



January 7, 2022

Cheryl Laskowski
Chief, Transportation Fuels Branch
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Via Electronic Submittal

Dear Dr. Laskowski:

Earthjustice respectfully provides these comments in response to CARB's December 7, 2021 workshop ("December Workshop") presentation on initial concepts for future program changes to the Low Carbon Fuel Standard ("LCFS"). To enable California's transformation to a zero-emission transportation system and uphold environmental justice, CARB must reform the LCFS in several critical ways, as detailed below.

1. CARB Should Directly Address the LCFS's Impacts on Environmental Justice and Hold at Least One Public Workshop on Environmental Justice Concerns.

Earthjustice is dismayed that CARB has failed to address the environmental justice implications of the LCFS program. During the December Workshop, CARB Staff failed to even mention environmental justice, and environmental justice was absent from the "Broad Principles" presented as guiding the new LCFS policy concepts.¹

As Earthjustice and other groups detailed to CARB in their October 2020 comments, the environmental justice impacts of biomethane are significant, and the LCFS program risks exacerbating these harms by rewarding producers that impose pollution burdens on already overburdened communities.² CARB can no longer ignore these injustices.

As a first step toward addressing these concerns, CARB should hold at least one public workshop specifically focused on environmental justice issues associated with biomethane production and use in California. In addition, CARB should take the key measures detailed below to end the LCFS program's perverse support of polluters.

¹ CARB, LCFS Workshop on Potential Future Changes (Dec. 7, 2021) at 11 https://ww2.arb.ca.gov/sites/default/files/2021-12/LCFS%2012_7%20Workshop%20Presentation.pdf.

² Comments of Leadership Counsel et al., Re: Low Carbon Fuel Standard Public Workshop (Nov. 5, 2020) <https://www.arb.ca.gov/lists/com-attach/98-lcfs-wkshp-oct20-ws-UDIGaVM9V2kCYVUh.pdf>.

2. CARB Should Phase Out LCFS Credits for Methane Derived from Dairy Livestock, Which Perversely Incentivize Increased Methane Production and Exacerbate Air and Water Pollution in Overburdened Communities.

At the December Workshop, CARB once again ignored the concerns of environmental justice communities regarding LCFS's support of dairy concentrated animal feeding operations ("CAFOs") in California's Central Valley. Many of these CAFOs are located in disadvantaged communities in the San Joaquin Valley—one of the most environmentally stressed parts in the nation—where they are the region's largest source of volatile organic compounds, a significant source of particulate matter,³ and a major source of nitrate pollution in groundwater.⁴ Neither existing regulations nor the LCFS require CAFOs to account for and eliminate the environmental and human health costs that they impose on nearby communities.⁵

These air, water, and health impacts are closely tied to the practice of consolidating and confining many thousands of cows to single farms where they produce waste far in excess of the land's ability to naturally reincorporate it. The recent trends towards confinement and consolidation, according to the U.S. EPA, translate "into an increasing use of liquid manure management systems, which have higher potential CH₄ [methane] emissions..."⁶

Only this highly-polluting management strategy, used by large, unsustainable industrial dairies, is able to link to the LCFS supply chain.⁷ As environmental justice communities have repeatedly pointed out, and as new research finds, the LCFS favors large dairies over small or pasture-based farms that handle their manure more sustainably.⁸ The findings of the Union of Concerned Scientist and Humboldt State University indicate that the LCFS is causing market distortions that encourage industry consolidation and that penalize farms that allow their herd to range free and deposit manure in a way that does not generate methane in the first instance.⁹ In this way, the LCFS is rewarding the very practices that generate methane and other pollutants

³ Sheraz Gill et al., "Air Pollution Control Officer's Revision of the Dairy VOC Emission Factors," SJVAPCD, at 9 (Feb. 2012), [https://www.valleyair.org/busind/pto/emission_factors/2012-Final-Dairy-EE-Report/FinalDairyEFReport\(2-23-12\).pdf](https://www.valleyair.org/busind/pto/emission_factors/2012-Final-Dairy-EE-Report/FinalDairyEFReport(2-23-12).pdf).

⁴ Eli Moore et al., "The Human Costs of Nitrate-contaminated Drinking Water in the San Joaquin Valley," Pacific Institute, at 7 (Mar. 2011), https://pacinst.org/wp-content/uploads/2011/03/nitrate_contamination3.pdf.

⁵ D. Lee Miller and Gregory Muren, *CAFOs: What We Don't Know is Hurting Us*, (Sept. 2019) at 8. <https://www.nrdc.org/sites/default/files/cafos-dont-know-hurting-us-report.pdf>.

⁶ U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017 – Agriculture*, at 5-9, <https://www.epa.gov/sites/production/files/2019-04/documents/us-ghg-inventory-2019-chapter-5-agriculture.pdf>.

⁷ See, e.g. U.S. EPA, "Is Anaerobic Digestion Right for your Farm?" (Accessed Jan. 4, 2021) <https://www.epa.gov/agstar/anaerobic-digestion-right-your-farm>.

⁸ Comments of Leadership Counsel et al., Re: Low Carbon Fuel Standard Public Workshop (Nov. 5, 2020); <https://www.arb.ca.gov/lists/com-attach/98-lcfs-wkshp-oct20-ws-UDIGaVM9V2kCYVUh.pdf>.

⁹ Amin Younes and Kevin Fingerman, "Quantification of Dairy Farm Subsidies Under California's Low Carbon Fuel Standard" (Sept. 2021), <https://www.arb.ca.gov/lists/com-attach/24-lcfs-wkshp-dec21-ws-AHVSNIhVlpXNQRI.pdf>, pp. 18-19.

such as odor, flies, and air and water pollution.¹⁰ Indeed, a study that examined the potential for biomethane production to have negative effects at scale found that intentionally produced biomethane is always greenhouse gas (“GHG”) positive, and that scaling the intentional production of methane could have perverse and climatically significant effects. As the study describes, “[b]ecause biogas and biomethane can generate revenue, it is not only possible but expected to intervene in biological systems to increase methane production beyond what would have happened anyway when there is an incentive to do so.”¹¹ It stands to reason that once these markets are established, they can become an impediment to more just, effective policies that would reform polluting practices by appropriately holding polluters responsible for addressing their emissions.

With respect to California’s dairy CAFOs in particular, researchers at UC Davis found that about 93% of projected revenue from dairy digester projects comes from selling government-created environmental credits like the LCFS.¹² They determined that the LCFS is the largest driver of dairy digester viability and that, prior to becoming eligible for LCFS credits, avoided emissions from dairy digesters were worth about one-tenth of their current value under the state’s Cap-and-trade program.¹³ Furthermore, separate from the LCFS, the dairy industry receives the largest total support of any agricultural commodity in the State in the form of subsidies for water and feed.¹⁴

A fair, climate-conscious regime would require State-supported industries to reign in their methane emissions, but California’s LCFS rewards their continued production. Given the myriad perverse outcomes of such support and their impacts on climate and human health, CARB should immediately reform the LCFS to exclude dairy biomethane.

3. CARB Should Correct the Distortionary Negative Carbon Intensity Value of Dairy Biomethane.

Even if CARB does not fully exclude dairy methane from the LCFS, it should at the very least correct the extremely negative CI score currently assigned to dairy biomethane. The negative CI value is the result of deeply flawed assumptions about the counterfactual—i.e. that methane from the manure lagoons would be emitted into the atmosphere but for the LCFS program. As explained above, methane from manure lagoons is neither natural nor inevitable (several livestock management practices avoid methane manure) and even if it were, capturable methane

¹⁰ Comments of Leadership Counsel et al., Re: Low Carbon Fuel Standard Public Workshop (Nov. 5, 2020); <https://www.arb.ca.gov/lists/com-attach/98-lcfs-wkshp-oct20-ws-UDIGaVM9V2kCYVUh.pdf>.

¹¹ Emily Grubert, “At Scale, Renewable Natural Gas Systems Could be Climate Intensive: The Influence of Methane Feedstock and Leakage Rates,” *Environ Research Letters*, at 6; *available at* <https://iopscience.iop.org/article/10.1088/1748-9326/ab9335>

¹² Hyunok Lee and Daniel A. Sumner, Dependence on Policy Revenue Poses Risks for Investments in Dairy Digesters (Dec. 2018) at 232; <https://calag.ucanr.edu/archive/?type=pdf&article=ca.2018a0037>; Aaron Smith, “What’s Worth More: A Cow’s Milk or its Poop?” (Feb. 3, 2021) asmith.ucdavis.edu/news/cow-power-rising.

¹³ *Id.*

¹⁴ Daniel Sumner et al., “Commodity Policy and California Agriculture” (2003) <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.383.8883&rep=rep1&type=pdf>.

should be compared to the counterfactual of flaring, not venting.¹⁵ As one study concluded “...if the methane can be captured for [renewable natural gas (“RNG”)] production, it can be captured for diversion to a flare, **and it is unrealistic to assume that capturable methane would be vented under a GHG conscious policy regime**... Flaring destroys the methane with the same destructive benefit as combusting the methane productively.”¹⁶ When the counterfactual is that waste methane would have been non-productively burned in a flare, the biomethane “is GHG negative...only if the RNG system’s total leakage is lower than leakage from the flare (1%), which is unlikely given that a best-guess estimate of downstream emissions alone is 0.8%.”¹⁷

Moreover, it is worth questioning whether methane from livestock manure should even be considered a waste product, given the evidence that researchers at UC Davis and Humboldt State found the subsidies for use as transportation fuel could be as large as the value of milk itself.¹⁸ This justifies treating the methane as a coproduct rather than a waste product.¹⁹ As explained above, evidence shows that the negative carbon intensity value rewards unsustainable mega-dairies for the production of polluting manure and incentivizes the consolidation and expansion of dairies in a way that can cause more methane emissions and other forms of pollution. The Humboldt State University researchers recommend that the negative CI value be eliminated in light of these and other negative distortionary effects.²⁰

In addition, the negative CI score distorts the transportation sector by creating the impression that compressed natural gas (“CNG”) vehicles powered by dairy biogas are superior to zero-emission vehicles which have a score of zero. This bias means that a fleet of CNG combustion vehicles and diesel vehicles, under CARB’s accounting, could appear preferable to a fleet of all zero-emissions vehicles. Such a perverse outcome conflicts with CARB’s goals in the Mobile Source Strategy to achieve air quality and climate targets,²¹ the State legislature’s goals under SB 350 to achieve “widespread transportation electrification,”²² and Governor Newsom’s September 23, 2020 Executive Order, calling for a full transition to zero-emission vehicles

¹⁵ See Amin Younes and Kevin Fingerman, “Quantification of Dairy Farm Subsidies Under California’s Low Carbon Fuel Standard” (Sept. 2021), <https://www.arb.ca.gov/lists/com-attach/24-lcfs-wkshp-dec21-ws-AHVSNI1MhVlpXNQRI.pdf>, p. 19.

¹⁶ Emily Grubert, “At Scale, Renewable Natural Gas Systems Could be Climate Intensive: The Influence of Methane Feedstock and Leakage Rates,” *Environ Research Letters*, at 6; *available at* <https://iopscience.iop.org/article/10.1088/1748-9326/ab9335>

¹⁷ *Id.* at 3.

¹⁸ Aaron Smith, “What’s Worth More: A Cow’s Milk or its Poop?” (Feb. 3, 2021) asmith.ucdavis.edu/news/cow-power-rising; Amin Younes and Kevin Fingerman, “Quantification of Dairy Farm Subsidies Under California’s Low Carbon Fuel Standard” (Sept. 2021), <https://www.arb.ca.gov/lists/com-attach/24-lcfs-wkshp-dec21-ws-AHVSNI1MhVlpXNQRI.pdf>, pp. 13-14.

¹⁹ Amin Younes and Kevin Fingerman, “Quantification of Dairy Farm Subsidies Under California’s Low Carbon Fuel Standard” (Sept. 2021), <https://www.arb.ca.gov/lists/com-attach/24-lcfs-wkshp-dec21-ws-AHVSNI1MhVlpXNQRI.pdf>, p. 19.

²⁰ *Id.* at 20.

²¹ CARB, 2020 Mobile Source Strategy (May 6, 2021) https://ww2.arb.ca.gov/sites/default/files/2021-05/2020_MSS_May_Webinar_Presentation.pdf.

²² Senate Bill 350, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB350

everywhere feasible by 2045.²³ Not surprisingly, CARB’s improper treatment of CNG also sends mixed policy signals. As a fleet operator pointed out during the December Workshop, to the frustration of many operators, CARB is both encouraging CNG trucks and at the same time calling for full fleet electrification. Finally, and most importantly, the use of CNG vehicles undermines the demands of communities most impacted by traffic pollution, who have repeatedly opposed policy support for combustion trucks.²⁴

Ultimately, the distortionary effects of the negative CI score for dairy biomethane, and the eligibility of low-NOx natural gas trucks for the Carl Moyer Memorial Air Quality Standards Attainment Program and other sources of clean transportation funding,²⁵ are delaying necessary investments in cleaner agriculture and zero-emissions transportation. CARB’s confusing and inefficient support for CNG must end, and it is high time CARB eliminate the negative CI score for dairy biomethane that has counterproductively supported both polluting vehicles and polluting agriculture practices.

4. CARB Should Exclude from the LCFS Dairies That Contribute to Exceedances of Air and Water Quality Standards.

If CARB opts not to exclude all dairy biomethane from the LCFS, it should establish safeguards that require sources of dairy biomethane to demonstrate that they are not polluting air and water.

Based on available monitoring data, many Central Valley dairies are causing groundwater pollution that renders drinking water unsafe for human consumption. According to the Central Valley Dairy Representative Monitoring Program—commissioned by the dairy industry itself—all wells monitored near its dairies were impacted with elevated nitrate levels exceeding the Maximum Contamination Levels established for human consumption.²⁶ This is especially egregious as many of California’s most vulnerable communities depend on these wells for drinking water. CARB should specifically eliminate from the LCFS program any dairies that cause such unjust pollution.

The California Public Utilities Commission (“CPUC”) has acknowledged the need to ensure polluting dairies are excluded from biomethane programs. In its decision approving with modifications Southern California Gas Company’s (“SoCalGas”) proposed Voluntary Tariff for Renewable Natural Gas, the California Public Utilities Commission found that “[i]nformation provided by [Leadership Counsel for Justice and Accountability and Sierra Club] clearly establishes that many communities in the vicinity of dairies are already disproportionately burdened by environmental pollution, and community members feel strongly that developing RNG at dairies will perpetuate their adverse environmental impacts on the local community, may allow dairies to continue causing pollution (other than GHG emissions) and may facilitate

²³ <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>.

²⁴ See Eastyard Communities for Environmental Justice et al., Investments for NOx medium- and heavy-duty trucks (June 28, 2021) https://earthjustice.org/sites/default/files/files/ej_letter_to_scaqmd.pdf.

²⁵ <https://ww2.arb.ca.gov/our-work/programs/carl-moyer-program-eligible-equipment/about>.

²⁶ J.P. Cativiela et al., *Summary Representative Monitoring Report (Revised*)*, CVDRMP, at 6 (Apr. 19, 2019), https://www.waterboards.ca.gov/centralvalley/water_issues/confined_animal_facilities/groundwater_monitoring/srmr_20190419.pdf.

expansion of dairies, even increasing the local environmental burdens.”²⁷ In light of these facts, the CPUC prohibited SoCalGas from making misleading claims in its marketing materials about the benefits of dairy biomethane and also stated that the CPUC would “monitor the status of in-state dairies’ compliance with laws and regulations to evaluate whether RNG supplies for the pilot program are provided by dairy facilities that fully comply with federal, state, and local laws, regulations and/or orders that establish air and/or water pollution control standards or requirements.”²⁸ To do this, the Commission required SoCalGas to “collect information on whether dairies under RNG contracts for this pilot program are in compliance with all applicable air and/or water pollution control standards or requirements, describe any incidents of noncompliance, and explain when and how it was or will be resolved.”²⁹ Like the CPUC, CARB should acknowledge the negative pollution impacts of dairies supplying biomethane and require any suppliers to demonstrate that they are not contributing to exceedances of water and air quality standards.

4. CARB Should End HRI Support for Light-Duty Vehicles Because Light Duty Fuel Cell Vehicles are a Poor Application for Green Hydrogen and Because California Has Already Vastly Over-Built Light Duty HRI Stations.

The LCFS provides two kinds of Hydrogen Refueling Infrastructure (“HRI”) credit support: One for charging or refueling infrastructure (based on the station’s capacity), and one for the fuel or electricity dispensed. The former functions to increase public support for the buildout of refueling infrastructure in areas where utilization rates may be low to overcome barriers establishing an initial network. However, Earthjustice believes the Heavy Duty HRI program should be a *replacement* for, rather than an expansion of, the Light Duty HRI support, which is wasting public resources by excessively crediting a costly light-duty hydrogen fueling network that is already over-built.

Of all the possible applications for green hydrogen—a scarce, and extremely costly resource—there is virtually unanimous consensus that light-duty passenger transport is one of the worst.³⁰ Even if the environmental integrity of the hydrogen could be assured—by producing the hydrogen from 100% renewable electricity—hydrogen cars would require more than 2 to 3 times

²⁷ CPUC, Decision Adopting Voluntary Pilot Renewable Natural Gas Tariff Program, D.20-012-022 (Dec. 22, 2020), <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M356/K268/356268059.PDF>, p. 37.

²⁸ *Id.*, p. 38

²⁹ *Id.*

³⁰ See, e.g., Volkswagen, *Battery or fuel cell, that is the question*, (Mar. 12, 2020) <https://www.volkswagenag.com/en/news/stories/2020/03/battery-or-fuel-cell--that-is-the-question.html>. (“The conclusion is clear: in the case of the passenger car, everything speaks in favor of the battery and practically nothing speaks in favor of hydrogen. ‘No sustainable economy can afford to use twice the amount of renewable energy to drive with fuel cell passenger cars rather than battery-powered vehicles,’ says study leader Dietmar Voggenreiter.”); see also Norman Gerhardt et al., Fraunhofer Institute for Energy Economics, “Hydrogen in the Energy System of the Future: Focus on Heat in Buildings,” at 5 (May 2020); and Michael Liebreich, “Separating Hype from Hydrogen – Part Two: The Demand Side” (Oct. 16, 2020) <https://about.bnef.com/blog/liebreich-separating-hype-from-hydrogen-part-two-the-demand-side/>.

as much renewable energy as battery-electric cars because so much energy is lost in the process of compressing and transporting hydrogen and then converting it into electricity in fuel cells.³¹ By contrast, battery-electric vehicles which can charge directly from renewable energy are extremely energy efficient—so much so that they can already have a lower total cost of ownership than typical gasoline cars, and by 2024 are expected to be cheaper even on an upfront basis.³²

Most carmakers have completely abandoned any projects they had pursuing hydrogen vehicles. For example, Volkswagen’s CEO declared that “you won’t see any hydrogen usage in cars...not even in 10 years because the physics behind it are so unreasonable.”³³ Toyota, the longest hold-out on the transition to battery electric vehicles, has just announced a full line up of electric models.³⁴ California should join the chorus of experts, analysts, and industry officials and end public support for light-duty fuel cell vehicles.

Furthermore, there is already an oversupply of Light Duty HRI stations. According to the most recent Integrated Energy Policy Report, there are already 52 retail light duty hydrogen fueling stations in California, with another 31 planned or under contract through the Clean Transportation Program. The California Energy Commission estimates that this is enough to support 98,000 fuel-cell vehicles. With future funding from the Clean Transportation Program and privately funded stations, the network could support nearly 230,000 fuel cell vehicles. There are only an estimated 8,935 fuel cell vehicles registered in California today. In other words, California has the infrastructure to support 25 times the number of fuel cell vehicles as are actually on the road. It is past time for the State to stop siphoning additional public investment toward a fueling network that is vastly underutilized, and which serves almost no decarbonization benefit given the superior zero-emission vehicle technology.

By contrast, California is far off track in building adequate electric vehicle (“EV”) charging stations to keep up with the surging demand for EVs—demand that must continue to grow if California is to meet its zero-emission vehicle deployment objectives in line with climate and air quality goals.

5. Compliance with SB 1505’s Renewable Electrolytic Hydrogen Goals Should Be an Eligibility Requirement for Any HRI.

Even if CARB declines to end support for light duty HRI, it should at the very least require compliance with Senate Bill (“SB”) 1505’s important renewable electrolytic hydrogen requirements. SB 1505 (Lowenthal), passed in 2006, ordered CARB to adopt regulations no later than July 1, 2008, that “[r]equire that, on a statewide basis, no less than 33.3 percent of the

³¹ Volkswagen, *Battery or fuel cell, that is the question* (Mar. 12, 2020), <https://www.volkswagenag.com/en/news/stories/2020/03/battery-or-fuel-cell--that-is-the-question.html>.

³² Nick Albanese, *Electric Vehicle Outlook 2020*, BloombergNEF (June 2020), <https://efiling.energy.ca.gov/GetDocument.aspx?tn=233410&DocumentContentId=65926>.

³³ Joshua S. Hill, *VW joins ranks of car makers rejecting hydrogen fuel cells*, The Driven (Mar. 16, 2021), <https://thedriven.io/2021/03/16/vw-joins-ranks-of-car-makers-rejectinghydrogen-fuel-cells/>.

³⁴ Sean McClain “Toyota, in Reversal, Says it Will Shift More Rapidly to EVs” (Dec. 14, 2021) <https://www.wsj.com/articles/toyota-in-reversal-says-it-will-shift-more-rapidly-to-evs-11639465002>.

hydrogen produced for, or dispensed by, fueling stations that receive state funds be made from eligible renewable energy resources as defined in subdivision (a) of Section 399.12 of the Public Utilities Code.”³⁵ Section 399.12(a) specifically lists renewable resources eligible under the state Renewable Portfolio Standard.³⁶ Yet, incredibly, CARB has not adopted any rule that requires hydrogen fueling stations to dispense a minimum amount of hydrogen made from renewable energy resources.

This failure to implement SB 1505 has led CARB to mislabel hydrogen made from fossil fuels as “renewable” even though it does not meet the statutory standard for renewable hydrogen. The statute plainly states that hydrogen must be “made from” renewable energy resources,³⁷ and includes no authorization of CARB’s current practice of accepting “renewable attributes” via book-and-claim in lieu of requiring that hydrogen actually be made from renewable energy resources.

More specifically, SB 1505 requires that state-funded hydrogen fueling stations dispense hydrogen made from renewable electricity resources—i.e. green electrolytic hydrogen.³⁸ This necessarily excludes hydrogen produced from SMR, even if the feedstock genuinely were biomethane (rather than fossil gas paired with the purchase of biogenic attributes). Both the Public Utilities Code and SB 1505 are unequivocal that the renewable hydrogen must be made from electrical generating facilities.

CARB’s failure to implement SB 1505 has allowed for extremely misleading claims that the hydrogen content in today’s refueling stations is nearly “90% renewable” even though the lion’s share of this requirement is fulfilled using hydrogen produced from steam methane reform (“SMR”) of fossil gas.

The vast majority (over 95 percent) of hydrogen today in California and the United States is produced from SMR of fossil gas, and most of that hydrogen is consumed by oil refineries. Producing hydrogen via SMR is extremely greenhouse gas intensive; if it were a country, hydrogen’s carbon footprint would be the 6th largest globally.³⁹ Furthermore, the SMR process also spews air pollution including nitrogen oxides, fine particulate matter, carbon monoxide, and volatile organic compounds into the air breathed by neighboring communities. Hydrogen production facilities are typically located near oil refineries, and the two together impose serious pollution burdens in the predominantly low-income communities of color where they are cited. For example, the community of Wilmington, CA hosts multiple oil refineries, SMR plants, and other highly polluting infrastructure. Over 90% of Wilmington is Latinx, and the majority of

³⁵ SB 1505, https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=200520060SB1505.

³⁶ Public Utilities Code Section 399.12(a).

³⁷ SB 1505, https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=200520060SB1505.

³⁸ *Id.*

³⁹ Sasan Saadat and Sara Gersen, Reclaiming Hydrogen for a Renewable Future (Aug 2021) at 10 <https://earthjustice.org/features/green-hydrogen-renewable-zero-emission>.

families live in poverty. Wilmington residents face a tremendously high pollution burden,⁴⁰ and hydrogen made from SMR contributes substantially to that burden.

Given the harmful and unjust health impacts of SMR and the mandate of SB 1505, CARB must reform LCFS to ensure that all hydrogen fueling stations are SB 1505 compliant and use the required percentage of renewable, electrolytic hydrogen.

Conclusion

As the climate crisis worsens and as air and water pollution continue to burden California's vulnerable communities, CARB must reform the LCFS to ensure that it reduces emissions, protects air and water quality, and fosters the innovation needed to bring California into a zero-emissions future. Accordingly, and as detailed above, CARB must directly addressing environmental justice concerns in public workshops, overhaul its misguided and harmful approach to dirty dairy biomethane, and require all hydrogen infrastructure to comply with the legal mandate to use only renewable and electrolytic fuel. We look forward to providing additional input as CARB improves the LCFS program.

Sincerely,

A handwritten signature in blue ink, appearing to read 'S. Saadat', with a large loop at the end.

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⁴⁰ See CalEnviroScreen 3.0; Search “Wilmington, CA, USA”
<https://experience.arcgis.com/experience/4af93cf9888a424481d2868391af2d82/page/Draft-CalEnviroScreen-4.0/>.