Submitted Via CARB Comment Submittal Form

January 7, 2022

Dr. Cheryl Laskowski
California Air Resources Board
1001 I Street
Sacramento, CA 95812

**Re: Comments on Proposed Low Carbon Fuel Standard Amendments: December 7, 2021 Workshop**

Dear Dr. Laskowski:

On behalf of Valero Marketing and Supply Company, Diamond Alternative Energy, Valero Renewable Fuels, and other wholly-owned subsidiaries of Valero Energy Corporation involved in producing and marketing fuels used in California (hereafter collectively and respectively "Valero"), I appreciate the opportunity to provide these comments regarding proposed amendments to the California Low Carbon Fuel Standard ("LCFS").

As one of the largest producers, importers, and sellers of transportation fuel in California, Valero is committed to lowering the carbon intensity of our fuels. Through its Diamond Green Diesel joint venture, Valero operates the largest renewable diesel plant in the United States, with an annual capacity of 690 million gallons in 2021 that will expand to 1.2 billion gallons annually, making it the predominant renewable diesel producer in the United States and the second largest in the world. Valero is North America's largest renewable fuels producer and is the world's second largest corn ethanol producer, with 12 ethanol plants in the U.S. and a total annual production capacity of 1.6 billion gallons per year. Valero is among the leading producers of ultra-low-carbon cellulosic ethanol and we are aggressively pursuing measures to reduce the carbon intensity of our ethanol production through carbon sequestration. Meanwhile, Valero continues to supply the California market with both traditional refined fuels and renewable fuels. In the past three and a half years, Diamond Green Diesel has provided approximately 25% of California's renewable diesel demand. This volume will continue to grow as part of Valero's strategy to be a provider of high-quality transportation fuels to all markets.

Valero welcomes the opportunity to provide feedback at this early stage on CARB's proposed changes to the LCFS program. Like CARB, Valero believes that the program should be robust and clear, as well as implementable for both participating entities and CARB. To accomplish these goals, the program should be amended to better incentivize investments including expanding indirect accounting and allowing displacement credit for co-products that

displace conventional fuels in non-transportation uses and to enhance regulatory certainty, reflect technology and data updates, and improve administration and accountability.

Based on the varied roles Valero plays in manufacturing and supplying both traditional and renewable fuels to the California market, Valero is uniquely situated to identify programmatic improvements aimed at ensuring LCFS carbon reduction targets are met. With the broad impact the California LCFS has on emerging programs in other states and internationally, it is important that the program is continually improved to better ensure carbon reductions are achieved and that programs function efficiently and with transparency. With this in mind, Valero offers the following comments to improve the next iteration of the California LCFS program.

## Comments on Proposed Amendment Concepts

### I. Program Improvements to Incentivize Investment

Valero urges CARB to increase the availability of indirect accounting within the low carbon transportation sector. These changes would better encourage the use and production of low carbon fuels by providing sufficient regulatory certainty for participants to increase their investments and send long-term market signals to investors.

#### a. Expand indirect accounting within the transportation sector

The LCFS regulations currently allow reporting entities to use indirect accounting mechanisms for low-carbon intensity ("CI") electricity supplied as either a transportation fuel or to produce hydrogen for transportation purposes. CARB should extend indirect accounting to feedstocks such as low carbon electricity, low carbon hydrogen, or renewable natural gas utilized in the production of renewable transportation fuels such as renewable diesel and low CI ethanol as doing so would aid in further decarbonization of the grid and further encourage investment in low-CI fuels.

CARB proposed, during the December 7, 2021 workshop, to expand the permissibility of book-and-claim accounting of new-or-expanded low-CI hydrogen injected into regional hydrogen pipelines for transportation fuel use. Valero supports this proposal but urges CARB to not limit indirect accounting mechanisms to end-use transportation fuels. Specifically, carbon capture and sequestration ("CCS") utilized to lower carbon emissions during the production of hydrogen or electricity (including electricity used for the production of hydrogen, or hydrogen used for the production of electricity) that gets used as feedstock or utility input for the production of a renewable fuel such as renewable diesel or ethanol should be recognized as lowering the CI of the transportation fuel. While renewable natural gas is allowed today using book-and-claim to lower the CI of a transportation fuel, it is limited to the production of hydrogen that is then used as for the production of a renewable fuel. Book-and-claim type indirect accounting should be allowed whenever low carbon hydrogen, renewable natural gas, or "dispatchable" low carbon electricity is supplied to renewable diesel or ethanol plants via regional hydrogen networks, the national pipeline network, or within independently operated electricity grids, e.g. MISO or ERCOT.

### b. Allow credit for displacement co-products not used for transportation fuel

Valero requests that CARB allow for credit for displacement co-products not used for transportation fuel. Co-products from the renewable transportation fuel process that are used outside of the transportation sector, such as renewable diesel sold as heating fuel, displace fossil fuels in various uses and should receive credit for doing so by accounting for this displacement in the fuel producer's CI score. The inclusion of non-transportation uses for co-products would incentivize the use of these fuels, resulting in further carbon reductions, and would not take away from the goal to decarbonize the transportation sector. However, for co-products that are also a transportation fuel, whether sold in California or not, CARB should continue to use the volumes as part of the allocation factor.

### c. Include mandatory and transparent reporting for project-based credit generators

CARB should require project-based credit generators (i.e. innovative crude oil project, refinery investment credit program) to submit disclosures or reports to purchasers that provide details on the low-CI and other environmental attributes of the feedstock and/or fuel that is purchased. This would result in greater transparency and would allow purchasers to properly account for reductions in their carbon footprint for purposes of ESG reporting to shareholders, which in turn may further encourage development of these projects.

## II. Amendments to Streamline Implementation

Robust but streamlined implementation is critical to the continued success of the LCFS program. Examples of streamlining measures include adoption of clear regulatory language, adequate agency staffing to implement the program, transparency in how guidance is established and decisions are made, and flexibility to avoid absurd, or overly punitive results. To improve program implementation, Valero recommends that CARB prioritize adoption of the following streamlining measures.

### a. Increase flexibility for operational CI calculations

Valero recommends that CARB enhance regulatory certainty for complying with, and clarify the enforceability of, the LCFS program by adopting (1) a force majeure clause for operational CI calculations and (2) a de minimis threshold for variations in operational CI score.

First, Valero requests that CARB include a force majeure clause to prevent penalization of reporting entities where operational CI scores are affected by emergency situations. For example, during a period where a production facility is forced to shut down due to extreme events such as earthquakes, fires, or hurricanes, the utility usage for subsequent start-up should be excluded from the annual pathway calculations. The start-up period should be measured as the time it takes to return daily production rates to the same rate immediately prior to the shutdown. To prevent any fraudulent claims, CARB should ensure there is sufficient verified data to support the force majeure event timeline.

Second, Valero proposes adding a de minimis threshold for operational CI score variations to encourage flexibility within the LCFS program. CARB should establish an acceptable threshold range for CI scores where an entity would not be considered out of compliance for a minor exceedance of the certified CI score for example, the lower of 0.2 gCO2e/MJ or 1.0%. This would add helpful flexibility both in force majeure circumstances and in other circumstances that result in insignificant variations.

### b. Establish a lookback period aligned with the statute of limitations

CARB should consider establishing a maximum lookback period for historical CIs, credits, and deficits. Nothing in the LCFS regulation prevents CARB from going back to previous versions of the regulation or models. Therefore, if an error is discovered, there is no limit to how far back CARB can go to revise this error, notwithstanding the fact that the California Code of Civil Procedure imposes a three-year statute of limitations for air issues.[1] Expressly limiting historical lookbacks to a period aligned with the statute of limitations would provide more stability and market certainty. It would also reduce the resource demand on auditors and CARB staff, which in turn would facilitate a more focused and in-depth review during the annual audits. Because audits are conducted annually, the risk that an issue would fail to be identified and addressed is minimal.

This type of lookback period is consistent with periods used by many agencies, including the Environmental Protection Agency ("EPA"), the Internal Revenue Service ("IRS"), and the Department of Health and Human Services ("HHS"). For example, EPA has multiple lookback periods aligned with the relevant enforcement limitations period, including ones for regional haze assessments and stationary source review.[2] Additionally, the IRS has a defined lookback period for assessing tax-exempt entities during excess benefit transactions,[3] and HHS has a five-year lookback period for Medicaid eligibility.

### c. Update the program elements to reflect technology and data advancements

Valero supports updating program elements to reflect technological and other advancements, including:

- ***Update the indirect land use change factors to include best available data.***

  The current Indirect Land Use Change (ILUC) factors used by CARB are based on modeling that is several years old and out of date. Understanding that ILUC modeling is complex and the model inputs are not available in a world-wide, clear, standard, and concise format, Argonne National Laboratory has completed ILUC modeling for the feedstock/fuel combinations that CARB has regulated. CARB should adopt these factors and use updated Argonne ILUC factors as they are released. Alternatively, if CARB intends to continue to develop their own ILUC factors, consideration should be given for land that has been used to produce crops for transportation fuel for more than 15

[1] *See* Code Civ. Proc. § 338(k).
[2] 40 C.F.R. § 51.308(g)(3); 40 C.F.R. § 68.42(a).
[3] 26 U.S.C. § 4958.

years. Since ILUC is based on the idea that the biofuel crops are grown on acreage formerly devoted to food and livestock feed production, it should account for and give credit to the land that has for the past 15 plus years been used to produce crops for biofuels.

- ***Update the electricity pathways to include a full lifecycle analysis of carbon emissions related to EV battery production and disposal.***

  Electricity used as transportation fuel generates LCFS credits based on either lookup table values or specific pathway approvals. However, neither the lookup table values nor the pathway review process properly accounts for the energy consumption and corresponding carbon emissions associated with mining the minerals used in electric vehicle battery production, mineral processing, battery assembly, or in disposal of spent batteries. This oversight is wholly at odds with the comprehensive lifecycle analysis conducted to determine the carbon intensity of other forms of transportation fuel, and it yields a distorted picture of the true carbon footprint of "fueling" electric vehicles (as does the use of the phrase "zero emission vehicles" to describe electric vehicles that rely on batteries containing minerals such as lithium, nickel, and cobalt that are produced and processed outside the United States in an energy-intensive manner). Data is available to support development of a fair and transparent assessment of these energy impacts, as described in detail in a 2016 "Cradle-to-Grave" report by the Argonne National Laboratory.[4] It is arbitrary to overlook these emissions for purposes of determining carbon intensity scores that result in credit generation, and such omissions may result in misleading the public about the impacts of their transportation choices.

- ***Update emission factors on the same timeline as California CI for grid electricity.*** Valero requests that CARB update the emission factors for grid electricity for all regions on the same schedule as CARB updates the California CI for grid electricity. After establishing a cohesive timeline, CARB would then update the associated GREET and Tier 1 models to account for the grid emission factor changes.

### d. Update CARB's Data Management Systems

CARB's LCFS Data Management System needs improvements to allow for more flexibility and to reduce unintended consequences. Though it is clear care was taken in establishing the reporting system, many reporting entities still find the platform unwieldy, inflexible, and difficult. Valero has identified three areas for improvement:

- ***Improve flexibility of the LRT-CBTS to recognize report corrections.*** The LRT-CBTS plays an important role in adjusting credits and deficits, facilitating credit transfers, and providing a credit account ledger. Because compliance obligations are directly tied to credit/deficit accounting calculated by the LRT-CBTS, this system must be efficient,

[4] *Cradle-to-Grave Lifecyle Analysis of U.S. Light-Duty Vehicle-Fuel Pathways: A Greenhouse Gas Emissions and Economic Assessment of Current (2015) and Future (2025-2030) Technologies,* Argonne National Laboratory, Energy Systems Division, ANL/ESD-16/7 Rev.1 (September 2016), at 83-91. Online access: www.osti.gov/scitech/.

flexible, and easy for reporting entities to use. However, the system does not accurately recognize situations in which reporting entities submit report corrections. For example, when Valero submitted a report correction within 24 hours of submitting the original report, the system incorrectly attempted to add an extra quarter's worth of deficits rather than accurately consolidating the true credit/deficit balance. Improving the flexibility of the system and ensuring that the LRT-CBTS can identify corrections like this would vastly improve the Data Management System.

- ***Correct parent-child relationship for CA-GREET 3.0 fuel pathway codes.*** Fuel Pathway Codes ("FPCs") that were applied for using the CA-GREET 3.0 model are no longer linking through a parent-child relationship. This is causing the need to report numerous gain/loss of inventory events to keep inventories current. Valero suggests that this error be addressed.

- ***Streamline Data Entry Options.*** It would be helpful if the LRT-CBTS had a quick option in the Fuel Transaction Reporting section to delete all the current entries in the open report. Uploading new data does not override existing data, so each entry must currently be manually deleted prior to uploading new data. Valero suggests that a quick option like a "delete all existing data" button be included in the LRT-CBTS.

## III. Amendments to Improve Timing and Effectiveness of Implementation

California was the first state to adopt a LCFS, and as a result, other jurisdictions are looking at CARB's LCFS program as an example. States like Oregon and Washington have already followed California's lead and other jurisdictions including Minnesota, New Mexico, and New York are working towards developing a LCFS program. This influence makes it imperative that CARB adopt the following amendments to maintain a robust, timely, and effective program.

### a. Establish obligations to respond to pathway applications

CARB should establish responsiveness obligations for pathway application processing. Implementation of the LCFS program must be robust enough to ensure that CARB is able to process applications in a timely manner and that reporting entities are not left waiting for agency action to continue operation. Prompt action on pathway applications allows low-carbon fuels to quickly reach the market and begin reducing carbon emissions. Delays in pathway application processing, on the other hand, can lead to significant issues for producers, including uncertainty around plant operation and the risk of enforcement related to action that is outside of the entity's control, as well as postponing the carbon reductions that would otherwise be achieved. CARB should create responsiveness obligations and deadlines in the application and validation process that will ensure balanced treatment of all participating entities, regardless of whether they be longtime participants producing more traditional renewable fuels or first-time participants producing innovative products.

Valero recommends that CARB have the same obligation to be responsive to the pathway petitioner and verifiers that is required of the pathway petitioners. To further improve the program's timeliness, CARB should be prohibited from holding onto or delaying applications

without responding to requests for status updates. Additionally, Valero proposes that the 6-month timeframe to complete validation not begin to run until after CARB releases the pathway for validation. During that validation time period, reporting entities should be allowed to ask CARB for a decision, and if CARB does not provide an answer to complete the validation within one month, the validation time period should automatically be extended without the petitioner needing to resubmit the pathway.

With the number of reporting entities that have expressed timeliness concerns,[5] the proposed responsiveness obligation would improve confidence in CARB's ability and commitment to timely program implementation.

**b. Adopt administrative procedures to ensure transparency, fairness, and consistency**

Valero recommends that CARB add administrative procedure language for staff practices that are not currently documented in the LCFS regulation or guidance and to ensure transparency, fairness, and consistency. Specifically, guidance regarding CARB's interpretation of regulatory provisions should be provided to the regulated community as well as to auditors. Officially outlining and cataloging the procedures behind implementation of the LCFS program will not only aid in CARB's ability to run the program smoothly, but will also assist other jurisdictions in using California's LCFS program as a model.

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Valero appreciates the opportunity to provide feedback at this critical stage of the LCFS amendments development. Should you have any questions, please contact me at 210-452-5593 or via email at lori.taylor@valero.com.

Sincerely,

Lori Taylor

Lori Taylor, Director
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