EARTHJUSTICE

November 10, 2025

Clerk of the Board and Members of Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Via Electronic Submittal and email to cotb@arb.ca.gov

Re: Proposed Amendments to the Low Carbon Fuel Standard

Dear Chair Sanchez and Members of the Board:

Earthjustice appreciates the opportunity to comment on the California Air Resources Board's (CARB) proposed amendment to the Low Carbon Fuel Standard (LCFS). Earthjustice supports and shares CARB's goal of speeding up deployment of electric vehicle (EV) charging infrastructure. However, several elements of the proposed LCFS changes risk undermining California's air quality, clean energy, and climate objectives. In particular, the proposed allowance for book-and-claim accounting of biomethane (aka "renewable" natural gas or RNG) used in linear generators to produce "EV electricity" raises significant policy, legal, and environmental concerns. The proposed changes are inconsistent with the LCFS's purpose, conflict with the state's zero-emission vehicle trajectory, disrupt a competitive market for zero-NOx power generations, rest on faulty market assumptions, and lack sufficient analysis of their environmental impacts.

We therefore urge CARB to withdraw the proposed changes and to analyze other options for catalyzing deployment of EV charging infrastructure.

I. Linear Generators Emit Pollution and Should Not Generate LCFS Credits.

A. Combustion Power Is Incompatible with California's ZEV trajectory.

CARB proposes to add "linear generator[s]" to section 95488.8 of the LCFS regulation and to allow book-and-claim biomethane to be matched to fossil methane burned in linear generators through December 31, 2035. This change would provide far greater subsidies for charging that is powered entirely by combustion than for charging that is powered by California's increasingly clean electric grid or by fully powered on-site zero-emission resources like solar and batteries. There is no basis for this change, as there is no evidence that the linear generators would displace higher-carbon grid electricity or reduce overall emissions. We urge the Board to reject this misleading, pro-combustion accounting scheme.

California's truck rules (i.e. Advanced Clean Trucks and Advanced Clean Fleets) and Executive Order N-79-20 commit the state to a zero-emission trajectory for medium- and heavy-

duty vehicles. Creating a new combustion-based LCFS crediting pathway contradicts those investment and creates a back-door gas pathway that dilutes ZEV charging investment and complicates grid-integrated signals. This undermines CARB's goal of reducing combustion-based emissions.

Appendix F, the Supplement to the Initial Statement of Reasons, states that the "proposed amendments to the LCFS support the State's climate and air quality targets."[1] Yet just two sentences earlier, CARB notes that in order to meet its carbon neutrality goals, it must "driv[e] down fossil fuel demand in transportation" and "deploy[] zero-emission technology wherever feasible..."[2] The proposed changes run counter to these objectives, subsidizing paper environmental offsets in the form of book-and-claim biomethane credits, increasing combustion, and shifting LCFS funding away from grid improvements for another 10 years.

What is more, because the proposal will result in more book-and-claim biomethane projects, the number of LCFS credits will increase, potentially driving down the credit price, which directly affects funding to California's electric utilities, who are required to spend the money from their LCFS credits on furthering transportation electrification. Staff fails to analyze this highly consequential, deleterious effect on zero-emissions pathways.

B. Staff's Proposal Fails to Quantify Expected Credit Volume Changes and Displacement of Other Credit Sources and Would Disrupt a Competitive Market for Zero-NOx Alternatives.

Appendix F also contains no estimate of the LCFS credits that linear generator projects paired with biomethane credits could generate, nor any sensitivity on emissions or price impacts. Appendix F asserts (without data) that the amendment is "not expected" to add new units and "not expected" to change NOx/PM, because some generators already exist.[3] This assertion defies logic and lacks evidentiary support because the changes, if adopted, would provide lucrative subsidies for methane-fired linear generators without any enhancement of crediting for zero-emitting power sources such as wind and solar, thereby tilting the playing field in favor of emitting resources. Further, Staff's proposal would stymie innovation of multiple zero-NOx options that are in direct competition with linear generators, thereby disrupting a competitive market for temporary power solutions for EV charging stations that await grid connection.[4] Staff

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[1] CARB, Appendix F: Supplement to Initial Statement of Reasons – Proposed Low Carbon Fuel Standard Amendments Proposed Amendments to the On-Road Heavy-Duty Engine and Vehicle Omnibus and Low Carbon Fuel Standard Regulations (Sept. 23, 2025) (hereinafter "Appendix F") at 5, https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2025/orhdlcfs/app_f.pdf.
[2] Id.
[3] Appendix F at 7-8.
[4] Craig Klaasmeyer, Kaizen Clean Energy, presentation at July 2025 IEPR workshop, https://efiling.energy.ca.gov/GetDocument.aspx?tn=265058 (discussing zero-NOx mobile power generation equipment with a lower levelized cost of energy than diesel and propane gensets); Nora Manthey, "Plug Power Presents Stationary Fuel Cell System to Charge BEVs" (May 3, 2023),

fail to acknowledge these perverse market signals and has not published a scenario analysis of likely deployment, credit volume per megawatt (MW), and displacement effects on vehicle charging. Staff's failure to disclose these impacts deprives the public and the Board of critical information about the effects of the proposed changes.

Importantly, the California Energy Commission has consistently described linear generators as backup or load management power systems for industrial uses like data centers, warehouses, grocery stores, and factories, not as dedicated EV charging resources.[5] Therefore, crediting these units as "EV charging infrastructure" risks subsidizing industrial behind-the-meter generation rather than supporting genuinely dedicated zero-emission fueling infrastructure. Further, even under optimal conditions, linear generators convert methane to electricity at about 40-50% efficiency.[6] This is significantly lower than renewable electricity delivered through the grid. Labeling such units as low-carbon fueling options is therefore misleading. Incentivizing their operation through LCFS crediting would divert investments needed to truly decarbonize California' grid.

II. The Proposal Contradicts the Board's Direction on Livestock Methane.

The proposed crediting pathway revisits an issue the Board explicitly addressed during the 2024 LCFS rulemaking. At that time, the Board recognized that the existing LCFS crediting system provides outsized financial benefits to dairy manure projects, and directed staff, through Resolution 24-14, to develop a livestock methane regulation.[7]

By allowing biomethane to be booked-and-claimed for electricity in fossil-methane linear generators, the proposal would expand the same mechanism the Board sought to sunset. Most of the additional crediting would likely be generated from out-of-state livestock projects that do not reduce California's methane emissions. If implemented, the proposed change would allow even more dairy methane molecules to earn LCFS credits at below -300 gCO_2e/MJ. It thus directly contradicts both the Board's 2024 direction and the state's objective of transitioning away from

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https://www.electrive.com/2023/05/03/plug-power-presents-stationary-fuel-cell-system-to-charge-bevs/#:~:text=Plug%20Power%20is%20looking%20to,provides%2060%20MWh%20on%20site.

[5] CEC, High-efficiency and Ultra-low Emissions Linear Generator Demonstration Project in Southern California (May 2024), https://www.energy.ca.gov/sites/default/files/2024-05/CEC-500-2024-037.pdf; https://www.energizeinnovation.fund/projects/high-efficiency-and-ultra-low-emissions-linear-generator-demonstration-project-southern.

[6] Id. at 17 (CEC stating that, in a demonstration project, "[t]he efficiency of the unit is relatively constant, slightly above 41 percent, and reduces slightly when power is below 150 kW."); Mainspring, https://www.mainspringenergy.com/product/ (reporting 46% efficiency).

[6] CARB, Public Hearing to Consider Proposed Low Carbon Fuel Standard Amendments Resolution 24-14 (Nov. 8, 2024), https://ww2.arb.ca.gov/sites/default/files/barcu/board/res/2024/res24-14.pdf.

[7] Id.

combustion in the transportation sector. Further, this policy could incentivize both expanding herd sizes and warming of manure lagoons to increase methane production.[8]

This approach:

- Violates Board direction to realign biomethane policy under a separate methane rule;
- Circumvents transparency, since this provision was not discussed during the 2024 LCFS amendments or through public workshops to interested methane, dairy, and LCFS parties;
- Rewards polluting practices by continuing to pay emitters for basic pollution control that other methane-emitting industries have long been required to undertake without subsidies; and
- Distorts credit markets, diverting LCFS value from zero-emission resources to legacy combustion systems.

Additionally, environmental justice advocates have long noted that large dairy operations incentivized under the LCFS create a range of local harms, including groundwater contamination, odor, and other air-quality and public health impacts. Other jurisdictions have recognized these potential harms and have adopted safeguards to prevent crediting for projects that may violate environmental requirements such as air quality or waste management rules. For instance, Washington's LCFS-equivalent program expressly prohibits avoided methane emissions crediting from any project in violation of other regulations.[9] New Mexico's Environmental Department has proposed similar safeguards in its forthcoming LCFS-equivalent program, clarifying that a project in violation of other regulations may not generate additional credits.[10] CARB's proposal lacks any comparable protection, leaving open the possibility that the LCFS could subsidize digester projects that are out of compliance with other standards. Together with the book-and-claim allowance, this gap creates a clear loophole: Projects unable to qualify

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[8] U.S. Treasury, Credit for Production of Clean Hydrogen and Energy Credit at 2290, https://www.govinfo.gov/content/pkg/FR-2025-01-10/pdf/2024-31513.pdf (noting that for methane produced from animal waste, there are several potential routes that may increase methane production including "[(1)] shifting management practices for existing quantities of manure from land application to lagoon, thereby significantly increasing methane generation; [(2)] on the margin, making new or expanded concentrated animal feeding operations more profitable (whether by increasing the overall numbers of animals raised, or by consolidating smaller existing operations) and thereby inducing additional manure and methane generation; and [(3)] using management practices at biodigesters to produce more methane than would have been produced otherwise (for example, increasing the temperature at an anaerobic digester)."); see also M. Hanna Pierce & Aaron L. Strong, An Evaluation of New York State Livestock Carbon Offset Projects in California's Cap and Trade Program, 14 Carbon Management 1, 9 (May 2023), https://www.tandfonline.com/doi/full/10.1080/17583004.2023.2211946 (documenting reported instances of dairies responding to the LCFS incentives by warming their manure to intentionally produce more methane than would have otherwise been emitted by the dairies).

[9] Washington Administrative Code 173-424-610(16), https://app.leg.wa.gov/wac/default.aspx?cite=173-424-610.

[10] New Mexico Environmental Improvement Board Docket 25-23, New Mexico Environment Department Exhibit 113, Proposed New Rule 20.2.92.202(E)(5) NMAC.

in other jurisdictions because of environmental violations could instead seek crediting under California's LCFS. This omission further undermines the integrity and fairness of California's program.

III. Additional Environmental Analysis Is Required Under CEQA.

Appendix F asserts that the proposal falls under the California Environmental Quality Act (CEQA) "common-sense" exemption, claiming it can be "seen with certainty" that no significant effects will occur.[11] To support this conclusion, CARB states that "given anticipated credit prices and the comparatively higher cost of biomethane, staff do not anticipate this amendment to incentivize significant indirect supply of RNG in any linear generators."[12] As a result, Staff's analysis "concludes there will be no change to existing conditions as a result of the proposed LCFS amendments."[13] For numerous reasons, this conclusion is not supported by the evidence, and additional analysis is required.

First, CARB references "previously identified significant effects" from the 2024 LCFS Environmental Impact Analysis (EIA) as justification for not analyzing impacts on the current proposal. Yet that analysis did not assess the effects of linear generator crediting that is currently proposed. Linear generators release harmful pollutants, including volatile organic compounds and NOx.[14] Indeed, linear generators are more polluting than many of the gas-fired generators that power the California grid because the South Coast Air Quality Management District applies a less stringent NOx standard to them than the one that applies to combined cycle gas generators. Thus, installing additional generators or running existing generators more often will increase emissions. CARB asserts that "there will be no change to existing conditions," given "the anticipated credit price," but its assumed credit prices are unrealistically low. In fact, the LCFS regulation's auto acceleration mechanism could lead to a price of $112.[15] CARB fails to demonstrate that this price will not lead to increased linear generator operation compared to grid-connected charging through 2035. Further, given the many variables that impact the LCFS credit prices and their dependence on factors outside of CARB's control, CARB cannot predict with "certainty" that its price assumptions are correct and that there is definitively "no possibility" of significant effects. CEQA's common sense exemption is reserved for a narrow set of

[11] Appendix F at 11.
[12] Id.
[13] Id.
[14] South Coast Air Quality Management District, Draft Staff Report, Proposed Rule 1110.3 – Emissions from Linear Generators (Oct. 2023), https://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1110.2/pr-1110-3-dsr_09-29-23.pdf?sfvrsn=6.
[15] CARB, "Modeling Output Sheets from 15-day Package-- Uncertainty Scenario 1: Proposed Scenario with AAM trigger," https://ww2.arb.ca.gov/resources/documents/supplemental-20232024-lcfs-modeling-documentation.

circumstances where significant effects are categorically out the question. Given the volatile nature of the complex LCFS credit market, those conditions do not exist here. CARB's conclusion that credit prices will never rise to a level that incentivizes increased emissions from linear generators is unsupported.

Second, the EIA did not adequately assess the impact of avoided methane and book-and-claim crediting even though ample evidence in the LCFS record demonstrates that avoided methane crediting has encouraged the expansion and concentration of large livestock operations. CARB therefore cannot rely upon the faulty EIA here and claim that there is "no possibility" of significant effects from the proposed change. The current proposal does not shift crediting opportunities from one methane source to linear generators; it adds to them. Therefore, there is no "certainty" that no significant effects will occur, as CARB claims. Indeed, CARB cannot have it both ways: either the proposed change will increase power generation for EV charging through use of emitting linear generators and biomethane crediting and thus increase air pollution and other environment harms, or the proposed change will do nothing and thus lacks justification.

Third, CARB has failed to evaluate the energy impact of the proposed changes, in violation of CEQA.[16] As explained above, Appendix F lacks any analysis of likely linear generator deployment, credit volume per MW, and displacement effects on genuine zero-emissions EV charging. It fails to address the flawed market signal it will send to encourage buildout of fossil-fueled power generation to the detriment of renewables and other zero-NOx alternatives available in the market. This failure deprives the public and the Board of critical information about the short and long-term energy impacts of the proposed changes.

Fourth, even if the prior EIA were adequate (which it is not), new information of substantial importance has emerged since it was certified in 2024. In January 2025, US Treasury Department explicitly acknowledged that crediting systems can incentivize more methane generation by shifting manure to lagoons, increasing herd sizes, and heating the manure.[17] These have the opposite effect of the subsidy, which was to mitigate an existing methane problem, not to create new sources of pollution. Under Public Resources Code section 21166 and CEQA Guideline section 15162, CARB must reevaluate its analysis in light of this new evidence, rather than rely on a contested, outdated record.[18]

Whenever a public agency must make a further discretionary decision to carry out or approve a project for which it has previously issued an approval, the agency must determine

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[16] Public Resources Code section 21100(b)(3); CEQA Guidelines, Appendix F and sections 15126.4(a)(1)(C) and (c); *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256; *California Clean Energy Comm. v. City of Woodland*, 225 Cal. App. 4th (2014) 173, 211.
[17] U.S. Treasury, Credit for Production of Clean Hydrogen and Energy Credit at 2290, https://www.govinfo.gov/content/pkg/FR-2025-01-10/pdf/2024-31513.pdf.
[18] Pub. Resources Code § 21166; 14 Cal. Code Regs. § 15162.

whether further environmental review is required due to changes in the project, changes in circumstances, or new information.[19] Here, CARB has proposed significant project changes after the close of public comment and certification of an EIA. Significant project changes require CEQA review when, as here, the changes could result in new and worsened environmental impacts that have not been analyzed in an environmental review document.[20]

The proposed changes to section 95488.8 are significant because they go beyond mere ministerial modifications of the previously analyzed project.[21] As described above, the proposed changes incentivize new combustion and favor emitting sources over zero-emissions solutions. These significant changes to the LCFS regulations would result in new and worsened environmental impacts. And since these new, negative effects have not been discussed or considered in the EIA, CARB must now analyze them. Importantly, any environmental review must address the impacts of the proposed changes on communities in freight corridors that may be impacted by increased linear generator deployment and use at charging stations, instead of grid-powered projects.

CARB's attempt to shoehorn the proposed change into the "common sense" exemption therefore cannot stand. Substantial evidence does not support with "certainty" that there is "no possibility" of significant adverse effects. Additional analysis is required under CEQA.

In conclusion, Staff's proposal to expand LCFS crediting to fossil-methane-powered linear generators through book-and-claim accounting is inconsistent with California's zero-emission policies, unsupported by the record, and inadequately reviewed under CEQA. There is a serious risk that the proposed changes, if adopted, will promote linear generator installation at the expense of grid-connected charging facilities, thereby favoring emitting fossil-fueled resources. CARB must avoid this perverse outcome by withdrawing the proposed changes, conducting a comprehensive analysis of the technologies available to speed up deployment of EV charging, and prioritizing infrastructure that does not increase emissions. Analysis of the wide array of options for powering EV charging will provide critical information to the Board and help ensure the LCFS supports California's climate, clean energy, and air quality goals. If CARB does not withdraw the proposed changes, CEQA requires CARB to prepare a full environmental analysis of their many environmental effects.

Sincerely,

/s/ Nina Robertson

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[19] *Department of Water Resources Environmental Impact Cases* (2022) 79 Cal.App.5th 556, 576.
[20] Pub. Resources Code § 21166(a); 14 Cal. Code Regs. 15162(a)(1).
[21] See *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310 (finding applicant's proposal to produce ultra-low sulfur diesel at oil refinery was not a mere modification where it would result in significant increased operation of polluting equipment).

Nina Robertson
Earthjustice
1 Sansome St. Suite 1700
San Francisco, CA 94104