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Rachel Assink
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Ms. Assink –

Thank you for the opportunity to comment on the Washington Clean Fuel Standard (CFS) Rule. Gevo, Inc. (Gevo) supports the establishment of this program and is excited for a new program focused on reducing emissions from the transportation sector.

Gevo's mission is to transform renewable energy and carbon into energy-dense liquid hydrocarbons. These liquid hydrocarbons can be used for drop-in transportation fuels such as gasoline, jet fuel and diesel fuel, that when burned have potential to yield net-zero greenhouse gas emissions when measured across the full life cycle of the products. Gevo uses low-carbon renewable resource-based carbohydrates as raw materials and is in an advanced state of developing renewable electricity and renewable natural gas for use in production processes, resulting in low-carbon fuels with substantially reduced carbon intensity (the level of greenhouse gas emissions compared to standard petroleum fossil-based fuels across their life cycle).

The compliance curve laid out in this rule is aggressive but achievable. Gevo supports the rule beginning the compliance period in 2023 at 0.5% reduction as well as the 10% reduction from 2033 to 2034. This aggressive approach will assist the growth of credit generation in the earlier years of the program (2023 – 2033) due to the need to cover deficits in 2034 – 2038 when compliance is more stringent. While this large jump has not been utilized in other programs, it compensates for the slow growth of the program prescribed by the legislature. The biofuels industry is ramping up and will be ready to provide the needed carbon reduction for this program in 2034.

Gevo is focused on the production of sustainable aviation fuel (SAF), renewable gasoline, renewable diesel, and naphtha, while facilitating the production of green hydrogen and other renewable electricity. These eligible fuels for credit generation will play a key role in Washington's carbon reduction program. The Gevo process captures as much carbon reduction as possible, working directly with farmers to reduce carbon emissions on their farm. These are important emission reductions that should be included in the life cycle analysis (LCA) Washington utilizes in order to incentivize our growers to participate. Gevo applauds the Department of Ecology's Agriculture and Forestry Carbon Capture &

Sequestration Advisory Panel to study this important topic. We encourage a robust discussion of how Washington Ecology can employ the Department of Energy Argonne National Laboratory's GREET model to count all carbon within a fuel's life cycle. This includes the carbon benefits of no- or low-till agriculture, cover crops, low carbon fertilizer, etc. Counting all carbon reductions through regenerative agricultural practices is the most complete and accurate LCA, and it incentivizes carbon reductions beyond Washington's borders.

We understand an effort to count on farm carbon reductions will require additional time and effort to implement and an additional rulemaking will be necessary. During future rule proceedings, we urge Ecology to include carbon accounting for reduced agricultural carbon and review the Indirect Land Use Change (ILUC) assessments for crop-based biofuels. Gevo is available to provide our data and expertise in regenerative agriculture efforts in reducing the carbon intensity of our SAF.

Our net-zero assessment utilizes the Argonne GREET model. Gevo believes Argonne GREET is the best available standard of scientific-based measurement for life cycle inventory (LCI). We encourage Ecology to adopt Argonne GREET in future rule makings to continuously monitor and update ILUC values for crop-based feedstocks. The ILUC scores currently used in this rule should be updated to account for more accurate science the Argonne GREET model provides.

Carbon Capture and Sequestration (CCS) is an essential part of reducing the carbon intensity of fuels below net-zero, the carbon benefit must be recognized in the LCA model of the Washington CFS. Gevo appreciates the inclusion of CCS in the Tier 2 pathway process as a proactive opportunity to achieve significant carbon reductions for ethanol and carbohydrate derived SAF.

Book and claim language for renewable natural gas (RNG) to hydrogen through a steam methane reformer (SMR) within the specified source feedstock section is appreciated. Gevo is requesting clarification of the ability to book and claim RNG for all production inputs, including process energy. Gevo will be utilizing both low CI H₂ and RNG for process inputs in converting carbohydrates to sustainable aviation fuel. Having the ability to book and claim RNG for both purposes allow the renewable fuels industry the ability to significantly reduce the carbon intensity of fuel for the Washington market. Allowing book and claim is the ideal process to recognize the environmental benefits of these reductions.

Gevo recommends a consistent verification process for co-processed fuels to ensure renewable molecules are present in the fuels claimed for credit generation. Frequent carbon isotope verification is regularly utilized by other CFS programs and upholds programmatic goals; verification of renewable content maintains equity between stand alone renewable fuel producers and co-processors.

We understand the legislature has allowed Ecology to implement a fee structure within the Washington CFS to cover costs of the program. Washington implementing the

proposed fees will be the first of its kind and will make the state an outlier among West Coast programs. We believe the fee will place Washington at a disadvantage to other programs by adding additional cost within the system and renewable fuel producers will come to Washington as a market of last resort. If Ecology chooses to implement a fee, we recommend only assessing deficit generators to ensure Washington does not hinder the flow of renewable fuels into the state.

Finally, Gevo recognizes provisions in the law plateaus the program at a 10% carbon reduction if new Washington feedstock and renewable fuel production does not reach statutory requirements. We encourage placing into the rule how these thresholds will be met, and the criteria needed to achieve these requirements. This guidance is necessary to provide renewable fuel producers with an understanding of the future potential of the program for investment purposes.

Thank you for the exceptional work Ecology has done to get this program in place by January 1, 2023. We commend you for the amount of public input you have taken and the way you incorporated the comments to establish a well written and functioning program. We look forward to participating in this program as Gevo grows our production of SAF and other biofuels.

Respectfully,



Kent Hartwig
Director of State Government Affairs



Gevo, Inc.