the state board.

(m) The Administrative Procedure Act (Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code) does not apply to reporting regulations and reporting standards promulgated pursuant to this section. Prior to adopting those reporting standards and regulations pursuant to this section, the proposed rulemaking shall be made available to the public and stakeholders for comment and workshopping. The state board, the California Building Standards Commission, the Department of Housing and Community Development, and the State Energy Resources Conservation and Development Commission shall exchange technical information with each other as part of this process prior to the adoption of any reporting standard or regulation pursuant to this section. All other regulations adopted pursuant to this section are subject to the Administrative Procedure Act.

(n) Division 13 (commencing with Section 21000) of the Public Resources Code does not apply to the state board's development and approval of the framework and comprehensive strategy developed pursuant to this section.

(o) Paragraphs (1) and (2) of subdivision (i) apply when the state board adopts any mechanism, standard, requirement, regulation, rule, protocol, framework, strategy, credit, target, or establishes an embodied carbon trading system, or alternative incentives or compliance programs, whichever occurs first.

(p) Penalties relating to the use or failure to use low-carbon building materials, or the failure to achieve the applicable target, may not be applied to an entity undertaking the construction of a project that is deemed to comply pursuant to paragraphs (1) and (2) of subdivision (i).

(q) Except as otherwise provided in subdivision (p), penalties for a violation of this section are limited to the penalties described in subdivisions (a) and (d) of Section 42402, unless the violation shows a disregard for the regulations under this section, extreme negligence, or acts of deceit, in which case the penalties set forth in subdivision (b) of Section 42402 apply.

(r) Notwithstanding any other law, the penalties described in subdivision (q) are the exclusive enforcement mechanism against regulated entities for a violation of this section and Section 38561.6.

(s) As used in this section, "entity undertaking the construction of a project" means a person or entity who owns the real property that is the subject of a development agreement.

*(Amended by Stats. 2023, Ch. 316, Sec. 2. (AB 43) Effective January 1, 2024.)*

**38561.5.** (a) For purposes of this section, the following definitions apply:

(1) "Natural carbon sequestration" means actions that are undertaken on natural and working lands to remove and provide storage of atmospheric greenhouse gases in vegetation and soils. This shall include preservation, conservation, restoration, and sustainable management of these lands, which may include compost application, cover crops, hedgerows, planned grazing, urban forestry, riparian restoration, restoration of tidal flows to wetlands, and other forms of wetland restoration, among other relevant actions.

(2) "Natural lands" has the same meaning as set forth in paragraph (2) of subdivision (d) of Section 9001.5 of the Public Resources Code.

(3) "Nature-based climate solutions" means activities, such as restoration, conservation, and land management actions, that increase net carbon sequestration or reduce greenhouse gas emissions in natural and working lands.

(4) "Vulnerable communities" has the same meaning as set forth in subdivision (d) of Section 71340 of the Public Resources Code.

(5) "Working lands" has the same meaning as set forth in paragraph (1) of subdivision (d) of Section 9001.5 of the Public Resources Code.

(b) (1) On or before January 1, 2024, the Natural Resources Agency, in collaboration with the state board, the California Environmental Protection Agency, the Department of Food and Agriculture, the expert advisory committee established pursuant to subdivision (c), and other relevant state agencies, shall determine an ambitious range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce greenhouse gas emissions for 2030, 2038, and 2045 to support state goals to achieve carbon neutrality and foster climate adaptation and resilience. These targets shall be integrated into the scoping plan prepared pursuant to Section 38561 and other state policies.

(2) Projects and actions developed to achieve the targets established pursuant to paragraph (1) shall support the state's efforts to achieve carbon neutrality, take into account climate impacts, increase resilience to climate change impacts, reduce greenhouse gas emissions, and enhance carbon sequestration in a manner that maximizes ecological health and biodiversity, and complements other climate and resources goals.

(3) The state board shall ensure that all emissions reductions from projects and actions developed to achieve the targets established pursuant to paragraph (1) shall be accounted for in a manner that does not result in double counting of emissions reductions, and that all greenhouse gas emissions reductions and removals used for any market-based compliance mechanism are in addition to any reductions and removals that would otherwise occur.

(4) On or before January 1, 2025, the Natural Resources Agency, in consultation with the state board, the California Environmental Protection Agency, and the Department of Food and Agriculture, shall review and update the Natural and Working Lands Climate Smart Strategy established pursuant to Section 39740.2 to achieve the targets established pursuant to paragraph (1).

(5) The review and update pursuant to paragraph (4) shall include all of the following:

(A) Descriptions of the actions and projects undertaken on natural and working lands to date.

(B) Quantified progress on emissions reductions, natural carbon sequestration, and cobenefits.

(C) A description of how the relevant agencies calculated emissions reductions, natural carbon sequestration, and cobenefits.

(D) A summary of the benefits to low-income communities, disadvantaged communities, vulnerable communities, disadvantaged farmers, and Native American tribes.

(E) An evaluation of the efficacy of the priority nature-based solutions, pathways, and priority actions for greenhouse gas reductions, climate resilience, and climate change adaptation.

(F) Identification and description of any barriers to achieving the range of targets pursuant to paragraph (1).

(G) Recommendations to address the barriers identified in subparagraph (F) to achieve the range of targets pursuant to paragraph (1).

(H) Recommendations from the expert advisory committee established pursuant to subdivision (c).

(c) The Natural Resources Agency and the state board shall jointly establish an expert advisory committee that is composed of university researchers, technical assistance providers, practitioners and other experts in the field of climate change and natural and working lands science and management, and Indigenous and environmental justice representatives, to inform and review modeling and analyses for natural and working lands, to advise state agencies on implementation strategies and standardized accounting, and to provide recommendations on addressing barriers to efficient implementation of this section.

(d) No later than January 1, 2025, the state board shall develop standard methods for state agencies to consistently track greenhouse gas emissions and reductions, carbon sequestration, and, where feasible and in consultation with the Natural Resources Agency and the Department of Food and Agriculture, additional benefits from natural and working lands over time. In estimating and tracking greenhouse gas emissions and reductions and carbon sequestration from natural and working lands, the state board shall take into account, where feasible, both of the following:

(1) Greenhouse gas emissions and reductions of carbon dioxide, methane, and nitrous oxide related to natural and working lands.

(2) Potential impacts of climate change, including, but not limited to, increased fire risk, warming temperatures, and decreasing precipitation, on the ability to reduce greenhouse gas emissions and sequester carbon from natural and working lands.

(e) On or before January 1, 2025, and every two years thereafter, the Natural Resources Agency shall publish data on its internet website on progress made in achieving the targets established pursuant to paragraph (1) of subdivision (b), including on state expenditures made to implement these targets.

*(Amended by Stats. 2023, Ch. 358, Sec. 1. (AB 1159) Effective January 1, 2024.)*

**38561.6.** (a) For purposes of this section, the following definitions apply:

(1) "Carbon intensity" means the quantity of life-cycle greenhouse gas emissions per unit of building material, and specifically the ratio between the net upstream carbon dioxide impact (emissions minus storage) of a material and the weight of the material.

(2) "Embodied carbon trading system" means a market-based credit trading platform of greenhouse gas emissions exchanges, banking, credits, and other transactions, governed by rules and protocols established by the state board, that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the state board pursuant to this division.

(3) "Low-carbon building standard" means a framework created pursuant to Section 38561.3 to reduce by 40 percent the carbon intensity of the materials used in newly constructed buildings identified in paragraph (1) of subdivision (c) of Section 38561.3 and within the embodied carbon trading system, to facilitate a credit trading platform for building materials along with other requirements as specified.

(4) "Material life-cycle" means the aggregate of greenhouse gas emissions associated with material production, as defined in the International Organization for Standardization (ISO) 14040 series of standards with a focus on the Product Stage phases (A1-A3).

(5) "Entity undertaking the construction of a project" means a person or entity who owns the real property that is the subject of a development agreement.

(b) The state board may establish an embodied carbon trading system in compliance with the requirements set forth in Section 38561.3 and this section that meets both of the following requirements:

(1) If the state board opts to establish an embodied carbon trading system, the system shall be designed to be used by entities undertaking a construction project and building material manufacturers.

(2) The embodied carbon trading system unit of measurement shall be Global Warming Potential (GWP) per gross square foot (kg CO<sub>2</sub>e/sq. ft.<sup>2</sup>).

(c) The state board shall have the flexibility to design the embodied carbon trading system and may do all of the following with respect to the embodied carbon trading system:

(1) (A) Adopt rules and regulations for the credit allocation approach, the anticipated carbon price in the scheme, and trading periods.

(B) In developing the rules and regulations for the credit allocation approach, including those governing any tradeable compliance instrument, make efforts to avoid an overabundance of compliance credits in the market, and, to this end, may consider setting an upper limit on amount of credits that can be generated per unit of material.

(2) Consider using the credits generated through the use of the embodied carbon trading system to help promote innovation and investment in building construction materials that reduce emissions of greenhouse gases.

(3) Consider all relevant information pertaining to low-carbon building materials reduction programs in other states, localities, and nations, including other states, Canada, and the European Union, and, in doing so, review existing and proposed international, federal, and state greenhouse gas emission reporting programs, make reasonable efforts to promote consistency among the programs established pursuant to this division and other programs, and streamline reporting requirements on greenhouse gas emission sources.

(4) Integrate the embodied carbon trading system with the framework described in Section 38561.3 on or before December 31, 2026, and shall implement that system on and after January 1, 2029.

(5) Consult with the California Building Standards Commission, the Department of Housing and Community Development, and the State Energy Resources Conservation and Development Commission in the development of building regulations, in order to minimize duplicate or inconsistent regulatory requirements.

(d) The state board shall have the discretion to adopt further greenhouse gas emission reduction targets within the scope of Section 38561.3 prior to December 31, 2035, or provide early reduction credit considering market adoption, if appropriate.

(e) In developing its plan, the state board shall identify opportunities for emission reduction measures from all verifiable and enforceable actions, and best management practices.

(f) (1) The state board may adopt rules and regulations to monitor, verify, and enforce reductions in embodied carbon in building materials pursuant to this section and Section 38561.3.

(2) The state board shall minimize the administrative burden of implementing and complying with these regulations when possible.

(3) The state board shall design any rules and regulations to encourage manufacturers of building materials to produce low-carbon materials for sale in California to ensure that entities that undertake construction of projects identified in paragraph (1) of subdivision (c) of Section 38561.3 have an adequate supply of low-carbon materials that meet all of the feasibility and cost impact requirements of subdivision (f) of Section 38561.3 to meet the greenhouse gas reduction targets established in Section 38561.3.

(g) The state board may consider the use of third parties, such as verifiers, for purposes of implementing the requirements of this section.

(h) Compliance mechanisms, reporting requirements, and penalties for noncompliance with any compliance standards or an embodied carbon trading system established pursuant to this section or Section 38561.3 will be determined by the administrative process. The carbon trading system established pursuant to this section alone or in combination with Section 38561.3 shall not cause a project to have a cost impact or be unfeasible as those terms are defined in subdivision (f) of Section 38561.3.

(i) The state board shall periodically review and update its emission reporting and compliance standard requirements, as necessary.

(j) This section does not limit the state board's ability to establish alternative incentives or compliance programs aside from or in addition to an embodied carbon trading system.

(k) This section provides guidance only. This section does not limit or expand the authority of the state board.

(l) This section does not authorize the creation of a revenue-generating program or any other program that would result in moneys being paid to the state, other than penalties imposed for a violation of this section.

(m) Notwithstanding any other law, the penalties described in subdivision (q) of Section 38561.3 are the exclusive enforcement mechanism against regulated entities for a violation of this section.



*(Added by Stats. 2023, Ch. 316, Sec. 3. (AB 43) Effective January 1, 2024.)*

**38561.8.** (a) For purposes of this section, "decarbonize" means to reduce or eliminate associated emissions of greenhouse gases.

(b) The state board, in consultation with the State Energy Resources Conservation and Development Commission and the Public Utilities Commission, shall prepare an evaluation posted to the state board's internet website by June 1, 2024. The evaluation shall include, but not be limited to, all the following:

(1) Policy recommendations regarding the use of hydrogen, and specifically regarding the use of green hydrogen, in the state to help achieve the state's climate, clean energy, and clean air objectives. The policy recommendations may include recommendations on how to overcome market barriers and accelerate progress in green hydrogen production, scaling and use, including through the use of public-private partnerships, demonstration projects undertaken by public, private, or nonprofit entities, or a combination thereof, incentives, financing mechanisms, or other policies, and recommendations to maximize economic, environmental, public health, workforce, and equity benefits resulting from increased utilization of green hydrogen.

(2) A description of strategies, consistent with the state's climate, clean energy, and clean air requirements, supporting hydrogen infrastructure, including needed infrastructure for production, processing, delivery, storage, and end uses in difficult-to-decarbonize sectors of the economy for the purpose of preparing infrastructure and end uses for green hydrogen deployment. This description shall identify policies that promote the reduction of economywide emissions of greenhouse gases and short-lived climate pollutants through the deployment of hydrogen, including green hydrogen, while ensuring that hydrogen infrastructure will support the employment of a skilled and trained workforce in California to perform that work.

(3) A description of the potential for other forms of hydrogen, outside of green hydrogen, to achieve emission reductions that can contribute to achieving the state's climate, clean energy, and clean air objectives.

(4) An analysis of how curtailed electrical generation could be better utilized to help meet the goals set forth in this division, including, but not limited to, whether curtailed electrical generation could be made available for the production of green hydrogen. The state board shall also consult with the Independent System Operator in the preparation of the analysis.

(5) An estimate of the amount of reduced emissions of greenhouse gases and air quality benefits the state could achieve through deploying green hydrogen through a variety of scenarios, the costs associated with using green hydrogen, and the associated health and environmental impacts of prioritizing the development of various forms of hydrogen, when compared to other alternatives.

(6) An analysis of the potential for opportunities to integrate hydrogen, including green hydrogen, production and application with drinking water supply treatment needs, particularly for advanced treatment water supplies such as desalination, potable reuse, and salt and contaminant removal projects.

(7) Policy recommendations for regulatory and permitting processes associated with transmission and distribution of hydrogen, including green hydrogen, from production sites to end uses.

(8) An analysis of the life-cycle greenhouse gas emissions from various forms of hydrogen, including green hydrogen, production.

(9) An analysis of air pollution and other environmental impacts from hydrogen, including green hydrogen, distribution and end uses.

(c) In developing the evaluation pursuant to subdivision (b), the state board shall consult the California Workforce Development Board and labor and workforce organizations, including those that administer state-approved apprenticeship programs that train workers to construct, install, and maintain hydrogen infrastructure.

*(Added by Stats. 2022, Ch. 363, Sec. 2. (SB 1075) Effective January 1, 2023.)*

**38562.** (a) On or before January 1, 2011, the state board shall adopt greenhouse gas emissions limits and emissions reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

(b) In adopting regulations pursuant to this section and Part 5 (commencing with Section 38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

- (1) Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions.
- (2) Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.
- (3) Ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions.
- (4) Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.
- (5) Consider cost-effectiveness of these regulations.
- (6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.
- (7) Minimize the administrative burden of implementing and complying with these regulations.
- (8) Minimize leakage.
- (9) Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

(c) (1) Unless otherwise required by context, terms in this subdivision shall have the definitions that apply pursuant to Section 95802 of Title 17 of the California Code of Regulations, as they read on January 1, 2017.

(2) The state board may adopt a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases, applicable from January 1, 2012, to December 31, 2030, inclusive, that the state board determines will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources. In adopting a regulation applicable from January 1, 2021, to December 31, 2030, inclusive, pursuant to this subdivision, the state board shall do all of the following:

(A) (i) Establish a price ceiling. In establishing the price ceiling, the state board shall consider, using the best available science, all of the following:

- (I) The need to avoid adverse impacts on resident households, businesses, and the state's economy.
- (II) The 2020 tier prices of the allowance price containment reserve.
- (III) The full social cost associated with emitting a metric ton of greenhouse gases.
- (IV) The auction reserve price.
- (V) The potential for environmental and economic leakage.
- (VI) The cost per metric ton of greenhouse gas emissions reductions to achieve the statewide emissions targets established in Sections 38550 and 38566.

(ii) To implement the price ceiling, the state board shall develop a mechanism that consists of both of the following:

- (I) Allowances remaining in the allowance price containment reserve as of December 31, 2020, shall be utilized solely for the purpose of sale at the price ceiling established by this section.
- (II) If the allowances from the allowance price containment reserve are exhausted, the state board shall offer covered entities additional metric tons at the price ceiling if needed for compliance. All moneys generated pursuant to this clause shall be expended by the state board to achieve emissions reductions, on at least a metric ton for metric ton basis, that are real, permanent, quantifiable, verifiable, enforceable by the state board and in addition to any greenhouse gas emission reduction otherwise

required by law or regulation and any other greenhouse gas emission reduction that otherwise would occur.

(B) Establish two price containment points at levels below the price ceiling. The state board shall offer to covered entities nontradable allowances for sale at these price containment points. The price containment points shall be established using two-thirds, divided equally, of the allowances in the allowance price containment reserve as of December 31, 2017.

(C) Require that current vintage allowances designated by the state board for auction that remain unsold in the auction holding account for more than 24 months to be transferred to the allowance price containment reserve.

(D) Evaluate and address concerns related to overallocation in the state board's determination of the number of available allowances for years 2021 to 2030, inclusive, as appropriate.

(E) (i) Establish offset credit limits according to the following:

(I) From January 1, 2021, to December 31, 2025, inclusive, a total of 4 percent of a covered entity's compliance obligation may be met by surrendering offset credits of which no more than one-half may be sourced from projects that do not provide direct environmental benefits in state.

(II) From January 1, 2026, to December 31, 2030, inclusive, a total of 6 percent of a covered entity's compliance obligation may be met by surrendering offset credits of which no more than one-half may be sourced from projects that do not provide direct environmental benefits in the state.

(ii) For purposes of this subparagraph, "direct environmental benefits in the state" are the reduction or avoidance of emissions of any air pollutant in the state or the reduction or avoidance of any pollutant that could have an adverse impact on waters of the state.

(F) Develop approaches to increase offset projects in the state considering guidance provided by the Compliance Offsets Protocol Task Force, established pursuant to Section 38591.1.

(G) Set industry assistance factors for allowance allocation commencing in 2021 at the levels applicable in the compliance period of 2015 to 2017, inclusive. The state board shall apply a declining cap adjustment factor to the industry allocation equivalent to the overall statewide emissions declining cap using the methodology from the compliance period of 2015 to 2017, inclusive.

(H) Establish allowance banking rules that discourage speculation, avoid financial windfalls, and consider the impact on complying entities and volatility in the market.

(I) Report to the Legislature, by December 31, 2025, on the progress toward meeting the greenhouse gas emissions reduction targets established pursuant to Sections 38550 and 38566 and the leakage risk posed by the regulation. The state board shall include recommendations to the Legislature on necessary statutory changes to the program to reduce leakage, including the potential for a border carbon adjustment, while maintaining the state's ability to reach its targets.

(J) (i) Report to the Legislature, in consultation with the Independent Emissions Market Advisory Committee, established pursuant to Section 38591.2, if two consecutive auctions exceed the lower of the price containment levels established pursuant to subparagraph (B). The report shall assess the potential for allowance prices to reach the price ceiling for multiple auctions.

(ii) A report submitted to the Legislature pursuant to this section shall be submitted in compliance with Section 9795 of the Government Code.

(K) Report to the relevant fiscal and policy committees of the Legislature, including the Joint Committee on Climate Change Policies, on all of the following:

(i) Updates to the scoping plan prepared pursuant to Section 38561 prior to adopting the update.

(ii) Updates on the implementation of the scoping plan prepared pursuant to Section 38561.

(iii) Updates on the implementation of the market-based compliance mechanism adopted pursuant to this subdivision.

(d) Any regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570) shall ensure all of the following:

(1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.

(2) For regulations pursuant to Part 5 (commencing with Section 38570), the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.

(3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

(e) The state board shall rely upon the best available economic and scientific information and its assessment of existing and projected technological capabilities when adopting the regulations required by this section.

(f) The state board shall consult with the Public Utilities Commission in the development of the regulations as they affect electricity and natural gas providers in order to minimize duplicative or inconsistent regulatory requirements.

(g) The state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.

(h) This section shall remain in effect only until January 1, 2031, and as of that date is repealed, unless a later enacted statute which is enacted before that date, deletes or extends that date.

*(Amended by Stats. 2017, Ch. 135, Sec. 4. (AB 398) Effective July 25, 2017. Repealed as of January 1, 2031, by its own provisions. See later operative version added by Sec. 5 of Stats. 2017, Ch. 135.)*

**38562.** (a) On or before January 1, 2011, the state board shall adopt greenhouse gas emissions limits and emissions reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

(b) In adopting regulations pursuant to this section and Part 5 (commencing with Section 38570), to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce greenhouse gas emissions.

(2) Ensure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.

(3) Ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of this section receive appropriate credit for early voluntary reductions.

(4) Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.

(5) Consider cost-effectiveness of these regulations.

(6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.

(7) Minimize the administrative burden of implementing and complying with these regulations.

(8) Minimize leakage.

(9) Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

(c) In furtherance of achieving the statewide greenhouse gas emissions limit, the state board may adopt a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or

categories of sources that emit greenhouse gases, applicable from January 1, 2012, to December 31, 2020, inclusive, that the state board determines will achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources.

(d) Any regulation adopted by the state board pursuant to this part or Part 5 (commencing with Section 38570) shall ensure all of the following:

(1) The greenhouse gas emission reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the state board.

(2) For regulations pursuant to Part 5 (commencing with Section 38570), the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.

(3) If applicable, the greenhouse gas emission reduction occurs over the same time period and is equivalent in amount to any direct emission reduction required pursuant to this division.

(e) The state board shall rely upon the best available economic and scientific information and its assessment of existing and projected technological capabilities when adopting the regulations required by this section.

(f) The state board shall consult with the Public Utilities Commission in the development of the regulations as they affect electricity and natural gas providers in order to minimize duplicative or inconsistent regulatory requirements.

(g) The state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.

(h) This section shall become operative on January 1, 2031.

*(Repealed (in Sec. 4) and added by Stats. 2017, Ch. 135, Sec. 5. (AB 398) Effective July 25, 2017. Section operative January 1, 2031, by its own provisions.)*

**38562.2.** (a) This section shall be known, and may be cited, as the California Climate Crisis Act.

(b) For purposes of this section, "net zero greenhouse gas emissions" means emissions of greenhouse gases, as defined in subdivision (g) of Section 38505, to the atmosphere are balanced by removals of greenhouse gas emissions over a period of time, as determined by the state board.

(c) It is the policy of the state to do both of the following:

(1) Achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative greenhouse gas emissions thereafter. This goal is in addition to, and does not replace or supersede, the statewide greenhouse gas emissions reduction targets in Section 38566.

(2) Ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85 percent below the statewide greenhouse gas emissions limit established pursuant to Section 38550.

(d) The state board shall work with relevant state agencies to do both of the following:

(1) Ensure that updates to the scoping plan required pursuant to Section 38561 identify and recommend measures to achieve the policy goals stated in subdivision (c).

(2) Identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California to complement emissions reductions and achieve the policy goals stated in subdivision (c).

(e) (1) By December 31, 2035, the state board shall evaluate the feasibility and tradeoffs of achieving the policy goal stated in paragraph (2) of subdivision (c) relative to alternative scenarios that achieve the policy goals stated in paragraph (1) of subdivision (c), and report its findings and recommendations to the Legislature.

(2) The state board shall report to the Joint Legislative Committee on Climate Change Policies annually on progress toward the goals stated in subdivision (c).

(3) As part of its annual reporting requirements pursuant to Section 38592.6, the Legislative Analyst's Office, until January 1, 2030, shall conduct independent analyses of the state's progress toward the goals stated in subdivision (c) and shall prepare an annual report detailing its review, which may include recommendations for improvements in state actions taken to achieve the goals stated in subdivision (c). When appropriate, these annual reports may incorporate reviews of the state board's evaluation and reporting practices, and may include

recommendations for potential changes to advance transparency and accountability. A report prepared pursuant to this paragraph shall be made available to the public.

*(Amended by Stats. 2023, Ch. 51, Sec. 13. (SB 122) Effective July 10, 2023.)*

**38562.4.** (a) For purposes of this section, the following definitions apply:

(1) "Scope 1 emissions" means all direct emissions from sources that are owned or controlled by the state agency, including, but not limited to, emissions from onsite fossil fuel combustion and fleet fuel consumption.

(2) "Scope 2 emissions" means all indirect emissions from sources that are owned or controlled by the state agency, including, but not limited to, emissions that result from the generation of electricity, heat, or steam purchased by the state agency from a utility provider.

(3) "State agency" means any state agency, board, department, or commission.

(b) It is the intent of the Legislature that all state agencies aim to achieve net-zero emissions of greenhouse gases resulting from their operations, including scope 1 and scope 2 emissions, no later than January 1, 2035, or as soon as feasible thereafter.

(c) In making progress toward the goal set forth in subdivision (b), the Department of General Services, in consultation with the State Air Resources Board, shall, to the extent feasible, do all of the following:

(1) On or before July 1, 2024, and annually thereafter until the goal set forth in subdivision (b) has been achieved, publish on its internet website or other publicly available location, an inventory of the greenhouse gas emissions of state agencies for the prior calendar year.

(2) On or before January 1, 2026, develop and publish, on its internet website or other publicly available location, a plan that describes required actions and investments for achieving the goal set forth in subdivision (b) and an estimate of the costs associated with the required actions and investments.

(3) Beginning June 30, 2028, and every two years thereafter until the goal set forth in subdivision (b) has been achieved, develop and publish, on its internet website or other publicly available location, an updated plan that includes a description of state agencies' progress, and any changes to the required actions and investments, toward achieving the goal set forth in subdivision (b).

(4) Ensure that the required actions and investments identified pursuant to paragraphs (2) and (3) are incorporated into the sustainability roadmaps of all state agencies.

(5) Subject to an appropriation by the Legislature, provide information, training, coordination, best practices, and other technical assistance to state agencies to help those state agencies implement the required actions and investments identified pursuant to paragraphs (2) and (3).

(d) State agencies shall incorporate the required actions and investments identified pursuant to subdivision (c) into their future budget proposals, subject to appropriation by the Legislature, in order to achieve the goal set forth in subdivision (b).

(e) Beginning December 31, 2027, and every two years thereafter, until the goal set forth in subdivision (b) is achieved, the Department of General Services shall report to the Legislature on the progress toward achieving that goal, including on both of the following:

(1) The overall greenhouse gas emissions from all state agencies and a summary of actions taken by state agencies since the submission of the last report.

(2) Barriers that are hindering progress and suggested actions that the Legislature could take to reduce those barriers.

*(Added by Stats. 2022, Ch. 368, Sec. 1. (SB 1203) Effective January 1, 2023.)*

**38562.5.** When adopting rules and regulations pursuant to this division to achieve emissions reductions beyond the statewide greenhouse gas emissions limit and to protect the state's most impacted and disadvantaged communities, the state board shall follow the requirements in subdivision (b) of Section 38562, consider the social costs of the emissions of greenhouse gases, and prioritize both of the following:

(a) Emission reduction rules and regulations that result in direct emission reductions at large stationary sources of greenhouse gas emissions and direct emission reductions from mobile sources.

(b) Emission reduction rules and regulations that result in direct emission reductions from sources other than those specified in subdivision (a).

*(Amended by Stats. 2017, Ch. 561, Sec. 119. (AB 1516) Effective January 1, 2018.)*

**38562.7.** Each scoping plan update developed pursuant to Section 38561 shall identify for each emissions reduction measure, including each alternative compliance mechanism, market-based compliance mechanism, and potential monetary and nonmonetary incentive, the following information:

(a) The range of projected greenhouse gas emissions reductions that result from the measure.

(b) The range of projected air pollution reductions that result from the measure.

(c) The cost-effectiveness, including avoided social costs, of the measure.

*(Amended by Stats. 2017, Ch. 561, Sec. 120. (AB 1516) Effective January 1, 2018.)*

**38563.** Nothing in this division restricts the state board from adopting greenhouse gas emission limits or emission reduction measures prior to January 1, 2011, imposing those limits or measures prior to January 1, 2012, or providing early reduction credit where appropriate.

*(Added by Stats. 2006, Ch. 488, Sec. 1. Effective January 1, 2007.)*

**38564.** The state board shall consult with other states, and the federal government, and other nations to identify the most effective strategies and methods to reduce greenhouse gases, manage greenhouse gas control programs, and to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs.

*(Added by Stats. 2006, Ch. 488, Sec. 1. Effective January 1, 2007.)*

**38565.** The state board shall ensure that the greenhouse gas emission reduction rules, regulations, programs, mechanisms, and incentives under its jurisdiction, where applicable and to the extent feasible, direct public and private investment toward the most disadvantaged communities in California and provide an opportunity for small businesses, schools, affordable housing associations, and other community institutions to participate in and benefit from statewide efforts to reduce greenhouse gas emissions.

*(Added by Stats. 2006, Ch. 488, Sec. 1. Effective January 1, 2007.)*

**38566.** In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.

*(Added by Stats. 2016, Ch. 249, Sec. 2. (SB 32) Effective January 1, 2017.)*

**38568.** (a) Contingent upon appropriation by the Legislature, to better assist the state in achieving its greenhouse gas emissions reduction goals, the state board shall do all of the following with respect to incentive programs administered by the state board:

(1) To improve the state board's ability to isolate the greenhouse gas emissions reductions for each of its incentive programs, the state board shall establish a process to formally identify any overlap among any incentive programs that share the same objectives.

(2) To improve its ability to identify the effectiveness of each of its incentive programs in reducing greenhouse gas emissions, the state board shall develop a process to define, collect, and evaluate data on the behavioral changes that result from each of its incentive programs.

(3) To better demonstrate that its incentive programs are as effective as possible in achieving specific socioeconomic benefits, the state board shall develop a process to define, collect, and evaluate data that will translate to metrics demonstrating the socioeconomic benefits that result from each of its incentive programs.

(4) The state board shall enter into a contract with either the University of California or the California State University to collect the information necessary to better isolate greenhouse gas emission reductions and

socioeconomic benefits ascribed to its incentive programs. The findings from that contract shall inform the processes and methodologies implemented by the state board.

(5) (A) The state board shall use the information collected pursuant to paragraphs (1) and (2) to refine any greenhouse gas emissions estimates of its incentive programs that are included in its annual reports to the Legislature, funding plans, or any long-term planning documents or reports.

(B) The state board shall use the metrics and data collected pursuant to paragraph (3) to make any funding and design recommendations in its annual reports to the Legislature or funding plans based on the efficacy and costs of its incentive programs in providing socioeconomic benefits.

(b) The state board shall complete the requirements of paragraphs (1) to (4), inclusive, of subdivision (a) within three years of receiving an appropriation from the Legislature for the purposes of this section.

(c) For purposes of this section, "incentive program" means an incentive program administered by the state board that is included in the audit entitled "California Air Resources Board: Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals" (Report Number 2020-114) conducted by the California State Auditor.

*(Added by Stats. 2021, Ch. 714, Sec. 1. (AB 1261) Effective January 1, 2022.)*





**Tanya DeRivi**

Senior Director, California Climate and Fuels

August 17, 2023

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

(Submitted via the Workshop Comment Submittal Form and to [ctworkshop@arb.ca.gov](mailto:ctworkshop@arb.ca.gov) email)

**Re: WSPA 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 (CARB) Public Workshop: Potential Amendments to the Cap-and-Trade Regulation, hosted on July 27, 2023.<sup>1</sup> 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 appreciates the information CARB shared during the public workshop regarding the potential amendments to the Cap-and-Trade Regulation. We are supportive of utilizing market-based approaches like Cap-and-Trade to help achieve California's greenhouse gas (GHG) reduction goals and appreciate CARB's inclusion of carbon capture, utilization, and storage (CCUS) and carbon dioxide removal (CDR) technology options needed to achieve the State's decarbonization objectives.

WSPA encourages CARB to consider how potential amendments to the Cap-and-Trade Regulation may impact gasoline costs in California. Senate Bill (SB) X1-2 (2023) directs State agencies to evaluate how to ensure that petroleum and alternative transportation fuels are adequate, affordable, reliable, and equitable. The California Energy Commission found that the Cap-and-Trade Regulation and the Low Carbon Fuels Standard (LCFS) together add approximately 32 cents per gallon to the cost of gasoline.<sup>2</sup> It is essential for CARB to minimize further impacts, given both the legislative directive in SB X1-2 and ongoing supply constraints for transportation fuels, which exacerbate existing impacts. WSPA is concerned that proposed amendments to the Cap-and-Trade Regulation could further compromise the supply reliability of critical transportation fuels, a consequence of which could increase energy costs at a time when energy affordability is a pressing priority for many Californians.

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, and appreciates CARB's inclusion of carbon-negative technologies within the Cap-and-Trade framework. These carbon-negative technologies are essential to achieve the State's 2045 carbon neutrality target,

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<sup>1</sup> CARB. California Public Workshop: Potential Amendments to the Cap-and-Trade Regulation. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop\\_July272023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop_July272023_0.pdf). Accessed: August 2023.

<sup>2</sup> Based on OPIS, EIA, API, and AAA data. CEC staff presentations available at: <https://www.energy.ca.gov/event/workshop/2022-11/commissioner-hearing-california-gasoline-price-spikes-refinery-operations>. Accessed: June 2023.

as outlined in the 2022 Scoping Plan Update. WSPA also supports CARB's introduction of new benchmarks and allowances for drop-in biogenic fuels in its proposal.

However, WSPA opposes any changes to the allowance mechanisms that could retrospectively adjust allowance budgets, which could introduce volatility and instability to the carbon market. Separately, we have significant concerns about the "one-product, one-benchmark" approach for oil and gas production, which could lead to unintended emissions leakage.

Our detailed comments are provided below:

**1. CARB must weigh technology readiness, implementation uncertainty, and the need to maintain a stable market when considering adjustments to the 2025-2030 allocation caps**

CARB presented scenarios that would make adjustments to the 2025-2030 allocation caps based on GHG reduction targets of 40%, 48%, or 55% from 1990 levels by 2030. CARB also presented hypothetical linear decline scenarios for 2021 to 2030 that estimated allowance reductions that *could have* been achieved beyond the allocation caps in the 2016 Cap-and-Trade Regulation, based on information from the 2022 Scoping Plan Update, the updated 2021 GHG Emission Inventory, and recent State climate policy. CARB proposed to decrease the 2025-2030 allocation caps beyond the GHG reduction targets based on the "cumulative" reductions that could have been achieved under the hypothetical linear decline scenarios.

*First*, WSPA opposes any methodology for assessing allocation cap adjustments for 2025-2030 that attempts to incorporate hypothetical reductions for previous years. Such methodologies would retroactively modify or reduce historical allowance pools that have already been distributed (i.e., via auction or direct allocation) or banked, creating a disincentive for companies to maximize their GHG emissions reductions. The Cap-and-Trade program depends on stability and predictability in order to facilitate long-term decarbonization planning. Investment in sustainable and low-carbon initiatives requires significant lead time, and companies must be able to depend on a stable and reliable allowance market to make these investments. Similarly, companies must be able to utilize allowance banking effectively to undertake longer-term, higher-capital investments that are necessary to achieve the State's carbon neutrality goals. By removing allowances from budget years prior to the amendments, CARB would set a concerning precedent that would undermine confidence in the Cap-and-Trade program as a market-based GHG mitigation mechanism.

*Second*, CARB's 55% GHG reduction target may not be achievable by 2030 with readily available technology. CARB's 2022 Scoping Plan modeling found that even a 48% GHG reduction target may not be achievable by 2030. As CARB acknowledged in the July 27<sup>th</sup> workgroup meeting, the 2022 Scoping Plan Update scenario<sup>3</sup> relied on a significant amount of mechanical carbon dioxide removal, including carbon capture utilization and storage, and renewable hydrogen, among others. These technologies have yet to be deployed in the State at the rates necessary to reach a 48% reduction target by 2030. These concerns would only be amplified under a 55% reduction target scenario. Assembly Bill (AB) 32

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<sup>3</sup> CARB. 2022 Scoping Plan for Achieving Carbon Neutrality, Table 2-3 Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed: August 2023.

(2006) requires CARB to consider technological feasibility and cost-effectiveness in regulating GHG emissions.<sup>4</sup> WSPA urges CARB to account for near-term reduction limits using readily available technologies, in accordance with this statutory mandate. WSPA further urges CARB to consider the costs of these technologies in setting GHG reduction targets, to ensure that GHG reductions are cost-effective.

While WSPA strongly supports the use of carbon-negative technologies and low-carbon fuels to achieve GHG reductions, we also urge CARB to include a regulatory “safety valve” to mitigate implementation uncertainty associated with the deployment of these and other technologies. Delays in deployment due to regulatory uncertainties, policy constraints or other commercial factors, could hinder the projected amount of GHG reductions achieved by 2030. For instance, California Environmental Quality Act (CEQA) review and other regulatory proceedings can cause significant delays in project implementation without a streamlined process. Similarly, SB 905 (2022) restricts implementation of pipeline projects to transport carbon dioxide (CO<sub>2</sub>) pending regulatory actions by the federal Pipeline and Hazardous Materials Safety Administration<sup>5</sup> (PHMSA). This restriction will stall the majority of large-scale CCS project developments, and likely all development of such projects at refineries. Maintaining a steady and stable market under the Cap-and-Trade program ensures that industry can address this implementation uncertainty and continue to reliably invest and make developments in low-carbon technologies.

To assuage this uncertainty and preserve the stability of the carbon market, WSPA recommends that CARB adopt a mechanism that would move the allowances under the three proposed scenarios into Allowance Price Containment Reserves (APCR) Tier 1. Moving the allowances into APCR Tier 1, rather than distributing them, will 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. Such a mechanism would still incentivize GHG reductions at the desired schedule, but would also preserve the price-containing mechanism necessary for the success of the program. Without the protections provided by this mechanism, the market price of allocations may rise dramatically to accommodate CARB’s aggressive short-term GHG reduction goals, resulting in detrimental consequences for California’s industries and harming long-term reduction goals. Abrupt increases in carbon market pricing could lead to higher operational costs for industry, which may struggle to absorb the added financial burden, leading to job losses, higher energy costs and reduced economic growth. Moreover, an unexpected surge in carbon market prices may disrupt long-term planning and investments in low-carbon technologies.

CARB should be aware that the cost of several key abatement and creditable actions related to hydrogen production and their economic viability may change substantially in part depending on California’s policy and incentives. As outlined in the 2022 Scoping Plan

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<sup>4</sup> California Health & Safety Code § 38560. Available at: <https://law.justia.com/codes/california/2021/code-hsc/division-25-5/part-4/section-38560/>. Accessed August 2023.

<sup>5</sup> SB905, Chapter 359, Statutes of 2022, Section 71465(a). Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=202120220SB905](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB905). Accessed August 2023.

Update,<sup>6</sup> California's long-term GHG reduction goals require a substantial increase in the supply of hydrogen. As a key component in decarbonizing various sectors including transportation fuels, hydrogen would play a key role in a transition to a low-carbon economy. The timeline to develop and scale-up hydrogen production, distribution, and utilization processes poses a challenge. The lack of regulations on streamlined permitting processes may inadvertently disincentivize long-term and timely investments in hydrogen technologies, leading to uncertainties in the market. For California to successfully realize its GHG targets, it is crucial for CARB to promptly address these concerns and create a conducive environment that fosters hydrogen development and deployment.

WSPA urges CARB to broadly consider these and other indirect impacts in conducting its environmental review under CEQA. CARB must consider, consistent with CEQA Guidelines, the impacts of a proposed project, which include any "cumulative and growth-inducing impacts."<sup>7</sup> CARB must also assess "a reasonable range of alternatives to the proposed project, which could feasibly attain most of the project objectives but could avoid or substantially lessen any of the identified significant impacts."<sup>8</sup>

**2. WSPA maintains its previous position that post-2030 targets as market signals are a necessity for the multi-decade capital investments to deploy these necessary technologies (electrification, hydrogen, low carbon fuels, CCUS/CDR, etc.)**

AB 398 (2017, E. Garcia)<sup>9</sup> expressly authorized CARB to extend the Cap-and-Trade program through December 31, 2030, and further instructed that CARB strengthen important cost containment mechanisms within the program, including a price ceiling, price containment points below that price ceiling, and a compliance offset program limit that increases in 2026. In accordance with this statutory mandate, CARB must ensure that its Cap-and-Trade program is technologically feasible and cost-effective.

The passage of AB 398 indicates that CARB requires legislative authorization to extend the Cap-and-Trade program beyond 2030. As such, WSPA encourages CARB to work with the State Legislature to establish legally defensible post-2030 targets that will send clear market signals for the multi-decade capital investments industries will need to make to deploy decarbonization technologies. We look forward to working with CARB and State policy leaders on such an effort to extend the program beyond 2030.

As WSPA has pointed out in its previous comment letter dated July 7, 2023,<sup>10</sup> post-2030 GHG reduction targets are necessary in order to provide assurance for long-term

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<sup>6</sup> Ibid, Figures 4-2 and 4-7.

<sup>7</sup> California Code of Regulations Title 17, § 60004.2. Environmental Impact Analysis. Available at: <https://www.law.cornell.edu/regulations/california/17-CCR-60004.2>. Accessed: August 2023.

<sup>8</sup> Ibid.

<sup>9</sup> California Legislature. 2017. Assembly Bill 398, California Global Warming Solutions Act of 2006: market-based compliance mechanisms: fire prevention fees: sales and use tax manufacturing exemption. Available at: [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB398](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB398). Accessed: August 2023.

<sup>10</sup> WSPA. 2023. WSPA Comments on the Joint California-Québec Public Workshop: Potential Amendments to the Cap-and-Trade Regulation. July 7. Available at: [https://ww2.arb.ca.gov/system/files/webform/public\\_comments/4411/WSPA%20Cap-and-Trade%20Workshop%20Comment%20Letter%207-7-2023.pdf](https://ww2.arb.ca.gov/system/files/webform/public_comments/4411/WSPA%20Cap-and-Trade%20Workshop%20Comment%20Letter%207-7-2023.pdf). Accessed: August 2023.

investments in low-carbon technologies. Upgrading utility infrastructure for electrification, installing hydrogen fueling infrastructure, transportation pipelines, and production facilities, and developing low-carbon and negative-carbon technologies will require multi-decade capital investments. By establishing post-2030 GHG reduction targets under the Cap-and-Trade program, more certainty can be provided for project investments where the emissions reductions may not be fully realized until 2030 or later.

WSPA encourages CARB to consider the implementation timelines and potential for delays for the large-scale infrastructure and technology deployments necessary to achieve GHG reductions when establishing near-term and post-2030 targets. Rather than modeling a linear annual decrease in allowance budget scheduled through 2030, CARB should consider a curved trendline which is slower in early years and faster in later years, similar to what is being considered for the LCFS regulation, to account for these development timelines.

### **3. WSPA reaffirms the need for carbon negative technologies under Cap-and-Trade to achieve the 2045 target for carbon neutrality under the 2022 Scoping Plan Update**

As WSPA has pointed out in its previous comment letter dated July 7, 2023,<sup>11</sup> CCUS and CDR technologies will be critical to the overall success of the 2022 Scoping Plan Update to achieve carbon neutrality by 2045. WSPA supports CARB's inclusion of CCUS and CDR technologies under the Cap-and-Trade program, and we agree that significant improvements are necessary to streamline and accelerate the permitting process for all negative-carbon technologies.

WSPA further recommends that CARB amend the Cap-and-Trade Regulation to include a mechanism for generating additional allowances based on emissions reductions achieved by CDR and CCUS. Such a mechanism would provide incentive for companies to take on the long-term, costly investments and implementation uncertainty associated with these technologies, while facilitating substantial emissions reductions in future years. CARB has already established a placeholder for such a concept in California Code Regulations title 17 Section 95852(g),<sup>12</sup> and WSPA encourages CARB to finalize this concept.

In order to ensure the successful development of CCUS and CDR technologies, WSPA recommends CARB establish and clarify the roles of State agencies in developing standards, streamlining permitting, and establishing land use authority. We encourage CARB to work with the California legislature to remove the provision in SB 905 that prohibits the use of pipelines to transport carbon dioxide and develop an improved project environmental review process under CEQA for an expedient deployment of CCUS and CDR technologies.

WSPA urges CARB to utilize the existing market-based regulatory programs – including the Cap-and-Trade framework and the corresponding Mandatory Reporting Regulation – to develop a robust CDR program, rather than pursue an additional rulemaking process, such

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<sup>11</sup> Ibid.

<sup>12</sup> California Code of Regulations Title 17, 95852. Emission Categories Used to Calculate Compliance Obligations. Available at: <https://www.law.cornell.edu/regulations/california/17-CCR-95852>. Accessed: August 2023.

as that proposed under SB 308,<sup>13</sup> which would require CARB to establish a separate CDR market rather than provide CARB flexibility to incorporate CDT rules into the Cap-and-Trade framework. The addition of CDR to Cap-and-Trade would provide entities with another tool to achieve the emission reductions necessary to meet the State's climate goals and further develop Cap-and-Trade as an economy-wide emissions reduction program. Creating an additional market when a successful market currently exists would be duplicative and would create an unnecessary compliance obligation secondary to the existing Cap-and-Trade requirements, further burdening emitting entities.

#### 4. WSPA supports CARB's proposal to include drop-in biogenic fuels in the Cap-and-Trade program

Including drop-in biogenic fuels supports efficient low carbon fuel production to meet the ongoing demands in the on-road, aviation, and off-road transportation sectors. Such fuels are an essential part of the path to decrease petroleum fuel production in line with demand under the 2022 Scoping Plan Update—CARB noted in a workshop presentation that *“modifications are occurring to existing in-state petroleum refineries to manufacture biogenic fuel.”*<sup>14</sup> WSPA encourages CARB to develop robust benchmarks and allocation methodology for drop-in biogenic fuels with input from impacted stakeholders.

As WSPA pointed out in the numerous comment letters on the 2022 Scoping Plan Update,<sup>15,16</sup> supporting renewable fuels with low carbon intensity is a technologically and economically feasible approach to achieve California's GHG reduction goals. CARB's proposed allocation for drop-in biogenic fuel production aligns with this perspective and allows renewable fuels to play an important role in California's decarbonization. WSPA supports an allowance mechanism for biogenic fuels produced and encourages the in-state development of low-carbon fuels. Such a mechanism would further the success of other key State programs such as SB 1383 (2016) and forestry management programs, which increase the supply of biogenic feedstocks that can be utilized in hard-to-decarbonize and hard-to-electrify sectors.

Given the extended timelines required for electrical grid infrastructure upgrades, drop-in biogenic fuels and other renewable fuels will play a key role in the State's decarbonization, not only as a bridge between existing technologies and electrification, but also as means to address intermittency concerns within the electric grid, as the State transitions to renewables generation while simultaneously expanding energy demand. WSPA encourages CARB to develop additional policy mechanisms to support the production and innovation of biogenic and low carbon fuels in-state. This approach is supported by AB 398, which outlines provisions for allocation of allowances to aid industries in meeting compliance

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<sup>13</sup> California Legislature. 2022. Senate Bill 308, Carbon Dioxide Removal Market Development Act. February 2. Available at: [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=202320240SB308](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB308). Accessed: August 2023.

<sup>14</sup> CARB. California Public Workshop: Potential Amendments to the Cap-and-Trade Regulation, Slide 54. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop\\_July272023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop_July272023_0.pdf). Accessed: August 2023.

<sup>15</sup> WSPA. 2022. Comments on the Draft 2022 Scoping Plan Update. June 24. Available at: <https://www.arb.ca.gov/lists/com-attach/4416-scopingplan2022-BnEAdVQIBTdRCAZn.pdf>. Accessed: June 2023.

<sup>16</sup> WSPA. 2022. Comments on the Final 2022 Scoping Plan Update and Appendices. December 15.

requirements.<sup>17</sup> Moreover, AB 32 reinforces this by instructing CARB to establish regulations aimed at mitigating any potential leakage.

WSPA also encourages CARB to consider impacts from electrification versus increased reliance on low-carbon fuels in conducting its required environmental analysis under CEQA. California currently faces unresolved grid reliability issues based on challenges in meeting demand during extreme heat waves. Recent studies have found that factors affecting grid reliability are predicted to increase in future years, as California is expected to experience continued greater demand for electricity. CARB should analyze these important cumulative and indirect impacts in accordance with 17 C.C.R. § 60004.2.

WSPA would like to highlight the importance of using publicly available data from verified sources as CARB develops the allocation method and benchmarks for drop-in biogenic fuels. Further, a definition of drop-in biofuels is needed to understand how the changes will apply to current and planned biofuel operations. We look forward to working with CARB to develop a method that can support efficient low carbon fuel production moving forward. We recommend a separate work group to address changes to the Mandatory Greenhouse Gas Reporting Regulation.

**5. WSPA is concerned that unreliable out-of-state data sources would bias a “one-product, one-benchmark” approach for thermal and non-thermal extraction methods of oil and gas production and lead to emissions leakage**

CARB is proposing a product-based allocation benchmark that would unify the standards for thermal production using enhanced oil recovery (EOR) and non-thermal production. According to CARB, this unified standard helps account for the difference in carbon intensity between in-state and out-of-state crude oil extraction. WSPA opposes reliance on a unified standard.

*First*, a unified standard puts California industry at a significant disadvantage. California is the only State to maintain data on the carbon intensity of crude production. The oil and gas production process in California is rigorously documented and modeled through the Oil Production Greenhouse Gas Emissions Estimator (OPGEE), leading to a reasonable degree of certainty in the calculations of emission intensity for California crude production. The OPGEE model was developed by Stanford University in conjunction with CARB, the California Environmental Protection Agency, and several industry partners, and focuses mainly on California and Alaska oilfields.<sup>18</sup> By contrast, estimates for out-of-state crude production are not reliable. Carbon intensity calculations for crude imported from many other countries are similarly unreliable due to inaccurate data on the range of production techniques used, the lack of confidence in the accuracy of data reported for specific production techniques, and out-of-date emission factors for production and transportation

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<sup>17</sup> California Legislature. 2017. Assembly Bill 398, California Global Warming Solutions Act of 2006: market-based compliance mechanisms: fire prevention fees: sales and use tax manufacturing exemption. Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB398](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB398). Accessed: August 2023.

<sup>18</sup> Stanford. Oil Production Greenhouse Gas Emissions Estimator User Guide & Technical Documentation. April 20, 2022. Available at: [https://eao.stanford.edu/sites/g/files/sbiybj22256/files/media/file/opgee\\_v3.0\\_methodology-3.pdf](https://eao.stanford.edu/sites/g/files/sbiybj22256/files/media/file/opgee_v3.0_methodology-3.pdf). Accessed: August 2023.

techniques. As a result, out-of-state data may significantly *underestimate* carbon intensity, putting California crude production at a disadvantage under a unified standard because of these untrustworthy data and modeling assumptions.

*Second*, a unified standard deemphasizes thermal enhanced recovery techniques. CARB's approach would discourage in-state production, raising concerns about the potential for emissions leakage to out-of-state entities where emissions cannot be accurately measured. CARB should account for these leakage impacts in conducting its CEQA analysis.<sup>19</sup>

WSPA urges CARB to conduct a thorough reevaluation of its carbon intensity data sources, ensuring that only publicly available and verified data are used. Additionally, WSPA advocates for maintaining an equal level of scrutiny for data pertaining to both in-state and out-of-state extraction techniques to ensure the proposal's integrity and accuracy. Until such time as all producers, globally and locally, are on an equal data quality footing, CARB should avoid using carbon intensity calculations for the purposes of Cap-and-Trade allowance allocation and should exercise great caution in relying upon carbon intensity calculations for other regulatory purposes as well.

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

Sincerely,



Tanya DeRivi  
Senior Director, Climate Policy

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<sup>19</sup> California Code of Regulations Title 17, § 60004.2. Environmental Impact Analysis. Available at: <https://www.law.cornell.edu/regulations/california/17-CCR-60004.2>. Accessed: August 2023.





**Tanya DeRivi**

Senior Director, California Climate and Fuels

October 26, 2023

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](mailto: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 October 5, 2023.<sup>1</sup> 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.

Assembly Bill (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. However, AB 32 places two key *limits* on CARB's broad authority to regulate emissions: (1) CARB must minimize the leakage potential of the actions taken; and (2) CARB must ensure that the emissions reductions are technologically feasible *and* cost-effective.<sup>2</sup> CARB should carefully consider these factors in revising the Cap-and-Trade program.

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.

WSPA encourages CARB to integrate carbon-negative technologies into the Cap-and-Trade framework to support their successful development and use. Including carbon capture, utilization, and storage (CCUS) and carbon dioxide removal (CDR) technology within the Cap-and-Trade program will be critical to achieving the State's decarbonization objectives. As CARB emphasized in the 2022 Scoping Plan Update, it will not be possible to meet the 2045 carbon neutrality target without the deployment CCUS and CDR technologies at significant scale. The Scoping Plan set targets for 20 million metric tons of carbon dioxide equivalents (MMTCO<sub>2e</sub>) removal and capture by 2030 and 100 MMTCO<sub>2e</sub> by 2045. However, deploying CDR and CCUS

<sup>1</sup> CARB. California Public Workshop: Potential Amendments to the Cap-and-Trade Regulation. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop\\_Oct052023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf) and [https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop\\_Oct052023\\_afternoon\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_afternoon_0.pdf). Accessed: October 2023.

<sup>2</sup> AB 32. Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=200520060AB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32). Accessed: October 2023.

technologies is currently infeasible at scale due to cost, technology readiness, and permitting barriers that delay even pilot projects. It is therefore imperative that CARB incentivize research and investment to support deployment of CCUS and CDR technologies at the scales required to meet the State's climate goals.

CARB must also ensure that the Cap-and-Trade amendments are consistent with other legislative goals. 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. In updating the Cap-and-Trade Regulation, CARB must consider impacts to gasoline costs consistent with SB X1-2. According to the California Energy Commission, the Cap-and-Trade Regulation and the Low Carbon Fuel Standard (LCFS) together add approximately 39 cents per gallon to the cost of gasoline.<sup>3</sup> The natural gas sector recently experienced similar supply constraints during periods of strong demand, challenging suppliers to deliver an adequate supply of affordable liquid fuels. The impacts of these cost increases are likely to be significant for California consumers. California continues to face serious supply constraints for transportation fuels, leading energy affordability to be a pressing priority for many Californians. The legislature recognized the importance of these impacts in enacting SB X1-2. Given these already-significant impacts, it is critical for CARB to ensure that its proposed Cap-and-Trade Regulation amendments do not considerably increase California fuel costs. WSPA is concerned that proposed amendments to the Cap-and-Trade Regulation could further compromise the supply reliability of critical transportation fuels, a consequence of which could increase energy costs and further burden California drivers, conflicting with clear legislative priorities in SB X1-2.

Overall, WSPA encourages CARB to adopt a Cap-and-Trade program that can maintain a steady and stable carbon market in California, while facilitating the continued development of critical carbon-negative technologies and integrating these technologies into the Cap-and-Trade framework. WSPA also supports CARB's proposal to expand biogenic emission exemptions within the Cap-and-Trade program to recognize the growth of biofuels within the State since 2010. However, WSPA strongly opposes CARB's inclusion of 'hypothetical' reductions for 2021-2024 budgets when assessing allocation cap adjustments for 2025-2030. Retrospective or cumulative allowance mechanisms accounting for these 'hypothetical' reductions would lead to unrealistic reduction requirements in allowances allocated to industrial entities and natural gas suppliers through potential Cap Adjustment Factors (CAFs) changes.

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<sup>3</sup> 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: October 2023.

Our detailed comments are provided below:

**1. CARB should not reduce industrial assistance allocations for 2025-2030 on 'hypothetical' reductions for historical inventories or allowance budgets.**

CARB presented three scenarios that would adjust the 2025-2030 annual allowance budgets based on specific GHG reduction targets. These targets are 40%, 48%, or 55% from 1990 levels by 2030. As part of these adjustments, CARB presented hypothetical linear decline scenarios for 2021 to 2030 that estimated allowance reductions that *could have* been achieved beyond the 2016 Cap-and-Trade Regulation, based on information from the 2022 Scoping Plan Update, the updated 2021 GHG Emission Inventory, and recent State climate policy. The proposed 2025-2030 adjustment includes industrial assistance allocations that would decrease based on what could have been achieved under the hypothetical linear decline scenarios. For example, CARB's first scenario, based on a 40% GHG reduction target, would reduce initial 2021 allowances by **11.5 million**. In calculating this proposed allocation adjustment, CARB first determined the total reductions achieved between 2012 and 2015, as reflected by the 2017 and 2022 GHG inventories—13.7 MMTCO<sub>2e</sub>— weighted by the level of Cap-and-Trade program participation, based on the percentage of AB 32 emission sources covered by the program—77%, as discussed in its July 27 workshop.<sup>4</sup> WSPA would caution that 77% of 13.7 MMTCO<sub>2e</sub> should be 10.5 MMTCO<sub>2e</sub>. CARB then applied this *same* level of reduction to *all* years from 2021 to 2030, based on a supposed 'linear decline.' According to this method, CARB proposed the 'cumulative reduction target' would be 115 million allowances based on actual GHG reductions achieved *beyond* the targeted levels. To help ensure such a substantial reduction adheres to the original AB 32 cost effectiveness requirements, WSPA urges that any allowances removed from the program only be removed from those available in the price ceiling.

However, as WSPA has previously emphasized, adjusting the 2030 emission target based on actual achieved reductions in previous years will severely impact the stability and predictability of the Cap-and-Trade program and harm long-term decarbonization planning efforts. CARB's proposed methodology would create a disincentive for companies to take early action to maximize their GHG emissions reductions and set a concerning precedent that would undermine confidence in the Cap-and-Trade program by retroactively manipulating the allowance market. This is contrary to the existing Cap-and-Trade framework, which recognizes early actions and is built around encouraging companies to undertake longer-term, higher-capital investments that are necessary to achieve the State's carbon neutrality goals. CARB should reconsider this 'cumulative reduction target' method and assure companies that early actions they take will not be used against them to restrict

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<sup>4</sup> CARB. July 27, 2023. California Public Workshop: Potential Amendments to the Cap-and-Trade Regulation. Slide 22. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop\\_July272023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop_July272023_0.pdf). Accessed: October 2023.

their future activities. The 2030 emission target should be 40% of the 1990 base year (i.e., 199 MMT CO<sub>2</sub>e) regardless of the actual GHG inventory values in interim years.

CARB's preferred scenario, based on a reduction target of 48%, creates additional challenges by artificially inflating required reductions well beyond the targets in AB 32. Under the 48% scenario, CARB would require a cumulative reduction of 265 million allowances by 2030, which assumes a 'linear decline' of 26.5 million every year from 2021 to 2030, equivalent to 8% of 1990 base year emissions from all AB 32 covered entities (e.g., 431 MMT CO<sub>2</sub>e \* 0.77 \* 0.08 = 26.5 MMT CO<sub>2</sub>e).<sup>5</sup> CARB would therefore effectively be requiring all covered entities to achieve additional reductions equivalent to 8% of the 1990 base year GHG emissions starting from 2021 in order to meet the 48% reduction goal. However, this level of reduction is inconsistent with CARB's prior findings in the 2022 Scoping Plan Update, where CARB determined that a 48% reduction would be achieved by setting the 2030 budget at 173 million allowances.<sup>6</sup> Instead, CARB's revised scenario would lower the 2030 budget to 139 million, an additional reduction of nearly 20%. This would place an unnecessary burden upon the California economy to achieve immediate additional emission reductions far greater than the 2022 Scoping Plan Update targets.

For example, all entities that received allowances within the industrial sector would be subject to substantial increases in compliance burdens based on CARB's proposed CAFs incorporating 'hypothetical' cumulative allowance reductions. Under the 2023 Vintage allocations, the total amount of allowances allocated to the industrial sector is approximately 34.6 million.<sup>7</sup> Using this metric as a baseline and applying the current CAFs, the total allocation (in the aggregate) would decline to approximately 23 million by 2030 under the current Cap-and-Trade program, which represents overall reductions of just over 30%.<sup>8</sup> However, under CARB's proposed 48% reduction scenario, the allowances to this sector would be cut down to (approximately) 16 million in 2030, a further 30% reduction beyond the current Regulation, which represents a cumulative reduction of approximately 32 million allowances to all entities in the industrial sector between 2025 and 2030.<sup>9</sup>

WSPA urges CARB to revise its methodology for calculating the annual budget and cumulative allowance reductions to eliminate consideration of 'hypothetical' reductions based on actual emissions levels in order to ensure that the Cap-and-Trade program remains consistent with AB 32, AB 398 (2017), and the 2022 Scoping Plan Update.

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<sup>5</sup> CARB. October 5, 2023. Cap-and-Trade Program Workshop: Potential Amendments to the Cap-and-Trade Regulation. Slide 16. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop\\_Oct052023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf). Accessed October 2023.

<sup>6</sup> Ibid.

<sup>7</sup> CARB. 2022. Cap-and-Trade Program Vintage 2023 Allocation Summary. Available at: <https://ww2.arb.ca.gov/sites/default/files/2022-12/nc-v2023%20Public%20Allocation%20Summary.pdf>. Accessed: October 2023.

<sup>8</sup> Ramboll calculation based on application of CARB's published CAFs for 2024-2030, and CARB's reported 2023 vintage allocation in the Natural Gas Suppliers sector. Actual allowances are subject to change based on production data.

<sup>9</sup> Ibid.

**2. CARB has not provided stakeholders with information to support a finding that a 55% GHG reduction target compared to 1990 levels is technologically feasible by 2030.**

CARB's 55% GHG reduction target scenario is not technologically feasible. In modeling used to support its 2022 Scope Plan Update, CARB found that even a 48% GHG reduction target may not be achievable by 2030. As CARB acknowledged in the July 27<sup>th</sup> and October 5<sup>th</sup> workgroup meetings,<sup>10,11</sup> the Scoping Plan's carbon neutrality target was *only* achievable by relying on a significant amount of mechanical CDR, CCUS, and renewable hydrogen, among other carbon-negative and low-carbon technologies. However, achieving a 48% reduction by 2030 will require significant *additional* reductions that will further depend on these technologies, but at present, these technologies have not been deployed at rates necessary to meet this target. These concerns would only be amplified under a 55% reduction target scenario.

AB 32 requires CARB to consider technological feasibility and cost-effectiveness in regulating GHG emissions. WSPA has expressed concerns on the feasibility of the 55% scenario in previous comment letters.<sup>12</sup> CARB has not provided stakeholders with information to find that a 55% GHG reduction target might be achievable, however, WSPA understands that the Environmental Justice Advisory Committee (EJAC) has requested the 55% scenario be included. If this scenario continues to be included in discussions about the Cap-and-Trade program, CARB must also include modeling of the leakage risks that will result from the reduction when discussing the viability of this scenario.

WSPA continues to urge CARB to consider near-term reductions using readily available technologies, in accordance with AB 32's statutory mandate. CARB must set reduction targets based on achievable limits using these technologies, while facilitating investment in emerging technologies like CDR and CCUS in order to increase the scale at which these technologies can be deployed. Mandating infeasible reductions now will harm these efforts. For similar reasons, CARB must also consider the cost-effectiveness of these reductions in order to comply with AB 32's legislative directive and to encourage investment in CDR and CCUS technologies.

**3. CARB should freeze the current allowance caps to allow adequate time to develop and deploy CDR and CCUS technologies.**

As detailed above, CARB's proposed methodology for incorporating 'hypothetical' cumulative allowance reductions based on additional reductions achieved in early

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<sup>10</sup> CARB. July 27, 2023. California Public Workshop: Potential Amendments to the Cap-and-Trade Regulation. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop\\_July272023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-07/nc-CapTradeWorkshop_July272023_0.pdf). Accessed: October 2023.

<sup>11</sup> CARB. October 5, 2023. Cap-and-Trade Program Workshop: Potential Amendments to the Cap-and-Trade Regulation. Slide 16. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop\\_Oct052023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf). Accessed October 2023.

<sup>12</sup> 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](https://ww2.arb.ca.gov/system/files/webform/public_comments/5326/WSPA%20Cap-and-Trade%20July%202023%20Workshop%20Comments%208-17-2023.pdf). Accessed: October 2023.

implementation years will significantly reduce the 2025-2030 allowance budgets and will result in a dramatic and rapid reduction of allowances allocated to all industrial facilities, far beyond what was anticipated under the previous rulemaking.

CARB's preferred scenario is based on a 48% reduction target, consistent with recommendations from the 2022 Scoping Plan Update. That Scoping Plan determined that the 2030 GHG reduction target should be accelerated from 40% to 48% in order to meet the AB 1279 (2022) target of 85% below 1990 levels by 2045.<sup>13</sup> However, the Update recognized that achieving this level of reductions is dependent on the *immediate deployment* of CCUS and CDR technology, 20 MMTCO<sub>2</sub>e by 2030 and 100 MMTCO<sub>2</sub>e by 2045. While WSPA agrees that CCUS and CDR are absolutely necessary elements to achieve a 48% reduction target, consistent with the 2022 Scoping Plan Update, the feasibility of implementing these technologies at the required scale is still uncertain. No such projects have yet been implemented at scale in the State. CARB's 48% reduction scenario anticipates that nearly 20% of the 265 million cumulative allocation reductions would come from the transportation sector. However, these reductions will not be feasible without the deployment of CCUS and CDR technologies. As discussed in WSPA's comments on the AB 32 Scoping Plan Recirculated Environmental Analysis dated October 24, 2022,<sup>14</sup> deploying these technologies will require the State to make substantial changes to streamline and speed-up permitting for CCUS projects. WSPA urges CARB to take action to incorporate the CCS Protocol into the Cap-and-Trade Regulation in order to incentivize petroleum refineries to participate in CCS projects. The current Cap-and-Trade Regulation allows suppliers of CO<sub>2</sub> to subtract emissions from their compliance obligation through a Board-approved carbon capture and geologic sequestration quantification methodology that ensures that the emissions reductions are real, permanent, quantifiable, verifiable, and enforceable. However, the Regulation also requires the Board-approved quantification methodology to be incorporated into the Regulation before it can be used to reduce a compliance obligation.<sup>15</sup> WSPA requests that CARB incorporate a "quantification methodology" (i.e., a CCS protocol) into the Cap-and-Trade Regulation or remove the requirement for incorporating the Board-approved quantification methodology in the Regulation.

Following the adoption of SB 905 (2022),<sup>16</sup> WSPA recommended that CARB work with the Office of Planning and Research to develop an improved project environmental review under the California Environmental Quality Act (CEQA) to ensure that regulatory

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<sup>13</sup> CARB. 2022. 2022 Scoping Plan Update. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed: October 2023.

<sup>14</sup> WSPA. Comments on the Recirculated Draft Environmental Analysis for the Draft 2022 Scoping Plan Update. October 24, 2022. Available at: <https://www.arb.ca.gov/lists/com-attach/35-sp22-recirc-ea-ws-UzICZlCJAmlKPIAP.pdf>. Accessed: October 2023.

<sup>15</sup> CARB. Cap and Trade Regulation Section 95852 (g). 2018. Available at: [https://ww2.arb.ca.gov/sites/default/files/2021-02/ct\\_reg\\_unofficial.pdf](https://ww2.arb.ca.gov/sites/default/files/2021-02/ct_reg_unofficial.pdf). Accessed October 2023.

<sup>16</sup> SB 905, Chapter 359, Statutes of 2022, Section 71465(a). Available at: [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=20210220SB905](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=20210220SB905). Accessed: October 2023.

proceedings do not unjustly stall or halt these crucial technologies. Other concerns include (1) the lack of clarity of authority between CARB and its sister agencies regarding permitting of technologies, installation of pipelines, and land use authorities and (2) the prohibition of use of pipelines to transport CO<sub>2</sub> until a federal rulemaking is completed by the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), which could take years to finalize. If not addressed, these issues will cause significant delays and interfere with the State's ability to meet near-term reduction targets.

In light of these potential delays and the centrality of CCUS to the proposed Cap-and-Trade targets, along with the concerns raised in the previous points, WSPA recommends that CARB freeze the reduction of allowance caps under the current Cap-and-Trade program until at least one large-scale CCUS project has been successfully implemented. Once it has been demonstrated that CCUS can be deployed in California and a roadmap has been provided for permitting and infrastructure development, CARB could include an assumed rate of CCUS deployment along with other market signals to determine the appropriate rate of statewide GHG reductions. This approach could result in a non-linear reduction, beginning with gradual reductions in the early years and leading to more rapid decreases in the later years of the program when CCUS technologies are readily available.

Including CCUS under the Cap-and-Trade program would incentivize the deployment of CCUS technologies in line with the 2022 Scoping Plan Update's schedule and will still achieve the same overall reductions without jeopardizing industry's ability to meet the reduction targets or penalizing them for regulatory delays outside of their control. This approach would also be more consistent with AB 32's clear directives that CARB consider technical feasibility and cost-effectiveness in promulgating its regulations.

#### **4. CARB's proposed adjustments to the Cap-and-Trade framework will increase fuel costs in California, which is inconsistent with the legislature's directive in SB X1-2.**

CARB has taken several recent actions to address emissions from the transportation sector by increasing the number of zero-emission vehicles (ZEVs). For instance, CARB recently finalized its Advanced Clean Cars II and Advanced Clean Fleets regulations requiring significant increases in ZEV sales through 2035 and 2040.<sup>17,18</sup> However, CARB has acknowledged that internal combustion engine vehicles will continue to operate in California well past 2035, even with CARB's 100% ZEV sales mandates. Reducing transportation emissions therefore requires CARB to continue to consider and address internal combustion engine vehicles and petroleum and alternative transportation fuels.

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<sup>17</sup> CARB. 2022. Advanced Clean Cars II. Available at: <https://ww2.arb.ca.gov/rulemaking/2022/advanced-clean-cars-ii>. Accessed: October 2023.

<sup>18</sup> CARB. 2023. Advanced Clean Fleets. Available at: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets>. Accessed: October 2023.

SB X1-2 requires State agencies to “ensure that the supply of petroleum and alternative transportation fuels is affordable, reliable, equitable, and adequate.”<sup>19</sup> WSPA has been working diligently with the California Energy Commission (CEC) and CARB as they develop the Transportation Fuels Assessment Report and Transportation Fuels Transition Study to facilitate a transition to a carbon neutral transportation sector. Consistent with SB X1-2, this transition must minimize market volatility and impacts to fuel costs.

As proposed, the combined impacts of the Cap-and-Trade and LCFS programs may significantly increase transportation fuel costs. CARB’s proposed adjustments to the Cap-and-Trade allocation cap starting in 2025 will substantially increase the program compliance cost for the industry, as detailed above, which will likely have adverse impacts to transportation fuel costs for consumers. At the same time, CARB is considering a potential step down of the carbon intensity benchmark in 2025 for its LCFS program, which may range from 2%-5%.<sup>20</sup> CARB’s Standardized Regulatory Impact Assessment (SRIA) estimates that the proposed LCFS amendments will increase gasoline and diesel cost in 2025 by \$0.47 and \$ 0.59 per gallon, respectively.<sup>21</sup>

These proposed programmatic updates will exacerbate existing state-wide issues that already impact transportation fuel costs. As of July 2023, California’s motor vehicle fuel excise tax rate has increased to \$0.58/gallon.<sup>22</sup> This tax is increased every calendar year based on the California Consumer Price Index (CPI) for inflation. The California Legislative Analyst’s Office (LAO) expects the annual inflation to remain at around 4%,<sup>23</sup> which indicates that the tax rate in July 2025 will increase to approximately \$0.62/gallon. Under this tax rate, consumers will already bear heightened fuel transportation costs that will be substantially increased under CARB’s current Cap-and-Trade and LCFS proposals.

The combined impact of these factors will result in increased fuels costs in 2025, counter to the legislature’s express directive in SB X1-2. CARB must account for cumulative cost impacts when designing and updating the suite of regulations that could impact the transportation fuels industry and all Californians.

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<sup>19</sup> SB X1-2. Available at: [https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=202320241SB2](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320241SB2). Accessed: October 2023.

<sup>20</sup> CARB. May 23, 2023. LCFS Public Workshop: Auto-Acceleration Mechanism and Step Down Benchmark Considerations. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-05/LCFSPresentation\\_052223\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-05/LCFSPresentation_052223_0.pdf). Accessed: October 2023.

<sup>21</sup> CARB. September 8, 2023. Low Carbon Fuel Standard 2023 Amendments Standardized Regulatory Impact Assessment (SRIA). Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-09/lcfs\\_sria\\_2023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-09/lcfs_sria_2023_0.pdf). Accessed: October 2023.

<sup>22</sup> California Department of Tax and Fee Administration (CDTFA). Sales Tax Rates for Fuels. Available at: <https://www.cdtfa.ca.gov/taxes-and-fees/sales-tax-rates-for-fuels.htm>. Accessed: October 2023.

<sup>23</sup> California Legislative Analyst’s Office (LAO). November 2022. The 2023-24 Budget: Considering Inflation’s Effects on State Programs Sales Tax Rates for Fuels. Available at: <https://lao.ca.gov/reports/2022/4647/Inflation-Effects-on-State-Programs-111622.pdf>. Accessed: October 2023.



**5. CARB should ensure that any post-2030 reductions targets provide adequate flexibility to encourage large-scale reduction projects.**

At the outset, as WSPA has previously explained in its comment letter dated August 17 2023,<sup>24</sup> CARB requires legislative authorization to extend the Cap-and-Trade program beyond 2030, which includes the proposed 30.3 million allowance target in 2045.<sup>25</sup> WSPA encourages CARB to work with the State Legislature to establish legally defensible post-2030 targets that will send clear market signals for the multi-decade capital investments industries will make to deploy decarbonization technologies.

With respect to post-2030 reduction targets, CARB has proposed two options for determining the 2031-2045 allowance budget: (1) capping 2030 allowance at a value that is consistent with emission reduction target below 1990 levels (i.e., 40%, 48%, and 55%) for the scenario (Emission Target Method); or (2) projecting future budgets from an adjusted 2030 allowance cap that incorporates cumulative achieved emissions reductions (Allowance Budget Method). WSPA strongly encourages CARB to base post-2030 budgets on a 2030 value that is consistent with emission reduction target from 1990 levels. This approach aligns with the statewide net-zero goals. In contrast, projecting future budgets based on CARB's target allowance budget exacerbates existing issues with CARB's proposed 2025-2030 budget adjustment, as explained by WSPA in Comment 1, and is not suitable as the starting point or baseline for the future trajectory.

CARB determined in its 2022 Scoping Plan Update that its 2030 reduction target should be accelerated from 40% to 48% in order to achieve AB 1279's 85% reduction target by 2045.<sup>26</sup> A 48% reduction target translates to a Cap-and-Trade budget of 173 million allowances in 2030.<sup>27</sup> The Emission Target Method reasonably approximates the long-term Cap-and-Trade allowance trajectory under this scenario. By contrast, the Allowance Budget Method uses a starting budget of 139 million allowances in 2030, which represents a 58% reduction from 1990 levels. However, CARB lacks authority to impose these heightened reduction requirements through 2030, which go well beyond the targets set by AB 32. The Allowance Budget Method would *exacerbate* this issue, significantly increasing the stringency of long-term emissions reduction targets without an adequate legal or technical basis. This Method would reduce 235 million additional allowances as compared to the Emission Target

<sup>24</sup> 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](https://ww2.arb.ca.gov/system/files/webform/public_comments/5326/WSPA%20Cap-and-Trade%20July%202023%20Workshop%20Comments%208-17-2023.pdf). Accessed: October 2023.

<sup>25</sup> CARB. October 5, 2023. Cap-and-Trade Program Workshop: Potential Amendments to the Cap-and-Trade Regulation. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop\\_Oct052023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf). Accessed: October 2023.

<sup>26</sup> CARB. 2022. 2022 Scoping Plan Update. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed: October 2023.

<sup>27</sup> CARB. October 5, 2023. Cap-and-Trade Program Workshop: Potential Amendments to the Cap-and-Trade Regulation. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop\\_Oct052023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf). Accessed October 2023.

Method,<sup>28</sup> with over two-thirds of these allowance reductions occurring in the first 5 years (i.e., 2031-2036, Table 1).

Both of these Methods also fail to incorporate needed flexibility for industrial facilities to facilitate long-term reduction strategies. This problem is most apparent under the Allowance Budget Method—this Method is based on a trajectory that falsely assumes the long-term feasibility of all short-term compliance methods and fails to recognize the long lead time for investment in sustainable and low-carbon initiatives. Basing post-2030 allowance budgets on this Method will therefore constrain the ability of industry to further invest in large-scale capital projects that are necessary to achieve the long-term emission targets but may not yield immediate reductions.

However, the Emission Target Method suffers from a similar problem. This Method bases post-2030 allowance budgets on a linear reduction trajectory, which assumes a consistent rate of emissions reductions between 2030 and 2045, using the 2030 target as the starting point and 30.3 million allowances in 2045 as the endpoint. However, this Method is oversimplified and does not fully account for the implementation timelines for large-scale carbon reduction programs.

<b>Calendar Year</b>	<b>Option #1: Emission Target Method</b>	<b>Option #2: Allowance Budget Method</b>	<b>Cumulative Allowance Difference From 2031</b>
2030 (base year)	172	139	--
2031	163	132	31
2032	153	125	60
2033	144	117	87
2034	135	110	112
2035	125	103	134
2036	116	96	154
2037	106	88	172
2038	97	81	187
2039	87	74	201
2040	78	67	212
2041	68	59	221

<sup>28</sup> Ibid

<sup>29</sup> Data for the 2030 base year and 2045 end year are from CARB's October 5<sup>th</sup> Cap-and-Trade Program Workshop. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop\\_Oct052023\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf). Accessed October 2023. For the middle years, linear interpolation was tabulated by Ramboll based on the method described by CARB in the slides.

<b>Table 1. Estimated Annual Allowances (million) Under the 48% Scenario<sup>29</sup></b>			
<b>Calendar Year</b>	<b>Option #1: Emission Target Method</b>	<b>Option #2: Allowance Budget Method</b>	<b>Cumulative Allowance Difference From 2031</b>
2042	59	52	227
2043	49	45	232
2044	40	38	234
2045	30.3	30.3	235
<b>2031-2045 Total</b>	<b>1450</b>	<b>1215</b>	<b>235</b>

WSPA strongly encourages CARB to adjust its post-2030 reduction targets to better facilitate long-term reduction strategies by imposing fewer reductions in earlier years and increasing reductions in later years. This strategy would still allow California to meet its reduction targets, while being more consistent with the long-term planning and significant up-front capital investment necessary to install large-scale emissions controls. Using this approach, CARB would encourage innovation and would facilitate more cost-effective reductions, consistent with the requirements of AB 32.

**6. WSPA supports CARB’s proposal to update biogenic emission exemptions in the Cap-and-Trade program to support low-carbon fuel production and use in California.**

WSPA encourages CARB to expand the exemptions for biogenic emissions which are essential for continued production of renewable fuels in California, including sustainable aviation fuels and propane.

Exempting biogenic emissions encourages the continued development of low-carbon and carbon-negative technologies. Biogenic feedstocks can be utilized in hard-to-decarbonize and hard-to-electrify sectors. Electrical grid infrastructure upgrades, as addressed in the 2022 Scoping Plan Update, require extended implementation timelines—biogenic fuels are readily available and help secure near-term emissions reductions while these upgrades are implemented. In addition, increased reliance on renewable generation, combined with significant increases in electricity demand due to the electrification of additional sectors of the economy, may create intermittency or reliability challenges—biogenic fuels can help mitigate these risks by providing reliable, consistent power.

Exempting biogenic emissions is consistent with existing State programs seeking to expand carbon reduction potential in natural and working lands. SB 1383 (2016)<sup>30</sup> and ongoing

<sup>30</sup> Senate Bill 1383. Short-Lived Climate Pollutant Reduction Law. September 19, 2016. Available at: [https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=201520160SB1383](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB1383). Accessed: June 2023.

forestry management programs<sup>31</sup> will expand the supply of biogenic feedstocks that can be utilized in hard-to-decarbonize and hard-to-electrify sectors.

CARB should ensure that the biogenic fuel provisions in the Cap-and-Trade program align with existing requirements in the LCFS program and the Mandatory Greenhouse Gas Reporting Regulation (MRR). While both the LCFS and Cap-and-Trade programs regulate the transportation fuel production and use in California, there are inconsistencies among these two programs, including program scope and quantification mechanisms. WSPA recommends that CARB form a separate working group to address changes to the MRR that are necessary for consistent reporting and compliance requirements for biogenic fuels across Cap-and-Trade, LCFS, and MRR. The goal of this alignment should be to support the low-carbon transportation fuel production and use in California.

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](mailto:tderivi@wspa.org). We look forward to working with you on these important issues.

Sincerely,



Tanya DeRivi  
Senior Director, California Climate and Fuels

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<sup>31</sup> CARB. Draft California 2030 Natural and Working Lands Climate Change Implementation Plan, January 2019. Available at: <https://ww2.arb.ca.gov/sites/default/files/2019-06/draft-nwl-ip-040419.pdf>. Accessed: October 2023.



**Tanya DeRivi**

Senior Director, California Climate and Fuels

May 8, 2024

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](mailto:ctworkshop@arb.ca.gov)

**Re: Comments on the April 23, 2024, 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) Cap-and-Trade program public workshop hosted on April 23, 2024.<sup>1</sup> 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 more cost-effective. However, WSPA reiterates, as noted in comment letters for previous workshops, that CARB's proposed updates to the Cap-and-Trade program must be consistent with requirements under Assembly Bill (AB) 32, AB 398, and Senate Bill (SB) 32; should integrate carbon-negative technologies; and should limit cost impacts, consistent with other legislative programs seeking to mitigate consumer burdens related to petroleum and alternative transportation fuels.

CARB's authority to adopt and implement the Cap-and-Trade program is governed by AB 32, SB 32, and AB 398. 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 minimize the leakage potential of the actions taken, ensure that the emissions reductions are technologically feasible *and* cost-effective, and ensure that any reductions achieved are real, permanent, quantifiable, verifiable, and enforceable.<sup>2</sup> SB 32, the California Global Warming Solutions Act of 2016, builds on and expands the requirements in AB 32, but reiterates that reduction measures must be technologically feasible and cost-effective.<sup>3</sup> AB 398 outlines specific requirements for the Cap-and-Trade program through 2030 intended to limit the program's cost impacts for consumers and industry, including a price ceiling, price containment points, and industry assistance factors.<sup>4</sup> In particular, in setting a price ceiling, CARB must consider any

<sup>1</sup> CARB. 2024. Cap-and-Trade Program Workshop. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop\\_Apr232024\\_1.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop_Apr232024_1.pdf). Accessed: May 2024.

<sup>2</sup> AB 32. Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=200520060AB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32). Accessed: May 2024.

<sup>3</sup> California Legislative Information. Senate Bill No. 32. Available at: [Bill Text - SB-32 California Global Warming Solutions Act of 2006: emissions limit](#). Accessed: May 2024.

<sup>4</sup> California Legislative Information. Assembly Bill No. 398. Available at: [Bill Text - AB-398 California Global Warming Solutions Act of 2006: market-based compliance mechanisms: fire prevention fees: sales and use tax manufacturing exemption](#). Accessed: May 2024.

adverse impacts on businesses, 2020 tier prices of the allowance price containment reserve, leakage potential, the auction reserve price, and the cost per metric ton of greenhouse gas emissions reductions, among other factors. Therefore, in amending the Cap-and-Trade program, CARB is statutorily bound to carefully consider these factors and to account for these legislative priorities. CARB's analysis to date has failed to appropriately quantify and assess potential consumer impacts or leakage risks under various proposed update scenarios, in violation of CARB's statutory mandate.

CARB has also not taken sufficient action to integrate carbon-negative technologies into the Cap-and-Trade program. WSPA has repeatedly emphasized that CARB must incorporate mechanisms within the Cap-and-Trade program to support the successful development and deployment of carbon dioxide removal (CDR) technology, including carbon capture, utilization, and storage (CCUS). As CARB itself has recognized, these technologies are necessary to achieve 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.<sup>5</sup> Indeed, the 2022 Scoping Plan Update set targets for 20 million metric tons of carbon dioxide equivalents (MMT $\text{CO}_2\text{e}$ ) removal and capture by 2030 and 100 MMT $\text{CO}_2\text{e}$  by 2045. However, these targets are currently infeasible 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 into 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 Regulation amendments align with other legislative programs seeking to minimize consumer burdens associated with transportation fuels. SB X1-2 (2023) directs State agencies to evaluate measures to ensure that petroleum and alternative transportation fuels are adequate, affordable, reliable, and equitable. According to the California Energy Commission, the existing Cap-and-Trade Regulation and the Low Carbon Fuels Standard (LCFS) together add approximately 42 cents per gallon to the cost of gasoline.<sup>6</sup> CARB must therefore consider impacts to gasoline costs in updating the Cap-and-Trade Regulation, consistent with this legislative mandate.

Given these already-significant burdens, CARB's proposed amendments to the Cap-and-Trade program are likely to have an 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 unreasonably increase California fuel costs.

In response to the April 23, 2024, workshop, WSPA offers the following comments:

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<sup>5</sup> CARB. 2022 Scoping Plan for Achieving Carbon Neutrality. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed: May 2024.

<sup>6</sup> 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: May 2024.

**1. CARB should not base allocations for 2025-2030 on hypothetical reductions from the 2021 to 2024 budgets.**

CARB presented three scenarios it has considered that would adjust the 2025-2030 annual allowance budgets based on specific GHG reduction targets (40%, 48%, or 55% from 1990 levels by 2030).<sup>7</sup> As part of these adjustments, CARB included a “correction” to the share of covered entities and reduced the 2021 through 2030 allowance budget by a total of 13.7 MMTCO<sub>2e</sub>.

In addition, CARB’s preferred scenario, a 48% GHG reduction target in 2030, means the 2021 through 2030 allowance budget is reduced by an additional 265 MMTCO<sub>2e</sub>, for a total of 278 MMTCO<sub>2e</sub> allowances removed with all of these allowances proposed to be removed from the 2025 through 2030 budget. While WSPA agrees with CARB that the Cap-and-Trade program is a cumulative emissions reduction program, this proposal amounts to a significant step change to the allowance budgets going forward. When comparing the 2018 Cap-and-Trade Regulation allowance budgets to those presented as CARB’s preferred 48% in 2030 case, the change results in a decrease of available allowances by 31% in 2030.

This 31% reduction in 2030 is significant and would place an unnecessary burden on the California economy to absorb this change over such a short period of time.

Adopting more aggressive targets is particularly unreasonable, given ongoing challenges in deploying CCUS and CDR. Deploying CDR and CCUS technologies is currently infeasible at scale due to cost, technology readiness, and permitting barriers that delay even pilot projects built into the 2022 Scoping Plan Update that informed the 48% target. While CARB is in the process of developing a CCUS and CDR strategy in accordance with SB 905, CARB’s progress on this strategy has been delayed, and these delays will leave 40 MMTCO<sub>2e</sub> of assumed reductions by 2030 without a framework to achieve the reductions. Post-2030, the 2022 Scoping Plan Update again includes significant emission reductions attributable to CCUS and CDR. However, without a framework to achieve the reductions, regulated parties and the economy should not bear the cost of these gaps. Without these technologies being available and readily deployable, accelerating reduction targets and increasing stringency of the caps will result in infeasible requirements, in conflict with CARB’s statutory duty under AB 32 and SB 32 to ensure that reduction measures are both cost-effective and technologically feasible.

Further, as WSPA has emphasized in a previous comment letter,<sup>8</sup> adjusting the 2030 emission target based on actual achieved reductions in previous years will severely impact the stability of the Cap-and-Trade program and could harm long-term decarbonization planning efforts. CARB’s proposed methodology would create a disincentive for companies to take early action to maximize their GHG emissions reductions and set a concerning precedent that would undermine confidence in the Cap-and-Trade program by retroactively manipulating the allowance market. This is contrary to the existing Cap-and-Trade framework, which recognizes early actions and is built around encouraging companies to undertake longer-term, higher-capital investments that are necessary to achieve the State’s long-term carbon

<sup>7</sup> CARB. 2024. Cap-and-Trade Program Workshop. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop\\_Apr232024\\_1.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop_Apr232024_1.pdf). Accessed: May 2024.

<sup>8</sup> WSPA. 2023. WSPA Comments on 10-05-2023 Cap-and-Trade Workshop. Available at: [https://ww2.arb.ca.gov/system/files/webform/public\\_comments/6456/WSPA%20Cap-and-Trade%20October%202023%20Workshop%20Comments%2010-26-2023.pdf](https://ww2.arb.ca.gov/system/files/webform/public_comments/6456/WSPA%20Cap-and-Trade%20October%202023%20Workshop%20Comments%2010-26-2023.pdf). Accessed: May 2024.

neutrality goals. This is also contrary to the statutory directive in AB 398 that requires CARB to design regulations to “encourage[] early action to reduce greenhouse gas emissions.”<sup>9</sup> WSPA urges CARB to reconsider its proposal with the principle to ensure that companies retain sufficient confidence in the predictability of the program so that they invest in early actions that will be essential for long-term compliance.

## **2. CARB should retain robust allowance banking and address any concerns about market liquidity through monitoring and reporting procedures.**

Allowance banking has been an essential part of the Cap-and-Trade program since its inception and has supported a well-functioning market with nearly 100% compliance for regulated entities. Banked allowances provide a strong incentive to regulated entities to take early action to reduce emissions, so that they have more flexibility in the long-term to invest in more extensive decarbonization efforts. As CARB recognized in the April 23 public workshop, allowance banking is also an important cost-containment mechanism, in furtherance of the edicts in AB 32 and SB 32 that CARB ensure that its reduction measures are cost-effective.

CARB is evaluating potential updates to allowance holdings and trading behavior based on concerns about market liquidity. CARB suggested that adjusting the holding limit formula in the context of allowance budget scenarios could address this concern. However, WSPA urges CARB to avoid curtailing holding limits for covered entities as a method of maintaining market liquidity. The holding limit is one of the important cost-containment mechanisms within the program because it encourages early action so that allowances can be banked in anticipation of year-over-year increases in allowance prices. This mechanism serves the purposes of AB 398, which requires CARB to design regulations to “encourage[] early action to reduce greenhouse gas emissions.”<sup>10</sup> Decreasing the number of allowances that can be banked by covered entities would also impact future long-term emission reduction projects. With lower holding limits, industrial facilities will have less flexibility to meet the compliance requirements. WSPA strongly encourages CARB to address concerns about market liquidity due to allowance banking with methods that do not include reducing the holding limit. CARB’s proposal to adjust the current holding limit formula would undermine covered entities’ abilities to achieve cost-effective emission reductions in-line with the program targets, in violation of AB 32 and SB 32.

Rather than limit allowance banking, CARB should instead address market liquidity by updating monitoring and reporting requirements for Voluntarily Associated Entities (VAEs). As WSPA has noted in previous comment letters, the number of VAEs participating in the Cap-and-Trade program has significantly increased in recent years, which raises concerns about their ability to accumulate an outsized proportion of allowances for investment purposes, rather than compliance requirements. Over-participation of VAEs, without appropriate constraints, creates an outsized risk of artificial inflation of allowance prices and restricts market liquidity, since these entities do not need to surrender allowances for compliance. As Slide 15 of CARB’s April 23, 2024, workshop illustrates, a majority of registered market participants are currently VAEs. Rather than limiting allowance banking, CARB should develop tracking and monitoring mechanisms to ensure VAEs’ activities do not disturb market liquidity.

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<sup>9</sup> California Health & Safety Code § 38562(b)(1).

<sup>10</sup> *Ibid*



**3. CARB should revise the holding limit formula to reduce market shocks due to the significant reductions proposed in its 2025-2030 Annual Allowance Budget, increasing the holding limits for covered entities to provide additional compliance flexibility.**

Under the current Cap-and-Trade program, the maximum number of allowances that can be held in a single year is governed by the holding limit, which is scaled based on the annual allowance budget. CARB is proposing to rapidly decrease annual allowance budgets between 2025 and 2030, in excess of the 2030 48% reduction target in SB 32, as discussed above. These budget decreases will also reduce holding limits under the current calculation methodology.

WSPA encourages CARB to reevaluate the holding limit to provide entities with additional compliance flexibility to meet the aggressive reduction targets in the proposed Cap-and-Trade program revisions. The current holding limit formula would undermine covered entities' abilities to achieve cost-effective emission reductions in-line with the future reduction targets, in violation of CARB's statutory obligation under AB 32 and SB 32. A significant decrease in the holding limit would require all entities to dispose of allowances during a brief period, introducing as many as 20 million allowances into the market in 2025, and causing volatility in allowance prices.<sup>11</sup> As projected by the University of California-Davis modeling presented at the November 16, 2023, workshop, future allowance prices could surge towards the price ceiling from 2030 through 2040 under a majority of the modeled scenarios.<sup>12</sup> CARB should be seeking to expand cost-containment mechanisms, including an increase of the holding limit for covered entities.

As noted in the workshop one impact of a reduced annual allowance budget is a reduction to a firm's holding limit. Banking is a fundamental function of the Cap-and-Trade program that provides firms an opportunity to cost effectively reduce emissions. Without the ability to bank a sufficient number of allowances, the costs of the program will be more apparent to the economy. Under CARB's 48% reduction by 2030 scenario, holding limits will be reduced in 2025 through 2030 by 15% assuming California's linked jurisdiction does not implement allowance reduction strategies as well. As noted above, the reduction in the allowance budget is abrupt and does not serve a Cap-and-Trade purpose to provide a steady signal to reduce emissions. To alleviate these concerns, WSPA recommends CARB adjust its 2025 through 2030 holding limit formula to provide additional room for entities to manage their compliance instrument holding accounts. One method CARB should employ is to create a table accompanying the Holding Limit Formula that updates the 2018 Cap-and-Trade Regulation value of 0.025 annually starting in 2025 through 2030. With this table, holding limits for firms would remain as currently expected for the rest of the decade, and reduce the impacts of the proposed annual allowance budget significantly. To facilitate this change, WSPA proposes the following amendment to the Holding Limit Formula for years 2025 through 2030:

$$\text{Holding Limit} = 0.1 \times \text{Base} + \text{HLF} \times (\text{Annual Allowance Budget} - \text{Base})$$

*In which:*

"Base" equals 25 million metric tons of CO<sub>2</sub>e

"Annual Allowance Budget" is the number of allowances issued for the current budget year

<sup>11</sup> CARB. 2024. Cap-and-Trade Program Workshop. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop\\_Apr232024\\_1.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop_Apr232024_1.pdf). Accessed: May 2024.

<sup>12</sup> CARB. 2023. Joint Cap-and-Trade Program Workshop. Available at: [https://ww2.arb.ca.gov/sites/default/files/2023-11/nc-combinedSlides\\_Nov162023.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-11/nc-combinedSlides_Nov162023.pdf). Accessed: May 2024.

“HLF” is the Holding Limit Factor for a corresponding Annual Allowance Budget year

Holding Limit Factor (HLF)	
Calendar Year	HLF
2025	0.027
2026	0.029
2027	0.030
2028	0.032
2029	0.034
2030	0.035

**4. CARB should consider the impacts of its proposed changes to the Annual Allowance Budgets on the number of allowances provided for industrial assistance.**

WSPA is aware that CARB intends to hold one additional workshop in the coming months to discuss allocations to the industrial sector. Like banking, industrial allocation is a core function of the program to ensure it operates cost effectively. For this expected future workshop, WSPA requests that CARB include an assessment of the impact to the industrial sector were CARB to utilize the 2018 Cap-and-Trade Regulation’s Cap Adjustment Factors for years 2025 through 2030 to apportion allowances for industrial allocation rather than update the adjustment factors for any reduced allowance budget.

**5. WSPA strongly opposes eliminating the offsets program or establishing “no-trade zones.”**

Consistent with recommendations from the Environmental Justice Advisory Committee, CARB is evaluating potential trading restrictions, including no-trade zones and limitations to the existing offset program. These limitations would conflict with CARB’s statutory mandate under AB 32, SB 32, and AB 398, and would exacerbate price volatility, emissions leakage, and market liquidity issues.

CARB recognizes in its Standardized Regulatory Impact Assessment (“SRIA”) that including trading limits or discontinuing the use of offsets would put “upward pressure on allowance costs” and “exacerbate the potential for emissions leakage.”<sup>13</sup> CARB further explains that “the compliance offset program has served as an important cost-containment feature of the Program” and “financially supports action to reduce GHG emissions outside of the sectors directly covered by the Cap-and-Trade Program.”<sup>14</sup> Imposing new trading limits or eliminating offsets would conflict with the legislative directives in AB 32, SB 32, and AB 398. These statutes require CARB to achieve “maximum technologically feasible *and cost-effective* greenhouse gas emission reductions,” “minimize leakage,” and consider “overall societal benefits” in implementing this program.<sup>15</sup> As CARB recognizes in its SRIA, eliminating offsets would remove important benefits from other sectors, such as “projects to sustainably manage natural and working lands to increase carbon sequestration, to capture and destroy fugitive emissions from high global warming gases, and to reduce fugitive methane emissions from

<sup>13</sup> CARB. 2024 Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms 2024 Amendments: Standardized Regulatory Impact Assessment. Available at: [Cap-and-Trade SRIA 2024](#). Accessed: May 2024.

<sup>14</sup> *Ibid.*

<sup>15</sup> California Health & Safety Code §§ 38562(a), (b)(6), (b)(8).

mines and livestock operations.”<sup>16</sup> Further, “[d]iscontinuing the use of any offsets would further limit compliance instruments and put further upward pressure on allowance costs, which increases the emissions leakage risk.”<sup>17</sup> Similarly, trading restrictions would “increas[e] compliance costs for all entities, increas[e] the potential for leakage, and increas[e] economy-wide costs to California consumers,” in violation of CARB’s requirement to ensure that its reduction measures are cost-effective.<sup>18</sup>

These revisions would also directly conflict with AB 398’s provisions related to Cap-and-Trade program design. AB 398 gives CARB authority to “adopt a regulation that establishes a system of market-based declining annual *aggregate emissions limits* for sources or categories of sources that emit greenhouse gases.”<sup>19</sup> As CARB explains in its SRIA, “AB 398 does not include any provisions to support new trading limits and any such limits would be inconsistent with an aggregate cap as mentioned in AB 398 and direction on cost-effectiveness.”<sup>20</sup> AB 398 plainly encompasses *all* sources of GHG emissions, and does not permit CARB to restrict trading among certain categories of sources. Importantly, the California legislature considered *and rejected* an amendment that would have included no-trade zones or declining caps for facilities where “emissions contribute to a cumulative pollution burden that creates a significant health impact.”<sup>21</sup> CARB cannot circumvent this legislative action by adopting no-trade zones.

Similarly, AB 398 recognizes the continued importance of the offset program and sets specific program guidelines intended to *increase* offset projects in the State.<sup>22</sup> Further, AB 398 establishes specific offset limits of 4 percent between 2021 and 2025, and 6 percent between 2026 and 2030.<sup>23</sup> Eliminating the offset program would conflict with this clear statutory directive, which contemplates expanded use of offsets between 2026 and 2030. The Offset Program remains an integral compliance option that increases cost-effectiveness within the Cap-and-Trade program and diversifies strategies for decarbonization. Rather than *eliminating* this program, WSPA encourages CARB to retain its proposal to increase the offset usage limit to 6% in 2026 and to further investigate alternative offset protocols and expand the program. The offset program will be increasingly important for maintaining the efficacy and cost-effectiveness of the program. AB 398 mandates that CARB increase the offset limit to 6 percent, and further contemplates that covered entities will expand their reliance on offsets. In accordance with this statutory mandate, CARB must increase the offset limit rather than eliminate the offset program.

Any policy that incorporates no trading provisions or allowance caps would undermine the efficiency of Cap-and-Trade as a market-based program by reducing cost-effectiveness and market liquidity, limiting compliance options, and increasing allowance costs and risk of emissions leakage, in direct conflict with CARB’s statutory directives in AB 32, SB 32, and the program design of AB 398.

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<sup>16</sup> CARB. 2024 Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms 2024 Amendments: Standardized Regulatory Impact Assessment. Page 19 Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-Cap-and-Trade\\_SRIA2024.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-Cap-and-Trade_SRIA2024.pdf). Accessed May 2024.

<sup>17</sup> *Id.* at 17-18.

<sup>18</sup> *Id.* at 20.

<sup>19</sup> California Health & Safety Code § 38562(c) (emphasis added).

<sup>20</sup> CARB. 2024 Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms 2024 Amendments: Standardized Regulatory Impact Assessment. Page 17 Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-Cap-and-Trade\\_SRIA2024.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-Cap-and-Trade_SRIA2024.pdf). Accessed May 2024.

<sup>21</sup> California Assembly Members Garcia, Holden, and Garcia (Apr. 2017).

<sup>22</sup> California Health & Safety Code § 38591.1.

<sup>23</sup> California Health & Safety Code § 38562(c)(2)(E).

## 6. CARB should retain existing compliance period (CP) schedules.

CARB is considering updates to compliance period (CP) end years in order to align requirements with GHG emission reduction target years.<sup>24</sup> Under Option 1, CARB would expand CP6 to four years, ending in 2030, and all subsequent CPs to five years. Under Option 2, CARB would establish two-year compliance periods until 2030 and subsequently alternate two- and three-year periods until 2045. CARB explains that the main objective of proposing a change is to “ensure data reconciliation between linked jurisdictions.” In order to further this objective, CARB must ensure the proposed CP schedules are also consistent with Quebec, since California is also linked to this jurisdiction.

In considering these updates, CARB should recognize that any changes to the existing CP schedules will introduce market volatility and uncertainty to the Cap-and-Trade program. Each option introduces new challenges for covered entities. WSPA encourages CARB to retain existing compliance schedules, but at minimum, urges CARB to consider the following feedback in order to carefully balance and address these challenges.

- **Option 1:** The Option 1 schedule would result in significant compliance obligations due at the end of each period, and may delay emission reductions, therefore hindering progress towards statewide targets. Covered entities would be required to comply with longer compliance periods, which risks significant compliance deficits if a covered entity cannot meet the steep reductions CARB has proposed between 2025 and 2030. CARB’s proposals restricting allowance banking compounds this risk. To address these challenges, CARB should increase the holding limit for covered entities to accommodate this longer compliance period to ensure that covered entities can effectively plan compliance obligations for longer four-year periods. However, the longer compliance periods in Option 1 could also allow for long-term planning and investment. By maintaining longer compliance periods, Option 1 offers a framework that incentivizes continuous improvement in emissions reduction efforts and fosters business practices that are sustainable. Option 1 also provides more regulatory certainty due to longer compliance periods which can help ensure that business operations remain stable. CARB must seek stakeholder feedback to ensure that these benefits are retained while also addressing the compliance challenges associated with longer compliance periods.
- **Option 2:** This includes shorter two-year compliance periods until 2030 and subsequently then alternating two- and three-year compliance periods until 2045. Under this option, compliance obligations are divided into smaller increments, which seeks to ensure continuous reductions by assessing compliance more frequently. However, WSPA is concerned that Option 2’s irregularity between the alternative two- and three-year periods may cause challenges for entities’ planning cycles. Further, the additional reporting periods that Option 2 presents limits entities’ abilities to engage in long-term strategies, such as investments into CCUS and CDR, due to the need to meet earlier compliance deadlines. Shorter compliance periods would also increase the administrative burden and compliance costs for regulated entities. Rapid adjustments or changes in the market could create volatility that could potentially impact investment decisions and overall market stability.

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<sup>24</sup> CARB. 2024. Cap-and-Trade Program Workshop. Available at: [https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop\\_Apr232024\\_1.pdf](https://ww2.arb.ca.gov/sites/default/files/2024-04/nc-CapTradeWorkshop_Apr232024_1.pdf). Accessed: May 2024.

Given the challenges associated with each proposed option, WSPA recommends that CARB maintain the existing CP schedules. The current three-year CP model provides an appropriate balance between the two proposed options, avoiding the potential negative consequences of either option.

#### **7. WSPA supports the proposed clarification and amendments to forest projects.**

WSPA supports CARB's proposed clarifications for revisions regarding forest projects. Including an Offset Project Data Report as an alternative to continue a forest project instead of an automatic termination in instances when carbon stocks fall below the baseline increases program flexibility, provides covered entities with more assurance on the reliability of these compliance options in the long-term, and will generate additional benefits in California, consistent with the legislature's directive in AB 398.

#### **8. WSPA reaffirms the need for carbon negative technologies under Cap-and-Trade to achieve the 2045 target for carbon neutrality under the 2022 Scoping Plan Update.**

As WSPA has pointed out in its previous comment letters,<sup>25,26</sup> CCUS and CDR technologies will be critical to the overall success of the 2022 Scoping Plan Update to achieve carbon neutrality by 2045. Therefore, WSPA recommends that CARB amend the Cap-and-Trade Regulation to include a mechanism for generating additional allowances based on emissions reductions achieved by CDR technology including CCUS. For instance, CARB should consider changes to existing Cap-and-Trade Regulation that are necessary to enable companies to offset their compliance obligations by the amount of CO<sub>2</sub> that is geologically sequestered through CDR (including CCUS) or to generate tradable credits from these actions. Such a mechanism would provide incentive for companies to take on the long-term, costly investments and implementation uncertainty associated with these technologies, while facilitating substantial emissions reductions in future years. CARB has already established a placeholder for such a concept in California Code Regulations title 17 Section 95852(g), and WSPA encourages CARB to finalize this concept.

WSPA continues to urge CARB to utilize the existing market-based regulatory programs – including Cap-and-Trade framework and the corresponding Mandatory Reporting Regulation – to develop a robust CDR program, rather than pursue an additional rulemaking process, such as that proposed under SB 308 (2023), which would require CARB to establish a separate CDR market. As WSPA explained in its August 17, 2023, comment letter,<sup>27</sup> the addition of CDR to Cap-and-Trade would provide entities with another tool to achieve the emission reductions necessary to meet the State's climate goals and further develop Cap-and-Trade as an economy-wide emissions reduction program. Creating an additional market when a successful market currently exists would be duplicative and would create an unnecessary compliance obligation secondary to the existing Cap-and-Trade requirements, further burdening emitting entities.

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<sup>25</sup> WSPA. 2023. WSPA Comments on 6-14-2023 Cap-and-Trade Workshop. Available at: [https://carbstage.arb.ca.gov/system/files/webform/public\\_comments/4411/WSPA%20Cap-and-Trade%20Workshop%20Comment%20Letter%207-7-2023.pdf](https://carbstage.arb.ca.gov/system/files/webform/public_comments/4411/WSPA%20Cap-and-Trade%20Workshop%20Comment%20Letter%207-7-2023.pdf). Accessed: May 2024.

<sup>26</sup> 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](https://ww2.arb.ca.gov/system/files/webform/public_comments/5326/WSPA%20Cap-and-Trade%20July%202023%20Workshop%20Comments%208-17-2023.pdf). Accessed: May 2024.

<sup>27</sup> *Ibid.*

**9. WSPA supports the proposed revisions to the Corporate Association Groups (CAG) triggers and recommends the release of the associated allowances in a way that minimizes price volatility while ensuring market liquidity and allowance availability.**

CARB's proposed revisions to the CAG triggers would address many of CARB's stated concerns regarding associated entities. WSPA recommends that these changes be implemented no more than one year after these Cap-and-Trade Regulation amendments are approved. Impacted CAGs would then need to manage their account holdings accordingly through approved transactions with other parties. The other alternative, to delay implementation until 2031, would undermine the intended purpose of the proposal by allowing coordinating operations to continue in the coming years and could be harmful to the market due to potential market manipulation concerns and lack of transparency.

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](mailto:tderivi@wspa.org). We look forward to working with you on these important issues.

Sincerely,



Tanya DeRivi  
Senior Director, California Climate and Fuels

AMENDED IN ASSEMBLY JUNE 5, 2024

AMENDED IN SENATE MAY 18, 2023

AMENDED IN SENATE APRIL 10, 2023

AMENDED IN SENATE MARCH 14, 2023

**SENATE BILL**

**No. 308**

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**Introduced by Senator Becker**

February 2, 2023

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An act to ~~add Article 3 (commencing with Section 39742) to Chapter 4.3 of Part 2 of Division 26 of~~ *amend Sections 38562.2 and 39741.4 of, and to add Section 38562.3 to,* the Health and Safety Code, relating to greenhouse gases.

LEGISLATIVE COUNSEL'S DIGEST

SB 308, as amended, Becker. ~~Carbon Dioxide Removal Market Development Act.~~ *Net zero greenhouse gas emissions goal: carbon dioxide removal: regulations.*

The California Global Warming Solutions Act of 2006 establishes the State Air Resources Board as the state agency responsible for monitoring and regulating sources emitting greenhouse gases. The act requires the state board to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to ensure that statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030. The act authorizes the state board to adopt a regulation that establishes a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases, applicable from January 1, 2012, to December 31, 2030, inclusive, as

specified. The act authorizes the state board to include in its regulation of those emissions the use of market-based compliance mechanisms.

The act requires the state board to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions and to update the scoping plan at least once every 5 years. Existing law requires the state board, as part of its scoping plan, to establish specified carbon dioxide removal targets for 2030 and beyond.

The act also declares the policy of the state both to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter, and to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below the 1990 levels.

~~Existing law also requires the state board to establish a Carbon Capture, Removal, Utilization, and Storage Program to, among other things, evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and carbon dioxide removal technologies and facilitate the capture and sequestration of carbon dioxide from those technologies, where appropriate.~~

~~This bill would enact the Carbon Dioxide Removal Market Development Act that would require the state board, no later than December 31, 2027, to adopt a regulation to require certain emitting entities to purchase negative emissions credits equal to a specified amount of their greenhouse gas emissions, as determined by the state board, in each calendar year beginning in the 2028 calendar year in accordance with specified requirements. The bill would require the state board, no later than December 31, 2027, to establish rules and processes for certifying carbon dioxide removal processes that may be used to create negative emissions credits and for tracking negative emissions credits in accordance with certain criteria. The bill would also require negative emissions resulting from the use of negative emissions credits to be included in the calculation of the state's net greenhouse gas emissions, as specified.~~

~~Because a violation of the requirement to purchase negative emissions credits would be a crime, the bill would impose a state-mandated local program.~~

~~The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.~~



~~This bill would provide that no reimbursement is required by this act for a specified reason.~~

*This bill would require the state board to develop and adopt regulations, or utilize existing programs and regulations, to ensure the state achieves carbon dioxide removals equivalent to at least 100% of statewide greenhouse gas emissions in calendar year 2045, and all subsequent years, in order to achieve the net zero and net negative greenhouse gas emissions goals. As part of those efforts, the bill would require the state board to establish separate interim targets for greenhouse gas emissions reductions and carbon dioxide removals, to be applicable beginning no later than calendar year 2030, and to report on progress toward achieving those targets. The bill would provide that only carbon dioxide removed by processes certified by the state board as satisfying certain requirements shall be eligible to be counted for the purpose of counterbalancing statewide greenhouse gas emissions when determining the state’s progress toward achieving net zero and net negative greenhouse gas emissions.*

*Existing law requires the state board to establish a Carbon Capture, Removal, Utilization, and Storage Program to, among other things, evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and carbon dioxide removal technologies and facilitate the capture and sequestration of carbon dioxide from those technologies, where appropriate. In furtherance of the objectives of that program, existing law authorizes the state board, by January 1, 2024, to adopt protocols to support additional methods of utilization or storage of captured carbon dioxide.*

*This bill would indefinitely authorize the state board to adopt those protocols, and protocols to support methods of utilization or storage of removed carbon dioxide.*

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: ~~yes~~-no.

*The people of the State of California do enact as follows:*

- 1 SECTION 1. (a) The Legislature finds and declares all of the
- 2 following:
- 3 (1) The United Nations’ Intergovernmental Panel on Climate
- 4 Change (IPCC) has recognized that limiting global warming to
- 5 1.5 degrees Celsius (2.7 degrees Fahrenheit) over preindustrial
- 6 times will require not only large reductions in global carbon dioxide

1 emissions from human sources but also carbon dioxide removal  
2 (CDR) from the atmosphere. “Climate Change 2022: Mitigation  
3 of Climate Change,” a report by the IPCC released in early 2022,  
4 states, “[t]he deployment of CDR to counterbalance hard-to-abate  
5 residual emissions is unavoidable if net zero CO<sub>2</sub> or GHG  
6 emissions are to be achieved.”

7 (2) Assembly Bill 1279 (Muratsuchi, Chapter 337 of the Statutes  
8 of 2022) established a target for reducing greenhouse gas (GHG)  
9 emissions by at least 85 percent from 1990 levels by 2045 as part  
10 of achieving net zero GHG emissions. California will need to  
11 employ CDR to balance out the remaining up to 15 percent GHG  
12 emissions to achieve the net zero target.

13 (3) The State Air Resources Board’s “2022 Scoping Plan for  
14 Achieving Carbon Neutrality,” dated November 16, 2022, stated,  
15 “[t]he modeling shows that emissions from the AB 32 GHG  
16 Inventory sources will continue to persist even if all fossil related  
17 combustion emissions are phased out. These residual emissions  
18 must be compensated for to achieve carbon neutrality.”

19 (4) The 2022 Scoping Plan estimated that the state would need  
20 approximately 75 million metric tons (MMT) of CDR in 2045 in  
21 order to achieve net zero GHG emissions. It further identified a  
22 target of 7 MMT per year of CDR by 2030 as “an ambitious, but  
23 achievable, goal” that “can serve as an important marker for  
24 progress in deploying CDR to support California’s carbon  
25 neutrality goal.”

26 (5) Therefore, although CDR should not be seen as a reason to  
27 prolong the state’s reliance on fossil fuels or as an excuse for not  
28 reducing GHG emissions as quickly as is feasible, CDR is widely  
29 predicted to be an important and necessary part of achieving the  
30 state’s net zero target.

31 (6) A diversity of approaches can be used to remove carbon  
32 dioxide from the atmosphere and sequester it, including natural  
33 processes, engineered mechanical and chemical processes, or a  
34 combination of these approaches.

35 (7) Once carbon dioxide is released into the atmosphere from  
36 previously inert sources, such as fossil fuels, it “causes increases  
37 in atmospheric concentrations of CO<sub>2</sub> that will last thousands of  
38 years,” according to the United States Environmental Protection  
39 Agency.

1 (8) CDR that is intended to balance out continued emissions of  
2 greenhouse gases in order to achieve net zero GHG emissions by  
3 2045 should therefore result in long-lasting reductions in carbon  
4 dioxide in the atmosphere on a similar time scale to that of the  
5 released carbon dioxide.

6 (9) Very little capacity exists currently to provide CDR that can  
7 meet these criteria for long-lasting reductions in carbon dioxide  
8 in the atmosphere, and this capacity, along with the supporting  
9 infrastructure for transporting and sequestering the removed carbon,  
10 will need to be scaled up enormously in order to meet the needs  
11 estimated for the state's target of achieving net zero GHG  
12 emissions by 2045.

13 (10) CDR approaches that can reduce atmospheric carbon  
14 dioxide for shorter periods of time can also provide valuable  
15 services in reducing climate change, but they eventually must be  
16 coupled with more durable sequestration of carbon in order to truly  
17 balance the impact of residual emissions of greenhouse gases.

18 (11) In order to be counted for the purpose of balancing  
19 continued residual emissions of greenhouse gases, CDR processes  
20 must be quantifiable and must include scientifically rigorous  
21 approaches to monitor and verify the sequestration of removed  
22 carbon in order to ensure that the reduction in atmospheric carbon  
23 dioxide is maintained over long periods of time.

24 (12) CDR that is intended to balance the impact of residual  
25 emissions of greenhouse gases in order to achieve net zero GHG  
26 emissions by 2045 should represent true removals of carbon  
27 dioxide from the atmosphere and not just the avoidance of  
28 emissions that might otherwise have occurred, as is sometimes  
29 allowed in carbon offset programs.

30 ~~(13) Consistent with the "polluter pays principle," the entities~~  
31 ~~responsible for GHG emissions should be responsible for paying~~  
32 ~~for CDR sufficient to balance the impact on climate change of~~  
33 ~~those GHG emissions.~~

34 ~~(14)~~

35 (13) Developing and manufacturing the technologies needed to  
36 capture and sequester carbon dioxide and building and operating  
37 the facilities and supporting infrastructure used for CDR can be a  
38 source of jobs, economic development, and tax revenues for the  
39 state and can establish the state as a leader in exporting these

1 products to help the rest of the world achieve reductions in net  
2 GHG emissions.

3 (b) It is the intent of the Legislature *for the State Air Resources*  
4 *Board* to implement a program to grow the CDR capacity and  
5 supporting infrastructure that is necessary to achieve carbon dioxide  
6 removal in sufficient volume *regulations and programs* to attain  
7 the state’s target for net zero greenhouse gas emissions, as set forth  
8 in Section 38562.2 of the Health and Safety ~~Code~~. *Code*, and to  
9 establish and attain interim targets in order to grow over time the  
10 CDR capacity and supporting infrastructure that will be necessary  
11 to achieve that net zero target.

12 SEC. 2. ~~Article 3 (commencing with Section 39742) is added~~  
13 ~~to Chapter 4.3 of Part 2 of Division 26 of the Health and Safety~~  
14 ~~Code, to read:~~

15  
16 Article 3. Carbon Dioxide Removal Market Development Act

17  
18 39742. ~~This article shall be known, and may be cited, as the~~  
19 ~~Carbon Dioxide Removal Market Development Act.~~

20 39742.1. For purposes of this article, the following definitions  
21 apply:

22 (a) ~~“Carbon dioxide equivalent” has the same meaning as~~  
23 ~~defined in Section 38505.~~

24 (b) ~~“Carbon dioxide removal process” means a process using~~  
25 ~~biological means, chemical means, physical means, or any~~  
26 ~~combination of these means, including the use of CDR technology~~  
27 ~~as defined in Section 39741, that results in a net reduction in~~  
28 ~~atmospheric carbon dioxide and puts carbon atoms into a form of~~  
29 ~~carbon sequestration.~~

30 (c) ~~“Carbon sequestration” means storing carbon atoms in a~~  
31 ~~geological location or in a stable chemical form so that the~~  
32 ~~geological location or the stable chemical form keeps the carbon~~  
33 ~~atoms from entering the atmosphere as carbon dioxide for a period~~  
34 ~~of time.~~

35 (d) ~~“Direct climate mitigation benefits to the state” means a~~  
36 ~~local reduction in atmospheric carbon dioxide concentration within~~  
37 ~~the state caused by removing carbon dioxide from the atmosphere~~  
38 ~~within or sufficiently close to that area.~~

39 (e) ~~“Durable carbon sequestration method” means a method of~~  
40 ~~carbon sequestration that can reasonably be projected to retain a~~

1 large majority of the carbon atoms out of the atmosphere for 1,000  
2 years and for which the responsible entity provides a guarantee  
3 period of at least 100 years.

4 (f) “Emitting entity” means an entity that is responsible for  
5 greenhouse gas emissions included within the state’s inventory  
6 and has an obligation to balance the impact of some or all of those  
7 greenhouse gas emissions through the purchase of negative  
8 emissions credits pursuant to Section 39742.4.

9 (g) “Guarantee period” means the period of time during which  
10 the responsible entity is required to ensure that the carbon remains  
11 sequestered and to replace any carbon that is lost.

12 (h) “Negative emissions credit” means a tradeable environmental  
13 attribute representing one metric ton of net carbon dioxide removed  
14 by a carbon dioxide removal process.

15 (i) “Negative emissions obligation” means the amount of  
16 negative emissions credits an emitting entity is required to purchase  
17 and retire each year in order to partially or fully balance the impact  
18 of the greenhouse gas emissions for which the emitting entity is  
19 responsible.

20 (j) “Neighboring communities” means the local government,  
21 residents, and other private entities in areas that are in close  
22 proximity to facilities used in a carbon dioxide removal process.

23 (k) “Net carbon dioxide removed” means the net amount of  
24 carbon dioxide, by mass, that is removed by a carbon dioxide  
25 removal process per ton of carbon put into carbon sequestration,  
26 as measured over the full lifecycle of the process, including any  
27 greenhouse gas emissions caused by the use of energy or fuels to  
28 drive the process, transport the captured carbon, or sequester the  
29 carbon.

30 (l) “Responsible entity” means a business, organization, or other  
31 entity that is responsible for ensuring that sequestered carbon is  
32 monitored and verified during the guarantee period and is  
33 responsible for replacing any losses to the sequestered carbon  
34 during the guarantee period.

35 (m) “Temporary carbon sequestration method” means any  
36 method of carbon sequestration that does not meet the criteria for  
37 a durable carbon sequestration method.

38 39742.2. (a) No later than December 31, 2027, the state board  
39 shall establish rules and processes for certifying carbon dioxide  
40 removal processes that may be used to create negative emissions

1 credits and for tracking negative emissions credits. In establishing  
2 these rules and processes, the state board shall consider all of the  
3 following:

4 (1) Criteria to ensure that certified carbon dioxide removal  
5 processes result in reductions in atmospheric carbon dioxide that  
6 are real, quantifiable, verifiable, and enforceable by the state board  
7 and are in addition to any carbon dioxide removals that are  
8 otherwise required by law or regulation. Only processes that result  
9 in removals of carbon dioxide from the atmosphere, not avoidance  
10 of or reduction of greenhouse gas emissions, may be certified for  
11 the purpose of creating negative emissions credits.

12 (2) A method to determine the net carbon dioxide removed by  
13 each certified carbon dioxide removal process.

14 (3) Criteria to determine whether each certified carbon dioxide  
15 removal process qualifies as using a durable carbon sequestration  
16 method.

17 (4) Requirements for scientifically rigorous and transparent  
18 methods for monitoring, reporting, and verification by responsible  
19 entities.

20 (5) Requirements for responsible entities to replace any losses  
21 in sequestered carbon during the guarantee period with newly  
22 sequestered carbon representing an equal amount of net carbon  
23 dioxide removed.

24 (6) Financial responsibility requirements for responsible entities  
25 to demonstrate that they, or another entity on their behalf, has the  
26 financial ability to meet their obligations during the guarantee  
27 period, such as through the use of surety bonds or other insurance  
28 products.

29 (7) A method of tracking the creation, transfer of ownership,  
30 and retirement of negative emissions credits based on certified  
31 carbon dioxide removal processes so that the environmental  
32 attributes of each negative emissions credit will be counted only  
33 once for the purpose of meeting any regulatory or voluntary carbon  
34 dioxide removal targets or net greenhouse gas emissions targets.

35 (b) (1) The state board may develop rules to create two-phase  
36 negative emissions credits that can meet the requirements of  
37 subdivision (c) of Section 39742.4 for durable carbon sequestration,  
38 such as a combination of the following:

39 (A) A negative emissions credit using a temporary carbon  
40 sequestration method.

1 ~~(B) A legally binding commitment to purchase another negative~~  
2 ~~emissions credit using a durable carbon sequestration method at~~  
3 ~~the end of the guarantee period of the original temporary negative~~  
4 ~~emissions credit.~~

5 ~~(2) For any two-phase negative emissions credits created~~  
6 ~~pursuant to this section, the state board shall do all of the following:~~

7 ~~(A) Establish a method for tracking compliance with future~~  
8 ~~negative emission credit purchase commitments.~~

9 ~~(B) Establish financial responsibility requirements to ensure~~  
10 ~~that the responsible entity can demonstrate that they, or another~~  
11 ~~entity on their behalf, has the financial ability to meet their~~  
12 ~~obligations, such as through the use of surety bonds or other~~  
13 ~~insurance products.~~

14 ~~39742.3. (a) The state board shall not certify a carbon dioxide~~  
15 ~~removal process pursuant to Section 39742.2 if the process is used~~  
16 ~~for purposes of enhanced oil recovery, including the facilitation~~  
17 ~~of enhanced oil recovery from another well.~~

18 ~~(b) (1) The state board may elect not to certify a carbon dioxide~~  
19 ~~removal process pursuant to Section 39742.2 if it determines the~~  
20 ~~benefits generated by the carbon dioxide removal process do not~~  
21 ~~outweigh the impacts caused by the carbon dioxide removal~~  
22 ~~process, including, but not limited to, benefits and impacts to~~  
23 ~~neighboring communities.~~

24 ~~(2) In making the determination pursuant to paragraph (1), the~~  
25 ~~state board shall consider at least all of the following:~~

26 ~~(A) Impacts on deforestation or the displacement of agricultural~~  
27 ~~land to grow dedicated biomass for carbon sequestration.~~

28 ~~(B) Impacts on neighboring communities from increases in~~  
29 ~~criteria air pollutants caused by equipment used to capture,~~  
30 ~~transport, sequester, or monitor the carbon.~~

31 ~~(C) Benefits to neighboring communities from investment, jobs,~~  
32 ~~and tax revenues associated with carbon dioxide removal processes.~~

33 ~~39742.4. No later than December 31, 2027, the state board~~  
34 ~~shall adopt a regulation to require emitting entities to purchase~~  
35 ~~negative emissions credits equal to a portion of their greenhouse~~  
36 ~~gas emissions in each calendar year beginning with greenhouse~~  
37 ~~gas emissions for calendar year 2028 in accordance with all of the~~  
38 ~~following:~~

39 ~~(a) Except as provided in subdivision (b), only emitting entities~~  
40 ~~with an obligation to report their greenhouse gas emissions~~

1 pursuant to the regulation adopted by the state board pursuant to  
2 Section 38530 and who report 25,000 metric tons or more of  
3 greenhouse gas emissions per year shall be considered emitting  
4 entities for the purposes of this article.

5 (b) The state board may include additional entities as emitting  
6 entities if the annual greenhouse gas emissions of those entities  
7 can be estimated with reasonable accuracy and without an  
8 unreasonable measurement burden on those entities.

9 (c) The regulation shall establish a negative emissions obligation  
10 that requires emitting entities to purchase negative emissions credits  
11 equal to a percentage of the carbon dioxide equivalent of their  
12 greenhouse gas emissions for each calendar year, as determined  
13 by the state board pursuant to subdivision (d).

14 (d) The state board shall determine the percentage required  
15 pursuant to subdivision (c) for each year, beginning with calendar  
16 year 2028, with the goal of increasing the total capacity to provide  
17 negative emissions credits over time in order to meet the state's  
18 net zero greenhouse gas emissions policy set forth in Section  
19 38562.2. Those percentages shall be at least the following  
20 percentages in the following years:

21 (1) One percent in 2030.

22 (2) Eight percent in 2035.

23 (3) Thirty-five percent in 2040.

24 (4) One hundred percent in 2045.

25 (e) Only negative emissions credits using a durable carbon  
26 sequestration method may be used to meet an emitting entity's  
27 negative emissions obligation.

28 (f) If the state board develops rules to create two-phase negative  
29 emissions credits pursuant to subdivision (b) of Section 39742.2,  
30 no more than 50 percent of the negative emissions credits used by  
31 an emitting entity to meet its negative emissions obligation in any  
32 calendar year may be two-phase emissions credits.

33 (g) At least 50 percent of the negative emissions credits used  
34 by an emitting entity to meet its negative emissions obligation in  
35 any calendar year shall be from carbon dioxide removal processes  
36 that provide direct climate mitigation benefits to the state.

37 (h) The state board may adjust any of the percentages specified  
38 in subdivision (g) or in paragraphs (1) to (4), inclusive, of  
39 subdivision (d) to a lower figure if it determines that it would be  
40 infeasible for emitting entities to comply with those requirements.



1 (i) ~~The state board may allow an emitting entity to reserve~~  
2 ~~negative emissions credits purchased in excess of its obligation in~~  
3 ~~a calendar year pursuant to subdivision (c) and to use those~~  
4 ~~negative emissions credits to meet its obligation in a future calendar~~  
5 ~~year.~~

6 (j) ~~Negative emissions resulting from the use of negative~~  
7 ~~emissions credits for the purpose of complying with the obligation~~  
8 ~~pursuant to subdivision (c) shall be included in the calculation of~~  
9 ~~the state’s net greenhouse gas emissions pursuant to Section~~  
10 ~~38562.2, even if those negative emissions occurred outside of the~~  
11 ~~state.~~

12 ~~39742.5. The provisions of this article are severable. If any~~  
13 ~~provision of this article or its application is held invalid, that~~  
14 ~~invalidity shall not affect other provisions or applications that can~~  
15 ~~be given effect without the invalid provision or application.~~

16 ~~SEC. 3. No reimbursement is required by this act pursuant to~~  
17 ~~Section 6 of Article XIII B of the California Constitution because~~  
18 ~~the only costs that may be incurred by a local agency or school~~  
19 ~~district will be incurred because this act creates a new crime or~~  
20 ~~infraction, eliminates a crime or infraction, or changes the penalty~~  
21 ~~for a crime or infraction, within the meaning of Section 17556 of~~  
22 ~~the Government Code, or changes the definition of a crime within~~  
23 ~~the meaning of Section 6 of Article XIII B of the California~~  
24 ~~Constitution.~~

25 ~~SEC. 2. Section 38562.2 of the Health and Safety Code is~~  
26 ~~amended to read:~~

27 38562.2. (a) This section shall be known, and may be cited,  
28 as the California Climate Crisis Act.

29 (b) For purposes of this section, “net zero greenhouse gas  
30 emissions” means emissions of greenhouse gases, as defined in  
31 subdivision (g) of Section 38505, to the atmosphere are balanced  
32 by removals of greenhouse gas emissions over a period of time,  
33 as determined by the state board.

34 (c) It is the policy of the state to do both of the following:

35 (1) Achieve net zero greenhouse gas emissions as soon as  
36 possible, but no later than 2045, and to achieve and maintain net  
37 negative greenhouse gas emissions thereafter. This goal is in  
38 addition to, and does not replace or supersede, the statewide  
39 greenhouse gas emissions reduction targets in Section 38566.

1 (2) Ensure that by 2045, statewide anthropogenic greenhouse  
2 gas emissions are reduced to at least 85 percent below the statewide  
3 greenhouse gas emissions limit established pursuant to Section  
4 38550.

5 *(d) Only carbon dioxide removed by processes certified by the*  
6 *state board pursuant to Section 38562.3 shall be eligible to be*  
7 *counted for the purpose of counterbalancing statewide greenhouse*  
8 *gas emissions when determining the state's progress toward*  
9 *achieving net zero and net negative greenhouse gas emissions*  
10 *pursuant to subdivision (c).*

11 ~~(d)~~

12 (e) The state board shall work with relevant state agencies to  
13 do both of the following:

14 (1) Ensure that updates to the scoping plan required pursuant  
15 to Section 38561 identify and recommend measures to achieve the  
16 policy goals stated in subdivision (c).

17 (2) Identify and implement a variety of policies and strategies  
18 that enable carbon dioxide removal solutions and carbon capture,  
19 utilization, and storage technologies in California to complement  
20 emissions reductions and achieve the policy goals stated in  
21 subdivision (c).

22 ~~(e)~~

23 (f) (1) By December 31, 2035, the state board shall evaluate  
24 the feasibility and tradeoffs of achieving the policy goal stated in  
25 paragraph (2) of subdivision (c) relative to alternative scenarios  
26 that achieve the policy goals stated in paragraph (1) of subdivision  
27 (c), and report its findings and recommendations to the Legislature.

28 (2) The state board shall report to the Joint Legislative  
29 Committee on Climate Change Policies annually on progress  
30 toward the goals stated in subdivision (c).

31 (3) As part of its annual reporting requirements pursuant to  
32 Section 38592.6, the Legislative Analyst's Office, until January  
33 1, 2030, shall conduct independent analyses of the state's progress  
34 toward the goals stated in subdivision (c) and shall prepare an  
35 annual report detailing its review, which may include  
36 recommendations for improvements in state actions taken to  
37 achieve the goals stated in subdivision (c). When appropriate, these  
38 annual reports may incorporate reviews of the state board's  
39 evaluation and reporting practices, and may include  
40 recommendations for potential changes to advance transparency

1 and accountability. A report prepared pursuant to this paragraph  
2 shall be made available to the public.

3 *SEC. 3. Section 38562.3 is added to the Health and Safety*  
4 *Code, to read:*

5 *38562.3. (a) (1) The state board shall develop and adopt*  
6 *regulations, or utilize existing programs and regulations, to ensure*  
7 *the state achieves carbon dioxide removals equivalent to at least*  
8 *100 percent of statewide greenhouse gas emissions in calendar*  
9 *year 2045, and all subsequent years, in order to achieve the net*  
10 *zero and net negative greenhouse gas emissions goals established*  
11 *pursuant to Section 38562.2.*

12 *(2) Regulations adopted pursuant to this subdivision shall be*  
13 *consistent with, or impose requirements equivalent to, Chapter*  
14 *4.3 (commencing with Section 39740) of Part 2 of Division 26 of*  
15 *this code and Part 8 (commencing with Section 71460) of Division*  
16 *34 of the Public Resources Code, as determined by the state board.*

17 *(b) (1) As part of its efforts undertaken pursuant to subdivision*  
18 *(a), the state board shall establish separate interim targets for*  
19 *greenhouse gas emissions reductions and carbon dioxide removals,*  
20 *to be applicable beginning no later than calendar year 2030, and*  
21 *report on progress toward achieving those targets. The state board*  
22 *shall post any report prepared pursuant to this subdivision on its*  
23 *internet website.*

24 *(2) The interim target for carbon dioxide removals established*  
25 *pursuant to paragraph (1) for calendar year 2030 shall be at least*  
26 *1 percent of projected total greenhouse gas emissions for that*  
27 *calendar year.*

28 *(c) For purposes of subdivision (c) of Section 38562.2, the state*  
29 *board shall only certify carbon dioxide removal processes that*  
30 *meet all of the following:*

31 *(1) The carbon dioxide removal process results in removals of*  
32 *carbon dioxide from the atmosphere, directly or indirectly, and*  
33 *not only the avoidance or reduction of greenhouse gas emissions.*

34 *(2) The carbon dioxide removal process is not used for purposes*  
35 *of enhanced oil recovery, including the facilitation of enhanced*  
36 *oil recovery from another well.*

37 *(3) If the carbon dioxide removal process requires biomass as*  
38 *a feedstock, it only uses biomass that is produced as a residue or*  
39 *waste product, including, but not limited to, agricultural residues*  
40 *and byproducts of sustainable forest management.*

1 (4) *The carbon dioxide removal process is consistent with the*  
2 *requirements of Section 39741.1.*

3 (5) *The carbon dioxide removal process uses a form of long-term*  
4 *carbon storage with requirements for financial responsibility and*  
5 *longevity consistent with, or equivalent to, those required under*  
6 *Section 39741.5, as determined by the state board.*

7 (d) *To the extent feasible, the requirements of this section shall*  
8 *apply equivalently to all carbon dioxide removal processes certified*  
9 *by the state board whether located inside or outside of the state.*

10 SEC. 4. *Section 39741.4 of the Health and Safety Code is*  
11 *amended to read:*

12 39741.4. *In furtherance of the objectives in Section 39741.1,*  
13 *by January 1, 2024, the state board may adopt protocols to support*  
14 *additional methods of utilization or storage of captured or removed*  
15 *carbon dioxide, including carbon capture for use in products and*  
16 *in methods of long-term storage as identified by the state board.*