August 7, 2022

Submitted via the "Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard (lcfs-wkshp-jul22-ws)" Comment Submittal Form

Liane Randolph
Chair, California Air Resources Board (CARB)
1001 I Street
Sacramento, CA 95814

Re: Comments on the July 7, 2022 "Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard" (lcfs-wkshp-jul22-ws)

Dear Chair Randolph:

The Valero family of companies (representing operating subsidiaries of Valero Energy Corporation – collectively "Valero") plays a significant role in the California fuel market. In addition to operating two petroleum refineries, Valero is one of the largest, if not the largest, producers of low-carbon renewable fuels supplied into California. Using existing infrastructure, our renewable fuels are used today by the current vehicle fleet to contribute significantly to the GHG emission reductions that have been achieved from the California transportation sector under the California Low Carbon Fuel Standard (LCFS). Currently, there are efforts underway to produce greater volumes of renewable fuels and to further reduce the carbon intensity of these fuels. With innovation in feedstocks and production processes and carbon capture opportunities, Valero's low-carbon liquid fuels have outperformed, and have the continuing potential to outperform other low-carbon transportation fuel options on a full lifecycle carbon intensity (CI) basis as well as on a cost basis.

In its upcoming amendments, Valero encourages CARB to reconsider its view of the LCFS as a mechanism to support a transition to zero-emission vehicles, and instead allow the program to function as intended, through objective evaluation of the full lifecycle impacts of all available technologies and free competition in the California market based on greenhouse gas (GHG) reduction performance and cost effectiveness. Efforts to influence the market by favoring one solution over others, by offering infrastructure incentives that do not result in actual GHG emission reductions, and by limiting the future capabilities of the liquid biofuels all have the effect of increasing the cost of transportation for Californians, without furthering the purpose of the LCFS to "reduce the full fuel-cycle, carbon intensity of the transportation fuel pool used in California" (17 CCR § 95480).

Valero offers the enclosed comments on the July 7, 2022 "Public Workshop to Discuss Changes to the Low Carbon Fuel Standard" and appreciates CARB's consideration. We would further welcome the opportunity to engage with CARB on the upcoming amendments to the LCFS.

Respectfully yours,

Mandy Garrahan
Executive Director Strategic Planning & Public Policy

Enclosures
(1) Valero Comments on the July 7, 2022 LCFS Public Workshop

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Valero's Comments on the July 7, 2022 LCFS Public Workshop

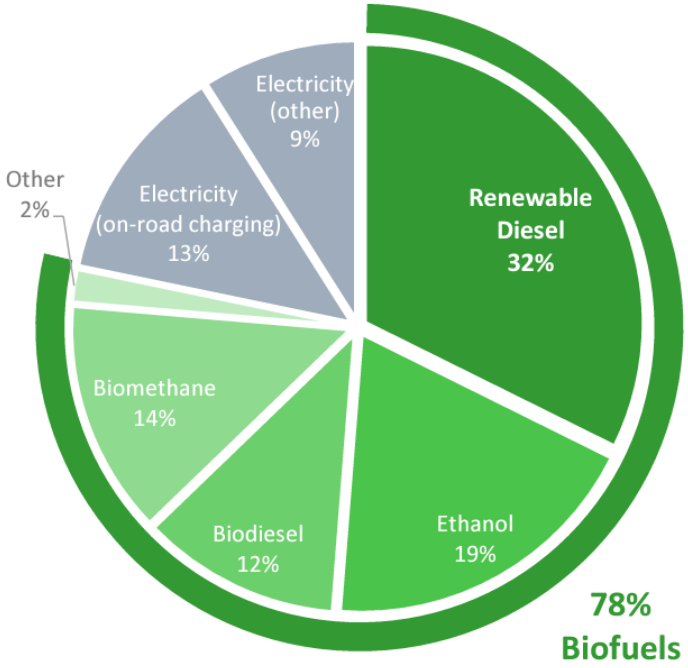
I. Low Carbon Fuel Standard (LCFS) Principles

In the July 7, 2022 public workshop, CARB described the LCFS as a key mechanism of California's Climate Portfolio, "providing long-term price signals needed to support transition to ZEVs [zero-emission vehicles]."[1] Valero feels compelled to comment on this representation of the purpose of the LCFS.

As stated in the LCFS Regulations, "the purpose of this regulation is to implement a low carbon fuel standard, which will reduce the full fuel-cycle, carbon intensity of the transportation fuel pool used in California, pursuant to the California Global Warming Solutions Act of 2006."[2] From its inception, the beauty of the LCFS has been its largely technology-neutral, market-based approach to reducing the carbon intensity (CI) of transportation fuels used in California; these embodied principles have created the financial incentives and afforded industry the flexibility to develop innovative and cost-effective low-carbon fuels. CARB and its fuel producer partners have been highly successful in meeting and even exceeding the ambitious goals in the LCFS for reducing in greenhouse gas (GHG) emissions.[3]

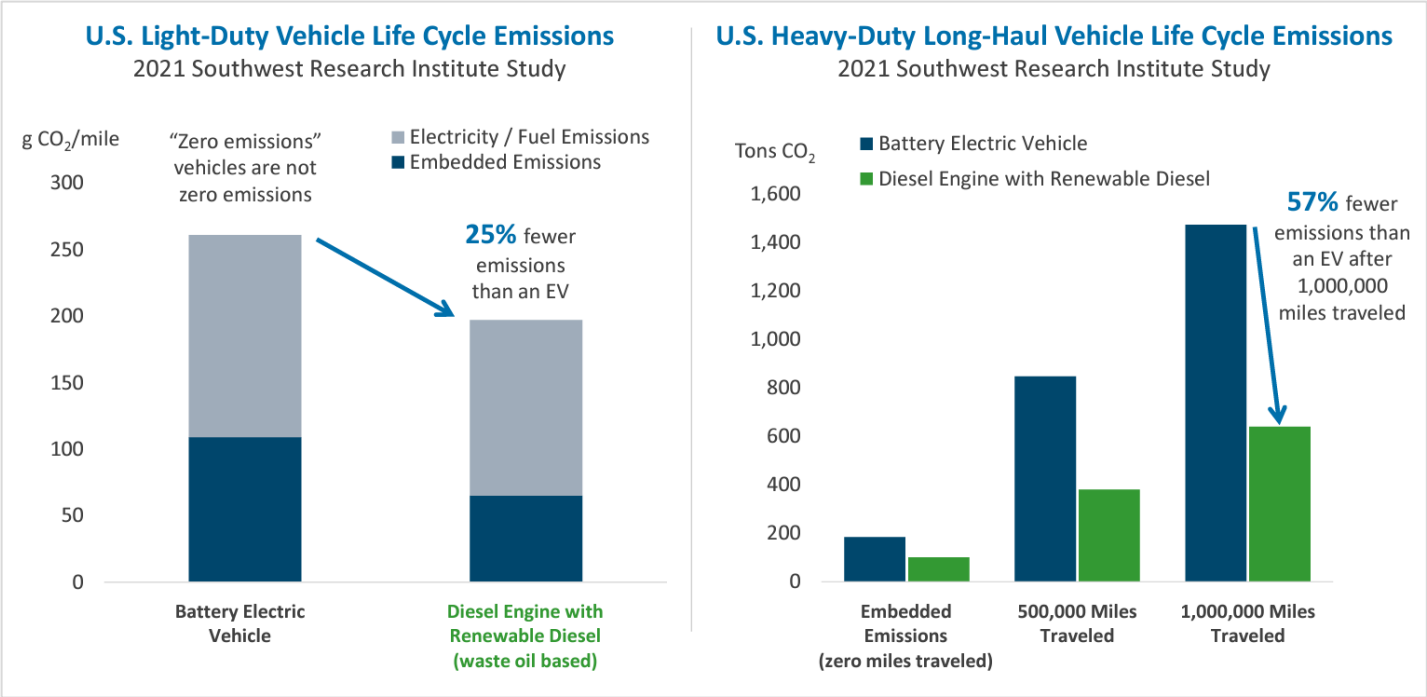
Biofuels, in particular, accounted for 78% of LCFS fuel-based credits generated in 2021 (refer to Figure 1).[4] Furthermore, as demonstrated in Figure 2, liquid biofuels such as renewable diesel are capable of outperforming electric vehicles (EVs) on a lifecycle GHG emission basis.[5]

Figure 1 – LCFS Credit by Fuel Type (2021)



[1] CARB Presentation, *Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard*, Slide 9 (July 7, 2022).
[2] 17 California Code of Regulations (CCR) § 95480.
[3] CARB Presentation, *Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard*, Slide 6 (July 7, 2022).
[4] CARB *LCFS Quarterly Data* for Q4 2021, https://ww2.arb.ca.gov/resources/documents/low-carbon-fuel-standard-reporting-tool-quarterly-summaries. Excludes project-related credits.
[5] Valero Investor Presentation (June 2002), https://s23.q4cdn.com/587626645/files/doc_presentations/2022/Investor-Presentation-June-2022.pdf.

Figure 2 – Lifecycle Emission Comparisons



In the midst of the program's success, CARB's attempt to use the LCFS to preferentially incentivize the adoption of EVs is troubling, as doing so threatens to significantly raise the cost of transportation for California consumers as well as stifle innovation in low-carbon fuels and lead to greater GHG emissions. **CARB should allow the LCFS to function as intended, through objective evaluation of the full lifecycle impact of all available technologies and free competition in the California market based on GHG reduction performance and cost-effectiveness.**

II. Aligning LCFS Incentives

A. Opportunities for Credit Phase-outs

1. CARB Principle for Alignment: Phase out incentives for mature low-carbon technologies

CARB should not consider phasing-out credit-generating eligibility for low-carbon transportation fuels based solely on maturity. Doing so would disincentivize long-term investment and ultimately stifle innovation. Regardless of technology maturity, any transportation fuel that satisfies the LCFS program's CI criteria should be eligible to generate credits.

2. CARB Feedback Request: Staff is soliciting feedback on phase-out of credits for electric forklifts.

CARB should phase out credit-generation for electric forklifts.

CARB first designated electric forklifts as a credit-generating category of transportation in the 2016 re-adoption of the LCFS. In its December 2014 *Initial Statement of Reasons for Proposed Rulemaking*, CARB estimated that "during the 2015 to 2020 timeframe, total credit generation for electric forklifts could potentially be as high as 245,000 credits ($MTCO_2e$) if all regulated parties opted into the program and reported all electricity used for forklifts," and further projected that "if all electric forklift credits were generated and all credits were sold to

satisfy program obligations, the impact on the LCFS program could be 0.3 percent of the total program GHG reductions for both gasoline and diesel standards."[6]

The credit generation by electric forklifts has far exceeded CARB's projections. In 2021 alone, electric forklifts generated almost 1.3 million metric tons of LCFS credits, representing 6.3 percent of GHG emission reductions under the LCFS. Meanwhile, based on CARB's emission inventories for onroad and offroad mobile sources, offroad industrial vehicles contributed only 0.8 percent of total 2021 onroad and offroad carbon dioxide (CO_2) emissions.[7] There is a disconnect between CARB's expectations of credit generation by electric forklifts, actual credit generation by electric forklifts, and impact on transportation-related GHG emissions.

CARB's extension of the LCFS to forklifts was intended to incentivize a transition from internal combustion engine (ICE) forklifts to electric forklifts, rather than to lower the CI of the transportation fuel pool. The LCFS was not designed for that purpose and is not the appropriate program for incentivizing such a transition. For example, LCFS credits are typically generated by the provider of a low-carbon transportation fuel, but in the case of electric forklifts, LCFS credits may be and are overwhelmingly generated by the forklift fleet owner. While directly incentivizing the fleet owner may be effective for driving electrification of the forklift fleet, it also has the potential to incentivize higher total energy use and emissions from forklifts, due to the value of LCFS credits (approximately $0.58/kWh during 2021) far exceeding the cost of electricity to industrial consumers (approximately $0.16/kWh).[8] CARB should take care to prevent potential outcomes that encourage higher transportation-related fuel consumption (i.e., discourage fuel efficiency and fuel conservation), which would be inconsistent with the goals of the *Global Warming Solutions Act of 2006*.

B. *Infrastructure Crediting*

1. *CARB Feedback Request: What role should LCFS credits play in building out infrastructure?*

The LCFS and associated credits should not play a role in building out EV charging or hydrogen fueling infrastructure. CARB should not implement new Direct Current Fast Charging Infrastructure (FCI) or Hydrogen Refueling Infrastructure (HRI) credit programs for medium- and heavy-duty (MHD) vehicles, nor should it extend the existing FCI/HRI programs, both of which sunset on December 31, 2025.

Firstly, significant funding opportunities already exist at the federal and state level to support the deployment of EV charging and hydrogen fueling infrastructure. The "Infrastructure Investment and Jobs Act," signed into law by President Biden in November 2021, establishes $7.5 billion in funding related to the deployment of EV charging and alternative fuel vehicle (include hydrogen) fueling infrastructure, including:

- $5 billion allocated over five years for the National Electric Vehicle Infrastructure (NEVI) Formula Program to support the installation of EV charging infrastructure along the national highway system. The NEVI

[6] CARB *Staff Report: Initial Statement of Reasons for Proposed Rulemaking* (December 2014), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2015/lcfs2015/lcfs15isor.pdf.

[7] CARB EMFAC2021 v1.0.2 (onroad) and EMFAC2017 v1.0.3 (offroad) statewide emission inventory for 2021, including all vehicle and fuel types, https://arb.ca.gov/emfac/emissions-inventory (accessed July 2022). "Offroad industrial vehicles" includes all vehicle types under the "Industrial" equipment sector, including aerial lifts, forklifts, sweepers/scrubbers and other material handling and general industrial equipment.

[8] In 2021, electric forklifts generated 1.3 million metric tons (MT) of LCFS credits, consuming 327 million kilowatt-hours (kWh) of electricity (CARB *LCFS Quarterly Data* for Q4 2021, https://ww2.arb.ca.gov/resources/documents/low-carbon-fuel-standard-reporting-tool-quarterly-summaries). At an average LCFS credit price over 2021 of $150/MT, the LCFS credits generated by electric forklifts are valued at $0.58/kWh. By comparison, the average California industrial electricity rate is $0.16/kWh (U.S. EIA *Electric Power Monthly*, https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a).

Program directs states to dedicate at least 40 percent of funding benefits to disadvantaged communities. California's share of funding from the NEVI Program is estimated to be $384 million.

- $2.5 billion allocated over five years for the Alternative Fuel Corridor (AF Corridor) Grant Program to support the deployment of publicly-accessible alternative fuel charging/refueling infrastructure (including EV charging and hydrogen fueling) along designated Alternative Fuel Corridors, 50 percent of which is reserved for community grants to prioritize building charging/fueling infrastructure in rural areas or low- and moderate-income neighborhoods, and communities with low ratios of parking spaces to households or high ratios of multi-unit houses to single family households.[9]

In addition to federal funding, the California Electric Vehicle Infrastructure Project (CALeVIP) assesses the regional need for and offers incentives for the purchase and installation of EV charging infrastructure at publicly-accessible sites throughout California. To date, the CALeVIP program has issued over $26 million in rebates for the installation of 1,293 chargers.[10]

Given the significant funding and incentives available to EV charging and hydrogen fueling infrastructure, it is neither necessary nor appropriate for CARB to provide additional incentives through the LCFS program, especially given that neither the FCI nor HRI credits represent actual contributions towards the stated purpose of the LCFS of reducing the CI of the transportation fuel used in California.[11]

Secondly, the LCFS FCI and HRI credit programs are neither designed nor equipped to ensure equitable and responsible deployment of EV charging and hydrogen fueling infrastructure. Whereas the NEVI, AF Corridor and CALeVIP programs prioritize the needs of disadvantaged communities and incorporate the designation of high-use corridors to optimize the value of the infrastructure investments, no such consideration exists for CARB's approval of FCI/HRI credit applications; rather, applications are reviewed and approved on a first-come, first-served basis, up to a cap on potential credits versus the previous quarter's deficits.

As of April 1, 2022, CARB has approved LCFS FCI applications for 2,402 EV charging ports at 366 stations, and HRI applications for 127 hydrogen dispensing units at 63 stations.[12] A comparison of the CalEnviroScreen 4.0 percentiles with the distribution of LCFS FCI-and HRI-approved stations (refer to Figures 3 to 5) demonstrates that CARB's approval of FCI/HRI applications does not prioritize or support a goal of equitable access to EV charging and hydrogen fueling stations. **Ultimately, California drivers who do not have access to EVs or FCEVs are disproportionately burdened with subsidizing the build-out of EV charging and hydrogen fueling infrastructure, with no oversight by CARB to ensure that the they are receiving any benefit from the installed infrastructure.**

In the July 7, 2022 public workshop, CARB requested feedback on the potential expansion of the LCFS infrastructure credit programs to support the recharging/hydrogen-refueling of MHD vehicles. By extending the infrastructure credit programs to cover MHD vehicles, the LCFS program would additionally burden the same California drivers who do not have access to EVs or FCEVs with subsidizing infrastructure that will primarily benefit wealthy Californians and commercial, government and other fleet users.

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[9] BGR Group, *Grants for Electric Vehicle Charging and Fueling Infrastructure*, https://bgrdc.com/infrastructure-investment-and-jobs-act-electric-vehicles-buses-and-ferries/ (accessed July 2022).

[10] California Energy Commission website, https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program/california-electric-vehicle (accessed July 2022).

[11] 17 CCR § 95480.

[12] CARB LCFS ZEV Infrastructure Crediting website, "FCI Approved Applications (May 12, 2022)" and "HRI Approved Applications (May 12, 2022)," https://ww2.arb.ca.gov/resources/documents/lcfs-zev-infrastructure-crediting (accessed July 2022).

Figure 3 - CalEnviroScreen 4.0 Percentile[13]

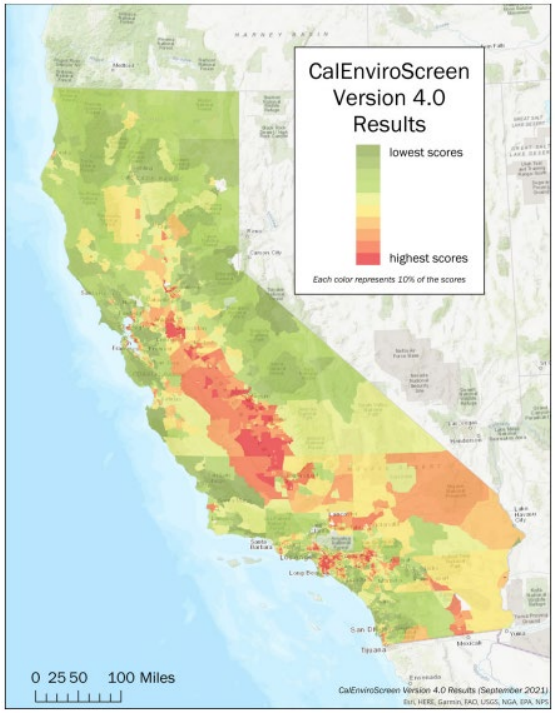


Figure 4 - Stations with Approved FCI Applications[14]

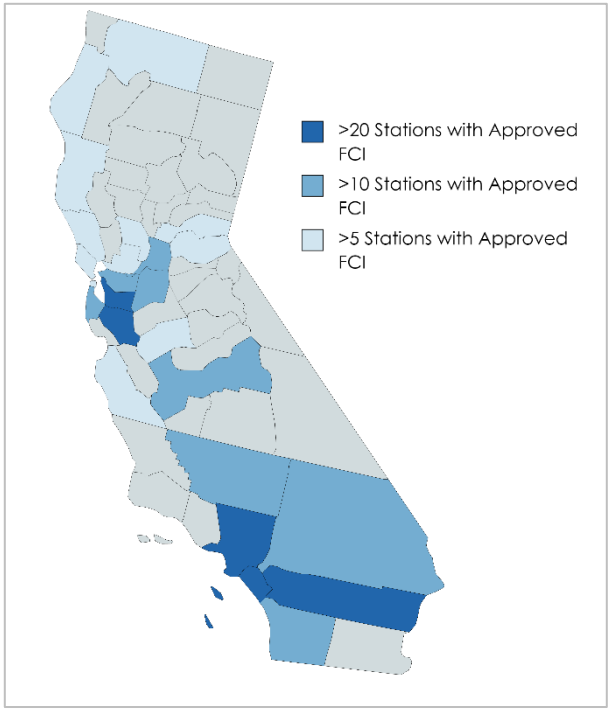
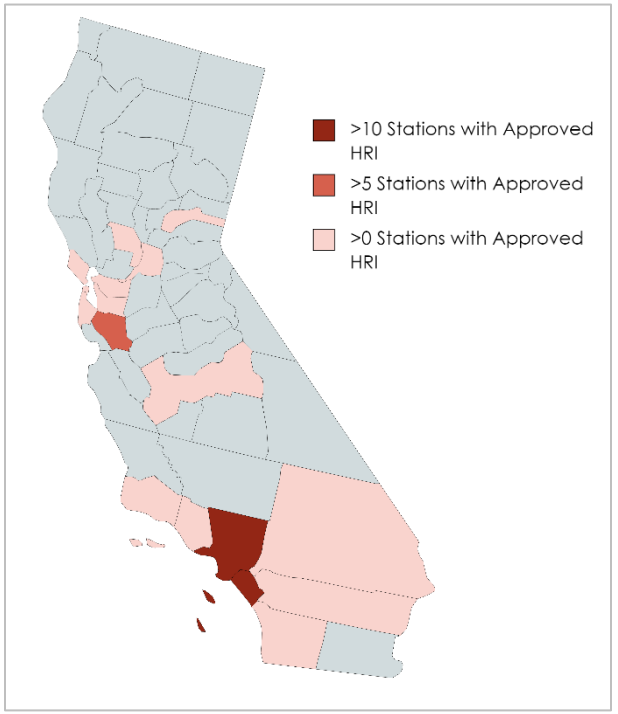


Figure 5 – Stations with Approved HRI Applications[15]



[13] CalEnviroScreen 4.0 (October 2021), https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf.

[14] CARB LCFS ZEV Infrastructure Crediting website, "FCI Approved Applications (May 12, 2022)," https://ww2.arb.ca.gov/resources/documents/lcfs-zev-infrastructure-crediting (accessed July 2022).

[15] CARB LCFS ZEV Infrastructure Crediting website, "HRI Approved Applications (May 12, 2022)," https://ww2.arb.ca.gov/resources/documents/lcfs-zev-infrastructure-crediting (accessed July 2022).

Thirdly, the CARB FCI program has historically and continues to primarily incentivize EV charging infrastructure that is available to only a subset of EVs. Of the 366 stations that generate FCI credits, 124 are Tesla stations, which are exclusively available for charging of Tesla vehicles and account for more than 70 percent of FCI-approved charging ports.[16] The LCFS requirement that a station support at least two types of fast charging connectors does not come into effect until an individual applicant's potential FCI credits exceed 0.5 percent of the deficits in the previous quarter.[17] The FCI approval process and results further demonstrate that CARB's objective in LCFS infrastructure crediting is simply to increase the number of DCFC chargers, rather than to maximize the value of DCFC chargers to Californians. **In the absence of a more equitable and responsible incentivization of EV charging/hydrogen-fueling infrastructure under the LCFS, CARB should defer to agencies and programs that are better equipped to incentivize infrastructure build-out in a way that maximizes value to Californians without unduly burdening disadvantaged communities.**

C. *Fuels and Vehicle Applications*

1. *CARB Feedback Request: Staff requests stakeholder feedback as to how the LCFS could best … support novel technologies.*

New and innovative technologies are emerging that will enable on-board capture of CO_2 from the tailpipe exhaust gases of ICE vehicles.[18] These technologies hold significant potential for helping to reduce GHG emissions, including from of hard-to-decarbonize transportation sectors such as heavy-duty vehicles, rail and marine transportation. To the extent that the CO_2 captured from ICE exhaust gases is permanently sequestered in geologic formations, it should be eligible for project-based crediting under the LCFS, similar to direct air capture. However, in this case the CO_2 would be removed directly from the ICE exhaust gases rather than ambient air.

To support novel technologies like on-board CO_2 capture, CARB should expand the LCFS credit-generating provisions for carbon capture and sequestration (CCS) to include CO_2 capture directly from the exhaust gases of combustion sources such as ICEs.

D. *Crop-Based Feedstocks for Biofuel Production*

1. *CARB Feedback Request: Should staff consider a cap on crop-based biofuels?*

CARB should not consider a cap on crop-based biofuels.

Firstly, Assembly Bill (AB) 32 directs CARB to adopt rules and regulations that achieve the "maximum technologically feasible and cost-effective" GHG emission reductions.[19] In 2021, crop-based biofuels made up 33% of LCFS credit generation and achieved 6.6 million metric tons of GHG emission reductions—one of the largest sources of credit generation under California's LCFS program. And unlike efforts to electrify the transportation sector, crop-based biofuels are "drop-in" mitigations that do not involve a long delay in actual GHG emission reductions or require investment in new fueling infrastructure or replacement of vehicles and other transportation equipment. **Without a suitable replacement fuel, the placement of a cap on crop-based biofuels would reduce the number of credits available for compliance with the LCFS program, driving up LCFS credit prices (and ultimately the cost of gasoline and diesel for California consumers) and potentially creating program infeasibility due to imbalance between deficits and credits.**

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[16] CARB LCFS ZEV Infrastructure Crediting website, "FCI Approved Applications (May 12, 2022)," https://ww2.arb.ca.gov/resources/documents/lcfs-zev-infrastructure-crediting (accessed July 2022).

[17] 17 CCR § 95486.2(b)(1)(B).

[18] Southwest Research Institute, *A Gas Separation Membrane Highly Selective to CO2 in the Exhaust of Internal Combustion Engines*, SAE 2019-01-2265 (2019), https://saemobilus.sae.org/content/2019-01-2265/.

[19] Cal. Health & Safety Code § 38560.

By taking actions to remove crop-based biofuels from the California market and thereby increase the costs of feedstock-constrained waste-based fuels, CARB will not reduce GHG emissions, but rather compromise the supply of affordable and reliable transportation fuel at the expense of consumers. **It is critical that CARB design the LCFS program to minimize the potential for price shocks, inefficient subsidies, and supply disruptions.**

Perhaps CARB intends to balance the loss of credits from crop-based biofuels by increasing credit generation through anticipatory projects like the LCFS FCI/HRI programs. However, doing so would be trading actual GHG reductions today with potential GHG that may occur in the future. **A crop-based biofuels cap would discourage the wide availability of affordable lower-CI biofuels that can be used to generate immediate emissions reductions in the current vehicle fleet.**

Secondly, the market for seed oils as feedstock for biofuels has become a significant revenue stream for the agriculture industry. For example, while soybean oil represents only 20 percent of the crop volume, it contributes approximately 50 percent of the crop value. Revenue from seed oil sold as biofuel feedstock effectively subsidizes the production of seed meal for the food/feed markets. A loss of revenue from the biofuels market that would occur as a result of a cap on crop-based biofuels would result either in reduced crop production (and therefore reduced food/feed production) or increased food/feed costs. **Under both scenarios, a cap on crop-based biofuels would raise the long-term cost of vegetable and animal proteins, grains, and other food items.** A cap on crop-based biofuels would also effectively limit the development and adoption of innovative and low-carbon agricultural techniques, which today rely on revenue from the biofuels markets.

Thirdly, CARB fails to acknowledge the degree of innovation and advancement of critical carbon reduction technologies that is being driven by crop-based biofuels producers. For example, crop-based ethanol producers are among the early and primary proponents of CCS projects in the U.S.[20] In a July 2022 letter to CARB, Governor Newsom states that "engineered carbon removal is clearly needed to achieve the scale of carbon removal required to reach carbon neutrality" and requests that CARB "set a 20 MMT [million metric ton] carbon removal target for 2030 and 100 MMT carbon removal target for 2045."[21] **If CARB were to exclude from its LCFS program crop-based ethanol that is produced using CCS, the action would disincentivize future investment by the biofuels industry in advancing the adoption of CCS.**

Fourthly, CARB's concern over a "likely increase [in] global demand for crop-based fuels"[22] demonstrates a repeated policy bias in which CARB fails to objectively evaluate all low-carbon transportation fuel options on a full lifecycle basis. While CARB expressed concerns in its July 7, 2022 public workshop about the potential global ramifications of crop-based biofuels policies on "deforestation, land conversion and adverse food supply impacts,"[23] it fails to consider the well-documented and global impacts of minerals extraction (to support widespread EV adoption) on air quality, biological diversity, water resources and human rights.[24] Recently, in July 2022, Ford Motor Co. entered into an agreement to secure lithium from the Rhyolite Ridge project, a proposed mine criticized by environmentalists for threatening to eradicate the desert wildflower, Tiehm's buckwheat, that only grows on a patch of land in Nevada.[25] The same month, dozens of environmental groups sent an open letter to Tesla urging the company to terminate investment plans in Indonesia's nickel industry due

[20] Global CCS Institute *Facilities Database*, https://co2re.co/FacilityData (accessed July 2022).

[21] Letter from Gavin Newson (Governor of California) to Liane Randolph (CARB Chair) (July 22, 2022), https://www.gov.ca.gov/wp-content/uploads/2022/07/07.22.2022-Governors-Letter-to-CARB.pdf?emrc=1054d6.

[22] CARB Presentation, *Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard*, Slide 36 (July 7, 2022).

[23] *Id.* at Slide 34.

[24] Max Planck Foundation, *Human Rights Risks in Mining A Baseline Study* (January 2016), https://media.business-humanrights.org/media/documents/files/documents/BGR_MPFPR_2016_Human_Rights_Risks_in_Mining.pdf.

[25] Jael Holzman, *Ford inks deal to get lithium from mine with ESA problem* (July 21, 2022), https://www.eenews.net/articles/ford-inks-deal-to-get-lithium-from-mine-with-esa-problem/.

to its longstanding history of environmental harm and human rights violations.[26] **CARB should not apply different standards relating to the global impacts of liquid biofuels versus widespread EV adoption.**

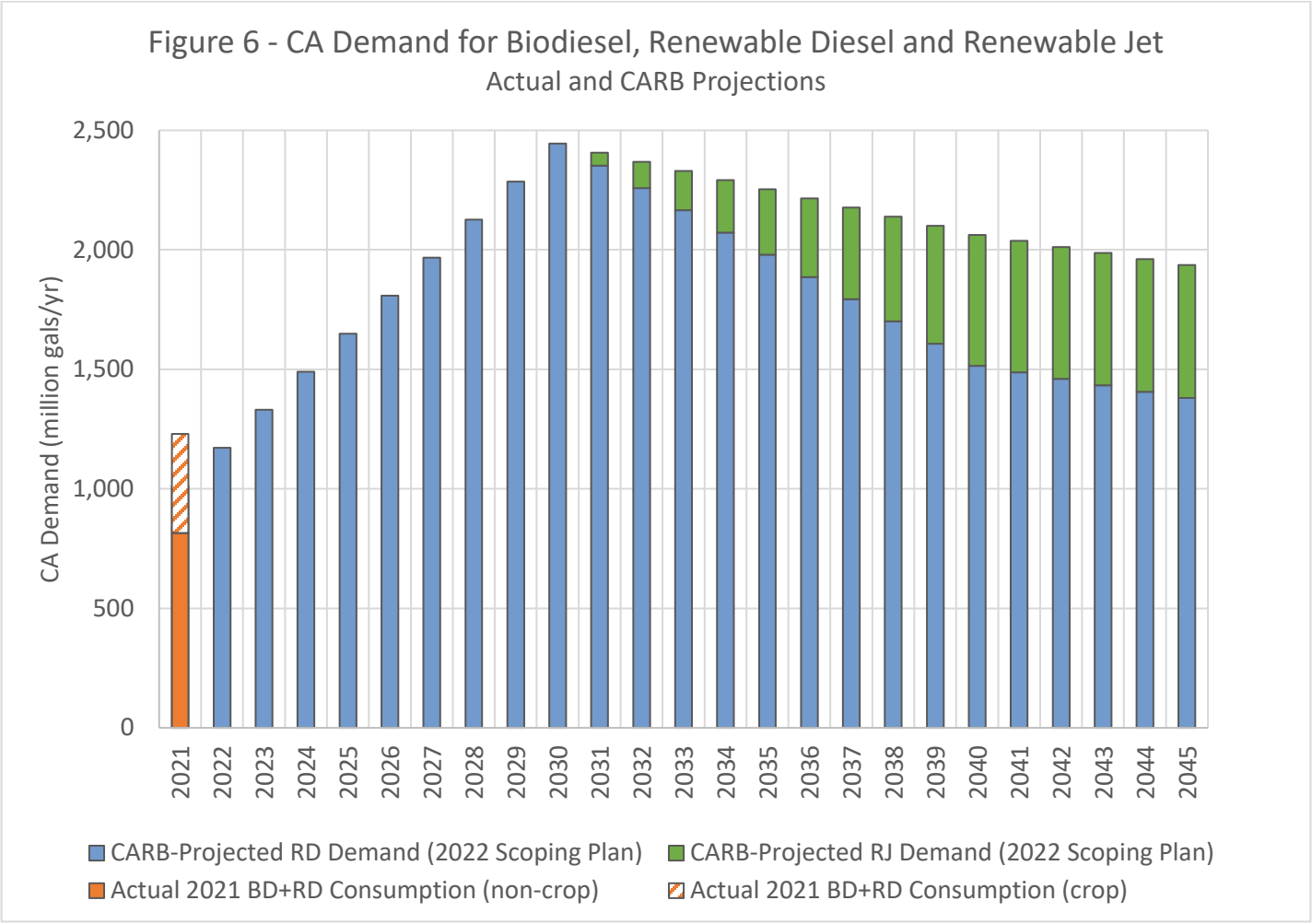
Similarly, while CARB has extensively modeled the potential indirect land use changes (LUC) associated with biofuels production and applies LUC-related CI penalties that are among the most stringent assessed by low-carbon fuel standards today, CARB widely considers renewable energy sources such as solar and wind generation to be "zero-emission," with no consideration for associated land use changes or full lifecycle carbon footprint. A recent study that assesses the potential solar land requirements and related LUC emissions for EU, India, Japan and South Korea concluded that land cover changes, including indirect effects, will likely cause a net release of carbon as high as 50 gCO_2/kWh, "depending on the region, scale of expansion, solar technology efficiency and land management practices in solar parks."[27] **CARB should objectively evaluate GHG emissions on a full lifecycle basis for all transportation fuel options, including compensation for LUC impacts.**

Finally, in the Draft 2022 Scoping Plan Update, CARB projects that California's demand of renewable diesel will double by 2030 to almost 2,500 million gallons per year (refer to Figure 6), as a critical drop-in fuel for hard-to-decarbonize transportation sectors such as heavy-duty vehicle, rail and marine transportation. CARB further projects that California's demand for renewable jet, which will draw from the same feedstock pool as either biodiesel/renewable diesel or ethanol, will increase from essentially zero to 640 million gallons per year by 2045.

By contrast, the non-crop-based volume of renewable diesel and biodiesel consumed in California in 2021 was 815 million gallons. **Given the limited supply of non-crop-based feedstocks for renewable diesel production and the growing demand in other markets, it is unlikely that CARB could meet the decarbonization goals established in the Draft 2022 Scoping Plan Update for the heavy-duty vehicle, rail, marine and aviation transportation sectors if it were to impose a cap on crop-based biofuels.**

[26] Reuters, *NGOs ask Musk to not invest in Indonesia's nickel industry over environmental worries* (July 25, 2022), https://www.reuters.com/business/environment/ngos-ask-musk-not-invest-indonesias-nickel-industry-over-environmental-worries-2022-07-25/.

[27] Dirk-Jan van de Ven et al, *The Potential Land Requirements and Related Land Use Change Emissions of Solar Energy* (February 3, 2021), https://www.nature.com/articles/s41598-021-82042-5.



Source: Actual 2021 data from CARB "LCFS Quarterly Data Summary (Q4 2021)." Projected data from "CARB Draft 2022 Scoping Plan Update," "AB 32 GHG Inventory Sectors Modeling Data Spreadsheet," Alt Scenario 3 (May 2022).

III. Equity in the LCFS

1. CARB Feedback Request: What should be the role of LCFS in supporting the various aspects of a holistic goal [for a long-term transition to zero emission vehicles]?

The LCFS is not an appropriate tool for incentivizing vehicle engine and transmission changes and should not play a role in driving a transition to zero emission vehicles.

The most effective way that CARB can support equity with the LCFS is to allow the market to find the most cost-effective solutions to reduce the CI of the transportation fuel pool. Efforts to influence the market by favoring one solution over others, by offering infrastructure incentives that do not result in actual GHG emission reductions, and by limiting the future capabilities of the liquid biofuels all have the effect of increasing the cost of transportation for Californians, and especially for those Californians who do not have the ability to buy a $60,000 EV,[28] to work remotely, or to live in a location that is convenient to work, school, food, medical care and other essential needs.

[28] Auvudaiappan, Siva, et al, S&P Global, *Tracking BEV prices – How competitively-priced are BEVs in major global auto markets?*, May 2022.

Although the July 7, 2022 public workshop lacks the force of law on its own merits, CARB's statements establish the Board's policy direction to staff that will guide future rulemaking actions and public discussion of the same. It is crucial that the policy discussion and directives guiding these future rulemaking actions be supported by state and federal law in order to avoid inefficient expenditure of time and resources, or worse, misleading the public by setting unrealistic expectations regarding outcomes that are not within the State's authority to act upon. CARB should consider whether potential changes to the LCFS conflict with or are otherwise preempted by the statutory mandates of federal legislation such as the Energy Policy and Conservation Act (EPCA); the federal Clean Air Act (CAA); and the Energy Independence and Security Act (EISA), including the Renewable Fuel Standard (RFS). Although detailed legal analysis can and should be conducted in support of the specific rulemaking actions undertaken consistent with this public workshop, that does not relieve CARB of the obligation to conduct sufficient analysis to determine that the measures discussed in the workshop are likely to withstand legal scrutiny or within its authority to control. CARB should conduct sufficient legal review to confirm that the potential changes are authorized under state law and that they are not preempted or precluded as a matter of Federal law before establishing direction and prompting discussion for further rulemaking.