



Submitted Via CARB Comment Submittal Form

May 31, 2023

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

Re: Valero Marketing & Supply Company Comments on Proposed Changes for Lookup Table Changes

Dear Dr. Laskowski:

On behalf of Valero Marketing & Supply Company (“Valero”), I appreciate the opportunity to provide these comments regarding proposed changes for the Lookup Table Pathways Technical Support Documentation.

In addition to being the nation’s largest independent refiner of petroleum fuels, Valero is one of the top producers of domestic biofuels and continues to supply the California market with both traditional refined fuels and renewable fuels.

Comments on CARB’s Proposed Lookup Table Changes

In the Lookup Table Pathways Technical Support Documentation, California Air Resources Board (“CARB”) provides a comparison of carbon intensities (“CIs”) generated using CA-GREET3.0 and CA-GREET4.0 for various fuels. For California Ultra-Low Sulfur Diesel (“ULSD”), CARB is proposing to increase the Lookup Table CI from 100.45 to 104.48 gCO₂e/MJ, driven largely by changes in CARB’s modeling and calculation of tailpipe emissions.¹ Most notably, CARB’s modeling reflects an increase in nitrous oxide (“N₂O”) emissions of 390%, from 0.724 to 3.55 gCO₂e/MJ. While CARB references EMFAC2021 (v1.0.2) as the source of the N₂O emission values, it provides no further explanation or background documentation supporting the change.

¹ Draft Lookup Table Pathways, Technical Support Documentation. Table B.4, Page 16.
https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/ca-greet/lut_update_2023_2.pdf

By comparison, the Argonne GREET-2022 model calculates emissions of 0.0002 gN₂O/MJ from “vehicle operation” of a “CIDI ICE vehicle using conventional and LS diesel,” or approximately 0.05 gCO₂e/MJ on an AR4/GWP100 basis (global warming potential of 298).

Given the magnitude of the change from CARB’s current value and the large discrepancy between CARB’s proposed and Argonne’s published value for N₂O tailpipe emissions, CARB should publish background documentation regarding this factor.

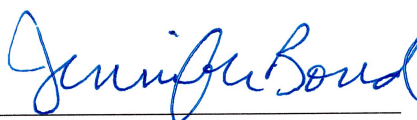
Valero further notes the following discrepancies in the Lookup Table Pathways Technical Support Documentation, for CARB’s consideration:

- The ULSD total CI values in Tables B.1 and B.4 disagree, and
- The ULSD tailpipe methane and N₂O emission values in Tables B.3 and B.4 disagree.

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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 210-345-4239 or via email at Jennifer.Bond@Valero.com.

Sincerely,



Jennifer Bond

Director Fuel Regulatory Planning & Assurance