

Public Hearing to Consider Proposed Low Carbon Fuel Standard Amendments

Resolution 24-14

November 8, 2024

Agenda Item No.: 24-6-2

Whereas, California experiences a wider range of the effects of climate change and suffers these effects as much as any other state in the nation, including swings between periods of extreme and prolonged drought and periods of extreme storms and flooding, dwindling supplies of fresh water from loss of snowpack, more extensive and severe wildfires and heatwaves, and rising storm surges and sea levels.¹

Whereas, in response to the climate crisis, the Legislature has enacted a series of statutes beginning with the California Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32),² declaring that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California and more recently including AB 1279 (Muratsuchi, Stats. 2022, ch. 337), which makes it the policy of the state to achieve net zero greenhouse gas emissions in the state as soon as possible but no later than 2045;

Whereas, AB 32, which expresses the Legislature's intent that the Board coordinate with State agencies and consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing AB 32; and design emissions reduction measures to meet the statewide emissions limits for greenhouse gases (GHG) in a manner that minimizes costs and maximizes benefits for California's economy, maximizes additional environmental and economic co-benefits for California, and complements the State's efforts to improve air quality;

Whereas, to implement AB 32 in 2007, Governor Schwarzenegger issued Executive Order S-01-07, which directed the creation of a Low Carbon Fuel Standard (LCFS) to reduce the carbon intensity of transportation fuels in California and spur innovation in low-carbon and renewable alternatives;

Whereas, following Board approval in 2009, the LCFS regulation took effect in 2010, and has been amended four times in the years since, most recently in 2019;

Whereas, in the 14 years the program has been in effect, it has displaced over 70% of fossil diesel fuel demand in the state, yielding a booming market in California for lower-carbon-

¹ See, e.g., discussion of evidence in 78 Fed. Reg. 2,112, 2,129 (Jan. 9, 2013); State of California Governor's Office of Planning and Research, California Energy Commission, California Natural Resources Agency, California's Fourth Climate Change Assessment Statewide Summary Report (hereinafter "Fourth Climate Change Assessment Statewide Summary"), Report # SUM-CCCA4-2018-013, August 27, 2018, available at: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf

² Health & Saf. Code § 38500 et seq. (Nuñez, Stats. 2006, ch. 488).

intensity biodiesel and renewable diesel, resulting in reduced air pollution in communities, and keeping jobs in California as refineries convert from producing fossil transportation fuels to producing renewable fuels;

Whereas, the program has led polluters to contribute \$4 billion annually in investments that support clean fuels and clean transportation infrastructure in California, including support for zero-emission vehicles and public transit;

Whereas, the LCFS regulation is due for another periodic amendment, to further incentivize cleaner fuels, in a cost-effective manner, to achieve carbon neutrality pursuant to SB 1279;

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, Health and Safety Code sections 39515 and 39516 provide that any power, duty, purpose, function or jurisdiction of the Board may be delegated to the CARB Executive Officer as the Board deems appropriate, and is presumed delegated unless it has been specifically reserved;

Whereas, section 41511 of the Health and Safety Code authorizes CARB to adopt rules and regulations to require the owner or operator of any air pollution emission source to take reasonable actions for the determination of the amount of such emission from such source;

Whereas, the increase in the size and severity of California wildfires is directly responsible for adding to the air thousands of tons of the criteria air pollutants designated under the federal Clean Air Act,³ including particulate matter (PM), oxides of nitrogen (NOx), and volatile organic compounds, which threaten public health;⁴

Whereas, as the United States Environmental Protection Agency (U.S. EPA) has recognized, the effects of climate change and rising temperatures from GHG emissions make it more difficult to reduce ozone air pollution that threatens public health;⁵

Whereas, section 38505 of the Health and Safety Code defines GHGs as including carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride;

Whereas, section 38510 of the Health and Safety Code designates CARB as the State agency charged with monitoring and regulating sources of GHG emissions in order to reduce these emissions;

Whereas, sections 38560, 38562, and 38566 of the Health and Safety Code direct the Board to adopt regulations in an open public process to achieve the maximum technologically feasible and cost-effective reductions in GHG emissions in furtherance of achieving the statewide limit and, to the extent feasible and in furtherance of achieving the statewide GHG emissions limit, to design its GHG regulations in a manner that is equitable, seeks to minimize costs and maximize the total benefits to California, and encourages early action to reduce GHG emissions;

³ 42 U.S.C. § 7401, et seq.

⁴ See Fourth Climate Change Assessment Statewide Summary.

⁵ See 74 Fed. Reg. 32,744, 32,763 (July 8, 2009).

Whereas, section 38580 of the Health and Safety Code charges CARB with monitoring compliance and enforcing its regulations under AB 32;

Whereas, the Legislature enacted Senate Bill 1383 (SB 1383, Lara, Stats. 2016, ch. 395), which requires CARB to develop, adopt, and begin to implement a Short-Lived Climate Pollutant Strategy no later than January 1, 2018, and the Board approved that Strategy with Resolution 17-9 in March 2017;

Whereas, methane is a powerful greenhouse gas, the emissions of which are responsible for about 20% of the global warming now driving climate change. Over half of the methane emissions in California come from dairy and livestock manure and enteric fermentation (the latter mostly from burping). The remaining methane is from landfilled organic waste streams and fugitive emissions from oil production, processing, and storage; the gas pipeline system; and industrial operations;

Whereas, state incentives and LCFS has supported deployment of anaerobic digestors at dairies and minimized the potential for leakage;

Whereas, as specified by the LCFS regulation, electrical distribution utilities receive LCFS credits associated with residential charging of electric vehicles, and have historically used those funds to support equity projects, and to support a statewide Clean Fuel Reward program to provide a reduction in price on new light duty electric vehicle purchases or leases in California;

Whereas, the 2022 Scoping Plan Update demonstrated the need to scale clean electricity and hydrogen production quickly to decarbonize multiple sectors of the economy and can scale faster through state and federal incentives;

Whereas, the hydrogen refueling infrastructure pathways included in the current LCFS regulation were designed to support California's transition to decarbonized and renewable hydrogen by supporting the deployment of hydrogen refueling stations ahead of fuel cell vehicle deployments;

Whereas, attaining federal air quality standards in California and addressing health inequities in coastal disadvantaged communities, is not possible without significant additional reductions of smog-forming nitrogen oxides (NOx) and diesel emissions from ocean-going vessels;

Whereas, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality, which charted a path to achieving carbon neutrality by 2045 and reducing greenhouse gas emissions 85% below 1990 levels by 2045;

Whereas, the current LCFS regulation is published at sections 95480, 95481, 95482, 95483, 95483.1, 95483.2, 95483.3, 95484, 95485, 95486, 95486.1, 95486.2, 95487, 95488, 95488.1, 95488.2, 95488.3, 95488.4, 95488.5, 95488.6, 95488.7, 95488.8, 95488.9, 95488.10, 95489, 95490, 95491, 95491.1, 95492, 95493, 95494, 95495, 95497, 95500, 95501, 95502, and 95503 of Title 17, California Code of Regulations;

Whereas, the goal of the Low Carbon Fuel Standard is to decarbonize transportation fuels to support the state's air quality and climate goals in the most cost effective way possible in a manner that has the least impact to consumers and the economy. The Board further recognizes that compliance costs of this program can be passed onto consumers.

Whereas, staff has proposed Low Carbon Fuel Standard Amendments (Proposed Amendments), as originally set forth in Appendix A to the Initial Statement of Reasons released to the public on January 2, 2024, and modified regulatory language developed in response to comments received since the Initial Statement of Reasons (ISOR or Staff Report) was released, as set forth in Attachment A to this resolution;⁶

Whereas, concerns have been raised about the potential impact of the proposed LCFS regulation amendment on retail gasoline prices because of an initial calculation included in a 2023 Standardized Regulatory Impact Assessment (SRIA) issued prior to the initial amendments proposal released with the ISOR—a calculation based on a model that the assessment explicitly stated could not predict gas prices, that did not capture all of the transportation fuels that will be available in response to these regulatory updates, and that did not account for savings from broader competition in the transportation fuels market;

Whereas, data from third party commodities markets experts show that the LCFS program generally results in a cost pass-through of 10 cents per gallon of gasoline, and fuel producers likewise self-report a cost pass-through of 8 to 10 cents per gallon of gasoline;

Whereas, the retail price of gasoline, including the costs that refiners, distributors, and retailers choose to pass through to consumers, is affected by many factors, and fuel producers have many choices in how they comply with the LCFS program's requirements under the program's flexible, market-based system, making it impossible to predict how fuel producers may ultimately make pricing decisions in response to program changes;

Whereas, notwithstanding the uncertainty of how any LCFS program change might indirectly affect retail gasoline prices, the Board recognizes its duty to minimize costs and maximize benefits for California's economy as it works to meet statewide GHG targets, and the Board acknowledges the strong State policy in favor of protecting consumers from high retail gasoline prices, as reflected in the Legislature's findings and actions in legislation enacted in two recent extraordinary sessions, SBx1-2 and ABx2-1;

Whereas, since an initial LCFS scenario was considered in developing the SRIA, staff has modified the Proposed Amendments to increase opportunities to develop transit and zero emission infrastructure credits, to smooth out phasing out of credit generation for hydrogen and renewable natural gas to minimize abrupt credit supply constraints, and removed an initial proposal to include conventional jet fuel as a deficit-generating fuel in order to minimize any possibility of near-term price spikes;

Whereas, the existing LCFS includes a maximum credit price provision to prevent unchecked cost increases in the program which would continue under the amended program;

Whereas, ongoing monitoring of any impacts of the LCFS regulation amendment on retail gasoline prices is warranted, to assess ongoing price effects;

Whereas, just as the Board has repeatedly amended the LCFS regulation, it may do so again if, contrary to the Board's expectations, the specific changes adopted under this resolution ultimately accelerate cost burdens on California consumers;

Whereas, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural

⁶ The final regulation orders and all other rulemaking documents are available on the CARB webpage for the 2024 LCFS rulemaking: <https://ww2.arb.ca.gov/rulemaking/2024/lcfs2024>

Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

Whereas, CARB prepared a Draft Environmental Impact Analysis (Draft EIA) for the Low Carbon Fuel Standard Amendments, herein referred to as the Proposed Amendments (i.e., the proposed project under CEQA), entitled “Draft Environmental Impact Analysis for the Proposed Low Carbon Fuel Standard Regulation” and circulated it as Appendix D to the Staff Report on January 5, 2024, for a 45-day public review and comment period that closed on February 20, 2024.

Whereas, the Draft EIA concluded that implementation of the Proposed Amendments has the potential to result in: beneficial impacts to greenhouse gas emission; less than significant impacts to air quality odors, energy, mineral resources (short-term construction-related), population and housing, public services, recreation, and wildfire; and potentially significant adverse impacts to aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources (long-term operational-related), noise and vibration, transportation, tribal cultural resources, and utilities and service systems;

Whereas, following the 45-day comment period, modified regulatory language and supporting documentation were circulated for an additional 15-day public comment periods, with the changes to the originally proposed text clearly indicated, according to provisions of California Code of Regulations, title 1, section 44 and Government Code section 11340.85, from August 12, 2024, through August 05, 2024;

Whereas, following the 45-day comment period staff determined, as the result of changes to the project description and new analysis in the air quality and GHG sections, recirculation of those portions of the EIA were warranted. The Recirculated EIA was released on August 16, 2024, for a 45-day public review and comment period that closed on September 30, 2024;

Whereas, following the first 15-day comment period, modified regulatory language and supporting documentation were circulated for an additional 15-day public comment periods, with the changes to the originally proposed text clearly indicated, according to provisions of California Code of Regulations, title 1, section 44 and Government Code section 11340.85, from October 1, 2024, through October 16, 2024;

Whereas, staff reviewed written comments received on the Draft EIA and the Recirculated EIA and prepared written responses to those comments raising significant environmental concerns in a document entitled Response to Comments on the Draft and Recirculated Environmental Impact Analysis Prepared for the Amendments to the Low Carbon Fuel Standard (Response to EIA Comments);

Whereas, prior to the November 8, 2024, Board Hearing, staff posted on the rulemaking page the Final EIA, which incorporates the Recirculated EIA project description, air quality analysis, and GHG analysis and includes minor revisions and the Response to EIA Comments;

Whereas, prior to the duly noticed public hearing held on November 8, 2024, the Final EIA including the Response to EIA Comments, was distributed to the Board for consideration;

Whereas, a public hearing and other administrative proceedings have been held according to the provisions of Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

The Findings of the California Air Resources Board

Whereas, in consideration of the Notice of Proposed Rulemaking for these regulations, ISOR, 15-Day Notices, the documents and evidence referenced and incorporated in these documents, and written comments and public testimony on the proposed regulations, the Board finds that:

California's transportation sector is the leading source of GHG emissions in the state, contributing almost 50% of the state's annual GHG emissions;

The fuels used in cars, trucks and other transportation sources have a significant impact on GHG emissions; reducing the impact these fuels have on GHG emissions will provide important environmental and possibly economic opportunities;

The proposed regulation was developed using the best available economic and scientific information and will achieve the maximum technologically feasible and cost-effective reductions in GHG emissions from transportation fuel used in California;

The proposed regulation itself establishes no motor vehicle fuel specifications and therefore no multimedia evaluation is required under section 43830.8 of the Health and Safety Code;

The scientific basis of the LCFS regulation was peer reviewed in 2015 consistent with Health and Safety Code section 57004;

The proposed Low Carbon Fuel Standard Amendments were developed in an open public process, in consultation with affected parties, through numerous public workshops, individual meetings, and other outreach efforts, and these efforts are expected to continue;

CARB considered alternatives to the Low Carbon Fuel Standard Amendments. No reasonable alternatives to the Low Carbon Fuel Standard Amendments considered to date, or that have otherwise been identified and brought to the attention of CARB, would be more effective at carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected entities than the proposed regulation; and

The proposed Low Carbon Fuel Standard Amendments are consistent with CARB's environmental justice policies and do not disproportionately impact people of any race, culture, income, or national origin.

Now, therefore, be it resolved that the Board hereby certifies that the Final EIA, which includes the Response to EIA Comments, as released to the public prior to the November 8, 2024, Board Hearing, was completed in compliance with CARB's certified regulatory program to meet the requirements of CEQA, reflects the agency's independent judgment and analysis, and was presented to the Board, whose members reviewed and considered the information therein before taking action to approve the regulations.

Be it further resolved that in consideration of the Final EIA, the Response to EIA Comments, and the entirety of the record, the Board adopts the Findings and Statement of Overriding Considerations.

Be it further resolved that the Board hereby approves for adoption amendments to sections 95480, 95481, 95482, 95483, 95483.1, 95483.2, 95483.3, 95484, 95485, 95486, 95486.1, 95486.2, 95487, 95488, 95488.1, 95488.2, 95488.3, 95488.4, 95488.5, 95488.6, 95488.7, 95488.8, 95488.9, 95488.10, 95489, 95490, 95491, 95491.1, 95495, 95500, 95501, 95502, 95503, and new sections 95486.3, 95486.4, and 95491.2, Title 17, California Code of Regulations, as set forth in Attachments A-1 and A-2 as released on CARB's LCFS rulemaking page on November 6, 2024, and Attachment A to this resolution.

Be it further resolved that the Board directs the Executive Officer to prepare a plan for initiating, developing, proposing, and implementing a livestock methane regulation under Health and Safety Code section 39730.7 (from SB 1383). The plan will include:

- A timeline that includes rule development to begin in 2025 and Board consideration by 2028 that would allow for potential regulatory implementation starting in 2030;
- Evaluating data to better inform methane emission estimates and whether mandatory reporting and/or other requirements are appropriate, as called for by CARB and the California Department of Food and Agriculture's May 2024 response to a March 2024 California Climate Action petition for rulemaking;
- Incorporating the lessons learned and progress achieved to date from the incentives provided to livestock methane sources into the plan development;
- Addressing any other elements to ensure compliance with the Health and Safety Code section 39730.7; including determining that any regulation is technologically feasible, economically feasible, cost-effective, inclusive of provisions to minimize and mitigate potential leakage to other states, and inclusive of an evaluation of the achievements made by incentives; and
- A recognition that a dairy with a digester installed prior to 2030 is not automatically exempt from any regulations that may be adopted pursuant to this plan.

Be it further resolved that the Board directs the Executive Officer to monitor, report back to the Board as part of the next Scoping Plan Update, and propose any adjustments, if any of the following conditions may impede successful expansion of similar GHG reduction policies in other jurisdictions or impede the ability of the State to achieve its air quality and climate goals, and transition to zero emission technology:

- Alternative fuel availability once sustainability guardrails are phased-in;
- Hydrogen fuel availability to meet growing demand and role of state and federal incentives, including alignment with federal hydrogen incentives to increase hydrogen supply;
- Need for new provisions that accelerate the deployment of new technologies that support low-carbon electricity for electric vehicle charging in the near-term, such as linear generators;
- Verification requirements for electricity fueling;

- Hydrogen or electricity fast-charging fueling infrastructure availability supported by the updated LCFS hydrogen refueling infrastructure or direct current fast charging infrastructure crediting provisions, including any station capacity limits or credit limits; and
- Potential acceleration of the timing of deliverability requirements for renewable natural gas in response to over-performance of zero-emission vehicle (ZEV) regulations.

Be it further resolved that the Board directs the Executive Officer to make publicly available the following types of information and any other information to support public transparency on the performance of the LCFS program, including:

- Carbon intensity reduction progress and future targets;
- Historical alternative fuel volumes and credit generation;
- Total credits and deficits generated per quarter, and credit bank size;
- Monthly credit price and transactions;
- Average carbon intensity by fuel type;
- Feedstock details for biomass-based diesel;
- Sources of crude oil supplied to California;
- Information about credit holdings;
- Share of alternative fuels produced in-State and out-of-State;
- Availability and use of conventional jet fuel and sustainable aviation fuel within California, as well as details on relevant state and federal incentives and policies (annual starting with 2025 data);
- Information on equity projects implemented by utilities funded by LCFS (annual starting with 2025 data);
- Information on any OEM credit recipients and use of credit value (quarterly starting with 2025 data);
- Public information on ZEV infrastructure and location (annual starting with 2025 data);
- Pending development of new LCFS interface system, better accessibility to public information on locations of renewable fuel projects and better accessibility to data on the production of alternative fuels and associated carbon intensity;
- Location of direct air capture projects;
- Coordination with the California Energy Commission on linking to data reported by refineries and retail costs (starting in 2025);
- Broader Western North American alternative fuel supply data (targeting 2027 and coordinating in the Pacific Coast Collaborative); and
- Penetration of E15 (gasoline blends with up to 15 percent ethanol), if CARB adopts regulatory updates to allow E15 in California.

Be it further resolved that the Board directs the Executive Officer to consider, for a future rulemaking, including ocean-going vessel fuels as LCFS-regulated fuels. This consideration should include both combustion and non-combustion fuels with a prioritization of non-combustion and least carbon fuels, and any other relevant policies to decarbonize this sector. Any potential change in approach to ocean-going vessel fuels under a future LCFS rulemaking must not impede progress to decarbonize on-road sources, which are the leading source of air pollution and greenhouse gases in the State.

Be it further resolved that the Board directs the Executive Officer to convene a public forum in the next 12 months on the latest science on land use change related to transportation fuels and the impact on greenhouse gas emissions, including the most commonly used models, for consideration in a future LCFS update. This should include a public discussion and consider viewpoints from industry, environmental advocacy groups, academia, and government agencies such as the United States Department of Agriculture.

Be it further resolved that the Board directs the Executive Officer to continue to monitor the development and commercialization of electrofuels (“e-fuels”) for inclusion in the next Scoping Plan Update and a potential future LCFS update.

Be it further resolved that the Board directs the Executive Officer to explore developing a zero-emission airport ground operations regulation and consider, for upcoming and relevant items going to the board including the next LCFS rulemaking, potential regulatory approaches to support emission reductions associated with conventional jet fuel. In considering these actions, the Executive Officer shall engage with labor, airport workers, airlines, airport operators, airport-adjacent communities, relevant federal, state, and local agencies, and interested members of the public.

Be it further resolved that the Executive Officer, along with the airlines represented by Airlines for America, implement the Sustainable Aviation Fuel Partnership and associated goals and cooperation recognized in October 2024, including the goal to ensure at least 200 million gallons of cost-competitive and commercially viable sustainable aviation fuel is available for use by operators in California by 2035.

Be it further resolved that the Board directs the Executive Officer to determine if additional sufficiently related modifications to the regulations are appropriate, and that if no additional modifications are appropriate, the Executive Officer shall take CARB’s final step for final approval of such amendments through submittal of the Board-approved rulemaking package to the Office of Administrative Law. The Executive Officer may revise the adopted regulations with grammatical and other non-substantial changes, indicate them as such, and add them to the rulemaking record. If the Executive Officer determines that additional sufficiently related substantial modifications are appropriate, the modified regulatory language shall be made available for public comment, with any additional supporting documents and information, for at least 15 days, and the Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Board delegates to the Executive Officer the authority to both (1) either approve or disapprove proposed changes in regulatory language under Government Code section 11346.8(c), and (2) conduct any appropriate further environmental review associated with such changes, consistent with the Board’s Certified Regulatory Program regulations, at California Code of Regulations, title 17, sections 60000-60008, for those sufficiently related substantial modifications. Alternatively, rather than taking action on the proposed modifications, the Executive Officer may instead present the modifications, and any appropriate further environmental review associated with the modifications, to the Board

for further consideration, if the Executive Officer determines further Board consideration is warranted.

Be it further resolved that the Board directs the Executive Officer to transmit the Notice of Decision to the Secretary of the Natural Resources Agency for posting.

Be it further resolved that because of the significant public health and welfare benefits of the proposed regulations and the potential for accelerating achievement of those benefits with an earlier effective date and implementation, the Board hereby determines there is good cause for the regulations to become effective as expeditiously as possible.

Be it further resolved that the Board directs the Executive Officer to assess any impacts of these regulation amendments on retail gasoline prices every year, beginning one year from the effective date of these regulation amendments, and to collaborate with the California Energy Commission in that effort.

Resolution 24-24

November 8, 2024

Identification of Attachments to the Board Resolution

- Attachment A-1: Final Regulation Order–Sections Proposed for Amendments
- Attachment A-2: Final Regulation Order–Sections Proposed for Adoption
- Attachment B: Final Environmental Impact Analysis
- Attachment C: Responses to Environmental Impact Analysis Comments
- Attachment D: Findings and Statement of Overriding Considerations