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VIA ELECTRONIC FILING
Submitted via LCFS Comments Upload Link

The Honorable Liane M. Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Gevo, Inc.'s Comments on the Second 15-Day Notice of Changes to the Proposed Low Carbon Fuel Standard Amendments

Dear Chair Randolph:

Gevo, Inc. ("Gevo") appreciates this opportunity to comment on the California Air Resources Board ("CARB") Second 15-Day Notice of Changes to the Proposed Low Carbon Fuel Standard ("LCFS") Amendments, issued on October 1, 2024 (hereinafter "Second 15-Day Notice"). Gevo submitted comments on CARB's proposed LCFS amendments on February 20, 2024, on the content of the CARB Workshop held on April 10, 2024, and on the first 15-Day notice on August 27, 2024, and we incorporate each of those comments here by reference.¹ Although we continue to urge CARB's consideration of all of the comments we previously submitted, the comments here relate to areas elaborated in the Second 15-Day Notice, as specified by CARB in its Second Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information Proposed Low Carbon Fuel Standard Amendments.²

As a refresher, Gevo's mission is to produce low-carbon, renewable energy-dense liquid hydrocarbons for drop-in transportation fuels such as gasoline, jet fuel, and diesel.

¹ See Gevo, Inc.'s "Comments on Proposed Amendments to the Low Carbon Fuel Standard" (February 20, 2024) (available as Comment #196 in CARB's Public Comments Received portal); Gevo, Inc.'s "Comments on the Low Carbon Fuel Standard Workshop, April 10, 2024" (May 10, 2024) (available in CARB's LCFS Meetings and Workshops portal); and Gevo, Inc.'s "Comments on 15-Day Notice of Changes to the Proposed Low Carbon Fuel Standard Amendments" (August 27, 2024).

² CARB, Second Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information Proposed Low Carbon Fuel Standard Amendments, at 3 (October 1, 2024) (noting that "staff will only address comments received during this 15-day comment period that are responsive to this notice, documents added to the record, or the changes detailed" in attachments to the notice.)

Gevo currently is participating in the LCFS through our production of renewable natural gas ("RNG") from three dairies, for which we installed dairy-manure biomethane capture and upgrading equipment, thereby producing pipeline quality RNG rather than allowing the methane from the manure to continue to be released from the dairy lots. In addition, Gevo has plans to participate in the LCFS with low-carbon products from our alcohol-to-hydrocarbons production process, which uses a combination of decarbonization technologies and sustainably farmed feedstock to produce fuels with substantially reduced carbon intensity ("CI") compared to fossil fuel equivalents.

We broke ground on our first alternative jet fuel ("AJF")/sustainable aviation fuel ("SAF")³ production facility, "Gevo Net-Zero 1" ("NZ1"), in Lake Preston, South Dakota, in September 2022. This facility will use a three-part strategy to produce low-CI SAF: 1) use locally-sourced corn feedstock from farmers engaged in sustainable agriculture to both reduce on-farm greenhouse gas ("GHG") emissions and sequester carbon dioxide ("CO₂") in the soil; 2) decarbonize the fuel production process by replacing conventional fossil fuel inputs with wind energy, renewable natural gas, and green hydrogen; and 3) use carbon capture and sequestration ("CCS") technology to reduce emissions from the production process further. The Gevo approach is aimed at decarbonizing every step in our SAF's life cycle, which we track all the way from the farm field through to the aircraft using our Verity Tracking platform. Upon completion of our NZ1 production facility, we intend to submit a Tier 2 LCFS Provisional Pathway application for the SAF, renewable diesel, and renewable naphtha fuels that will be produced at the NZ1 facility, utilizing our field corn starch feedstock and alcohol-to-jet ("ATJ")/alcohol-to-hydrocarbons production process.

I. Gevo Strongly Supports CARB's Proposed Modification to the Trigger for the Automatic Acceleration Mechanism (Section 95484)

In each of our earlier sets of comments, Gevo supported CARB's intent to adopt an Automatic Acceleration Mechanism ("AAM") to advance CI adjustments as needed to respond to LCFS market conditions. Gevo strongly supports CARB's proposal in the Second 15-Day Notice to have the trigger for the AAM be based on the four most recent quarters of reporting, making a quarterly announcement regarding whether the AAM is triggered, rather than using a calendar year for the trigger and making an annual

³ Gevo typically uses the term "sustainable aviation fuel" or "SAF" to refer to our fuel. This fuel meets the definition of "alternative jet fuel" (AJF) as set forth in the LCFS regulations. Accordingly, our references to SAF in this comment letter should be deemed synonymous with AJF.

announcement. As CARB recognized in making the current proposal, switching from a calendar year of data to the most recent four quarters of data as the determination for the AAM trigger will allow for greater transparency and market certainty to LCFS participants, thereby strengthening the market pull of the LCFS and increasing the GHG emissions savings it achieves. Accordingly, Gevo urges CARB to adopt this proposal.

II. Gevo Urges CARB to Make the Renewable Naphtha Definition Feedstock and Process Neutral

Throughout this LCFS revision cycle, CARB has revised various definitions to better reflect the array of feedstocks and processes that generate renewable fuels. As noted in our August 27 comments on the first 15-Day Notice, we strongly supported CARB's proposal to make the "renewable diesel" definition process- and feedstock- neutral and we see in the Second 15-Day Notice additional efforts by CARB to better reflect an array of processes in definitions involving LCFS eligibility (for example, the proposal to expand the definition of "recovered organics.") While we were pleased that CARB provided a new proposal for the "renewable diesel" definition in the 15-Day Notice that would make it process- and feedstock-neutral, and note that the definitions of biomethane, renewable gasoline, renewable propane and several others are similarly neutral as to process and feedstock, we are concerned that CARB still has not proposed a corresponding change to the "renewable naphtha" definition. As we had noted in our previous comments, there is no rational reason for excluding from LCFS eligibility the renewable naphtha from a process such as Gevo's. Accordingly, we urge CARB to also make the "renewable naphtha" definition neutral as to non-petroleum feedstocks and production processes.

III. Gevo Supports CARB's Proposal to Retain Three Ten-Year Crediting Periods for Early Adopters and Urges CARB to Eschew Crediting Time Limits for All Avoided Methane Projects (Section 95488.9(f)(3)(A))

In the Second 15-Day Notice, CARB has withdrawn its proposal from the first 15-Day Notice that would have reduced the total number of crediting periods for pre-2030 avoided methane emissions projects from dairy and swine manure and landfill-diverted organic waste disposal to two 10-year crediting periods, proposing instead in Section 95488.9(f)(3)(A) to retain the three 10-year periods in the original LCFS proposal. Gevo supports CARB's proposal to revert back to three 10-year crediting periods for these projects, though, as we have previously commented, we believe that the inclusion of any crediting limit (whether for pre-2030 projects or those that commence in 2030 or later) unnecessarily stifles investment in these important projects and limits the climate benefit avoided methane projects can bring.

As we noted in our previous comments, Gevo participates in the LCFS via the RNG captured from three dairies, for which we installed dairy manure biomethane capture

and upgrading equipment, thereby producing pipeline quality RNG rather than allowing the methane from the manure to continue to be released to atmosphere. LCFS policies create incentives for dairy farmers to capture methane emissions from their cows to convert into biogas. As CARB has recognized, “capturing methane from dairies is one of the primary measures for achieving the state’s 2045 greenhouse gas reduction targets and SB 1383 methane reduction target.”⁴ In addition, we note that use of dairy digesters creates synergistic environmental benefits, as farmers can generate soil amendments that provide nutrients and decrease the amount of fertilizer needed.⁵

In our previous comments, Gevo supported CARB’s proposal to continue avoided methane crediting, including for dairy RNG, and we urged CARB to decline to impose time limits (or other restrictions) on such crediting. As we noted, dairy manure methane avoidance projects such as ours require significant capital investment and carry with them significant ongoing operating costs. Accordingly, limits on the crediting period for such projects would not only inhibit initial investment but also would threaten the viability of continuing methane avoidance operations over time. By restoring the crediting period for pre-2030 biomethane projects to three 10-year periods, these avoided methane projects will be able to bring needed climate benefits for longer.

While supporting the provision in the Second 15-Day Notice for pre-2030 avoided methane projects, Gevo continues to question why CARB would limit these pre-2030 projects to only three crediting periods and we urge CARB to decline to place crediting time limits on any avoided methane projects.

IV. Gevo Supports CARB’s Proposal to Remove the Potential Statutory Change Limit for Early Dairy Biomethane Adopters (Section 95488.9(f)(3)(B))

In the Second 15-Day Notice, CARB has proposed to revise the existing regulation applying to pre-2030 dairy biomethane projects that states that “if a law, regulation, or legally binding mandate requiring either greenhouse gas emission reductions from manure methane emissions from livestock and dairy projects or diversion of organic material from landfill disposal, comes into effect in California during a project’s crediting period, then the project is only eligible to continue to receive LCFS credits for those greenhouse gas emission reductions for the remainder of the project’s current crediting

⁴ California Air Resources Board, “Proposed Amendments to the Low Carbon Fuel Standard Initial Statement of Reasons,” Dec. 19, 2023, at page 124.

⁵ See, e.g., University of California, Agriculture and Natural Resources, “California Dairy Farmers Generate Renewable Energy from Waste,” (Nov. 3, 2023) available at <https://ucanr.edu/News/?postnum=58234&routeName=newsstory>.

period and may not request any subsequent crediting periods.” Gevo supports this proposal because, as CARB notes in the Second 15-Day Notice, it supports California’s “methane reduction goals by providing incentive certainty for project developers for methane capture projects.” At the same time, however, we question why CARB would retain the existing provision for 2030+ projects, as all dairy biomethane projects that bring emissions reductions need investment certainty.

V. Conclusion

Thank you for the opportunity to comment on the Second 15-Day Notice of additional changes to the Low Carbon Fuel Standard amendments proposal. Please let us know if you have any questions regarding our comments. We look forward to continuing to participate in this program with our RNG and as Gevo begins commercial scale production of SAF and other biofuels.

Respectfully,

A handwritten signature in black ink, appearing to read 'KH' with a stylized flourish.

Kent Hartwig
Director of State Government Affairs
Gevo, Inc.

A handwritten signature in black ink, appearing to read 'Nancy N. Young' with a checkmark at the end.

Nancy N. Young
Chief Sustainability Officer
Gevo, Inc.