



Submitted Via CARB Comment Submittal Form

September 19, 2022

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

**Re: Valero Renewable Fuels Comments on Proposed Low Carbon Fuel Standard Amendments: August 18, 2022 Workshop**

Dear Dr. Laskowski:

On behalf of Diamond Alternative Energy and Valero Renewable Fuels (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 renewable 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.

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 is also 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. 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, the mandated technology choices of the California

Air Resources Board (CARB) in its Draft 2022 Scoping Plan, on a full life-cycle carbon intensity basis as well as on a cost basis.

Valero welcomes the opportunity to provide feedback at this 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 reporting entities and CARB. To accomplish these goals, the program should be amended to better incentivize investments including expanding indirect accounting, to allow 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 renewable and traditional 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 the program functions 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 CARB's LCFS Considerations**

Valero is providing feedback, as requested by CARB, regarding the concepts below, as presented in the August 18, 2022 workshop.

#### **I. Alignment of Tier 1 and Tier 2 Deemed Complete Date**

Valero is in support of CARB's proposed alignment of the Tier 1 and Tier 2 Deemed Complete dates, but it is critical that CARB must also commit to a regulatory deadline by release the application to a Verification Body (VB) within a specified timeframe. Such alignment would ensure consistency and, when combined with required timeframes defined by the statute, would provide an additional confidence in forward-looking planning and economic justification by an applicant. This uncertainty is often part of a project developer's economic justification for a project, which can negatively impact the number of projects implemented.

Additionally, 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 potentially not being able to recognize the carbon reductions that are being achieved while the application is being processed. CARB should commit to responsiveness obligations and deadlines in the application and validation process that will ensure



balanced treatment of all participating entities, regardless of whether they are longtime participants producing more traditional renewable fuels or first-time participants producing innovative products. Valero suggests a 30-day timeframe for CARB to release the application to a VB, since the six-month validation window is short.

Valero recommends that CARB have the same obligation to be responsive to the pathway petitioner and verifiers that is required of the pathway petitioners<sup>1</sup>. To further improve the program's timeliness and transparency, 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 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<sup>2</sup>, the proposed responsiveness obligation would improve confidence in CARB's ability and commitment to timely program implementation. This would also set a valuable and helpful precedent for numerous other jurisdictions that are adapting or considering LCFS programs.

## **II. Temporary Pathway Credit True-Up**

CARB should allow a credit true-up back to the first full quarter of a project's operation, with a corresponding temporary pathway. As discussed above, the ability of a fuel pathway applicant to plan appropriately and to provide economic justification assist in incentivizing projects, which will inherently increase the number of projects in alignment with the following statement in the draft 2022 Scoping Plan:

*"Private investment in alternative fuels will play a key role in diversifying the transportation fuel supply away from fossil fuels."<sup>3</sup>*

This true-up should be allowed in the event that the temporary pathway is extended, even if retroactive credits would be generated outside of the open reporting period. Effectively, extensions to the credit true-up should be automatically granted if an active validation is in progress.

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<sup>1</sup> See Title 17 CCR § 95488.6(b)(1) and § 95488.7(d)(3)

<sup>2</sup> Commenters Lyle Schlyer of Calgren Renewable Fuels and Brandon Price of Voss Energy Works both expressed concerns about application approval timelines during the December 7, 2021 Workshop.

<sup>3</sup> CARB Draft 2022 Scoping Plan Update, 5/10/2022. Page 180. <https://ww2.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf>

### III. Hydrogen Tier 1 Calculator

CARB's publication of additional Tier 1 calculators encourages participation in the LCFS program by lowering the barrier to entry for potential fuel pathway holders. As such, Valero supports CARB's development of a Tier 1 calculator for hydrogen. Valero also suggests the following enhancements to a Tier 1 calculator for hydrogen:

- ***Additional renewable fuel production.*** The calculator should allow not only book-and-claim for hydrogen, but also expand to include renewable propane and other renewable fuels.
- ***Carbon capture and sequestration.*** An option to include carbon intensity reductions via carbon capture and sequestration (CCS) should be included directly within the calculator rather than requiring an applicant to develop the calculations outside of CARB's standard file.
- ***Use of the renewable hydrogen as a feedstock.*** In order to encourage additional diversification in of renewable transportation fuels, the calculator should also include outputs that would allow a pathway holder to use the renewable hydrogen as a feedstock for other renewable fuels and not just as a finished transportation fuel.
- ***Additional renewable feedstocks.*** Additional options for renewable feedstocks (in the form of electricity, natural gas, etc.) should also be included in the Tier 1 calculator via a joint application with another entity.

### IV. Additional Ideas for Streamlining

#### ***a. 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 VB's. 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.

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

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 the following 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, 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 report corrections within 24 hours of each other, 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.
- ***Create standard blend fuel pathway codes.*** CARB should establish standard FPCs that represent common fuel blends, such as those listed on its website<sup>4</sup>. Incorporating such blended FPCs would reduce the amount of data required and impact the workload of both the fuel reporting entity and CARB. Valero also suggests that the incorporation of blend FPCs affect any retroactive reporting updates as a single credit/deficit adjustment. For example, if a verification requires that an E85 import be adjusted, CARB should consider the net impact to credits from the ethanol portion of the volume and the deficits from the gasoline portion of the volume – rather than each impact separately.
- ***Provide written documentation for credit/deficit adjustments.*** Valero requests that CARB provide written documentation for all credit and deficit adjustments that occur within LRT-CBTS. This would assist data reporters with reconciling all credits and deficits with internal financial data.

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<sup>4</sup> See table titled “Default Blend Percentages for Reporting Fuels with Unknown Blend Levels for 2022”.  
<https://ww2.arb.ca.gov/resources/documents/substitute-pathways-and-default-blend-levels-lcfs-reporting-specific-fuel>

**c. *Overlap with requirements from other jurisdictions***

In the event that a pathway holder is also subject to a low carbon fuels program in another jurisdiction, CARB should allow flexibility in compliance with the LCFS of a case-by-case basis. For example, production allocation is often required to be calculated with slight differences by program, which forces a pathway holder to keep multiple sets of “books” to account for the different methods. If CARB allowed a pathway holder to streamline this accounting process, it would incentivize additional participants in the LCFS program without a disproportionate amount of effort.

Furthermore, production allocation calculations should utilize a mass-balance that aligns with the GREET model that is used for annual report submittals. CARB should require that all yield rates used in the annual report be based on actual production volumes and explicitly prohibit the use of pathway application yields, which would be estimates and carry an inherent inaccuracy.

**V. Emission Factor (EF) Updates**

**a. *Grid electricity factors***

Valero requests that CARB update the emission factors for grid electricity for all regions on the same schedule as CARB updates the California CI used for generating electric vehicle (EV) credits from grid electricity. After establishing a cohesive timeline, CARB should then update the associated GREET and Tier 1 models to account for the grid emission factor changes. This would ensure equity for renewable transportation fuels across geographic regions.

**b. *Renewable diesel factors in the Tier 1 calculator***

Valero requests that CARB update the emission factors in the Tier 1 calculator for renewable diesel. These factors are commonly updated by fuel pathway applicants, which prompts an application to change to a Tier 2 review – requiring additional effort on both the part of CARB and the applicant.

- ***Hydrogen energy density.*** Valero requests that this value be updated to 274.37 Btu/gallon, which is temperature corrected to 60 degrees Fahrenheit. CARB’s current value of 290 Btu/gallon can be found in the Tier 1 renewable diesel calculator, in cell B24 on the “Fuel\_Specs” tab.
- ***Hydrogen emission factor.*** Hydrogen used in the production of renewable diesel is often produced very near the renewable diesel plant, as compared to the 150-mile distance that the current hydrogen emission factor currently uses. Valero requests that the distance used in the calculation of the hydrogen emission factor be more reasonable and closer to the average distance used by pathway holders.



- ***Blended diesel emission factor.*** The vast majority of renewable diesel produced in the U.S. is blended with 0.1% ULSD, allowing the producer to claim the Blender’s Tax Credit. As such, Valero recommends that CARB include a factor, either as a standard or actual volume, in the Tier 1 calculator for renewable diesel to account for this ULSD blending, in a similar manner to that for denaturant added into ethanol.
- ***Additional standardized emission factors.*** Valero requests that CARB also incorporate into the Tier 1 renewable diesel calculator standardized emission factors for renewable propane, renewable naphtha, and renewable jet fuel. These factors should be tied to those in Table 4 of the LCFS, in a similar way to how renewable diesel is currently treated. This would allow applicants to account for these products consistently in the production allocation.

## **VI. Verification Updates**

### ***a. Additional transaction types***

In order to ensure that the LCFS program is technology neutral, CARB should require that all credits generated under the LCFS program be treated with the same scrutiny. As outlined in the workshop, CARB should require that the following transaction types undergo an annual third-party verification:

- EV charging transaction types;
- eTRU, eCHE, and eOGV fueling;
- Fixed guideway electricity fueling; and
- Fuel cell vehicle fueling transaction types.

Valero agrees that it is technology-neutral and appropriate to exempt from the third-party verification requirement entities which do not exceed the threshold of 6,000 credits or deficits, as described in the August 18 workshop. This threshold ensures that credits generated by liquid fuels and by EVs are equitably held to the same verification standard.

### ***b. Overlap with the Renewable Fuel Standard attestation requirement and the LCFS Annual Verification***

Furthermore, Valero notes that there is a timing issue between the Renewable Fuel Standard (RFS) attestation requirement and the LCFS Annual Verification, which are respectively due on June 1 and August 31 annually. Because auditing firms are often certified for both programs, it has been Valero’s experience that a VB will often not begin to verify LCFS data until after June 1, creating a shortened timeframe in which the LCFS verification must be completed – by no fault of the reporting entity. In fact, CARB noted to Valero that the majority of LCFS verifications for the 2021

reporting year were not submitted until within one week of the August 31, 2022 deadline, which Valero believes was due to VBs prioritizing RFS attestations.

If CARB intends to provide five full months in order to complete a verification, then Valero suggests extending the verification deadline to October 31 annually. Alternatively, CARB could restrict a VB (or a select number of its staff) from completing RFS attestations, in the same manner as a VB is prevented from having a conflict of interest with the reporting entity<sup>5</sup>.

## VII. Residential Base Crediting

During the workshop on August 18, CARB outlined the following options for calculating base credits for residential plug-in electric vehicles (PEVs):

- Electrical distribution utility (EDU) PEV dedicated rates;
- EDU Time of Use (TOU) estimation;
- Onboard telematic charging data; and
- Emissions Factor (EMFAC) model estimated data.

In order for CARB to maintain the LCFS as a high-integrity program, all program credits must be held to the same data quality standard. As such, source data used to generate credits should be as accurate as possible, rather than “estimated.” Fuel pathway holders and fuel reporting entities are required to undergo an annual third-party verification in which reported data is verified *to the gallon* and where even a late meter calibration can result in a *qualified positive* verification statement.<sup>6</sup> The generation of residential base credits should be treated with the same level of scrutiny by moving away from any source data that is estimated and toward actual, realized charging rates.

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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 210-345-4650 or via email at [elizabeth.bourbon@valero.com](mailto:elizabeth.bourbon@valero.com).

Sincerely,

  
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Elizabeth Bourbon  
Senior Managing Counsel

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<sup>5</sup> See Title 17 CCR § 95503.

<sup>6</sup> See Title 17 CCR § 95481(a)(125).