

August 1, 2025

Abbey Brown
Clean Fuel Standard Technical Lead
Department of Ecology
PO Box 47600
Olympia, WA 98504

Re: Comments on Washington's Amendments to the Clean Fuel Standard

Ms. Brown,

We appreciate the opportunity to comment on the Department of Ecology's (Ecology) proposed updates to the state's Clean Fuel Program (CFP). Growth Energy is the world's largest association of biofuel producers, representing 97 U.S. plants that each year produce more than 9.5 billion gallons of renewable fuel; 131 businesses associated with the production process; and tens of thousands of biofuel supporters around the country. Together, we are working to bring better and more affordable choices at the fuel pump to consumers, improve air quality, and protect the environment for future generations. We remain committed to helping our country diversify our energy portfolio in order to grow more green energy jobs, decarbonize our nation's energy mix, sustain family farms, and drive down the costs of transportation fuels for consumers.

We applaud Ecology's efforts to reduce Washington's greenhouse gas (GHG) emissions in the transportation sector and believe the biofuels industry represents the greatest opportunity to lower carbon emissions immediately as future technologies are developed. Growth Energy's members produce bioethanol which, according to recent data from Environmental Health and Engineering, reduces GHG emissions by nearly 50 percent compared to gasoline and can provide even further GHG reductions with additional readily available technologies.¹ A study conducted in 2022 by the University of California – Riverside found that shifting from E10 to E15 (gasoline containing up to 15% ethanol) in light-duty vehicles reduces emissions including harmful particulates and air toxics such as carbon monoxide, and benzene.²

Addressing Corn Stover and Corn Kernel Fiber

Biofuels producers are pushing innovations to use every part of the corn crop. While traditionally considered waste, corn stover and corn kernel fiber have increasingly been used as a feedstock for bioethanol production. We appreciate the recognition and inclusion of corn stover, which is a byproduct of corn bioethanol production, in the list of specified source feedstocks, thus aligning the Clean Fuels Program with California's LCFS and Oregon's Clean Fuels Program. We also understand Ecology proposes to add bioethanol from corn kernel fiber to the list of fuels eligible for Tier 1 pathways. We appreciate Ecology's consideration of these two feedstocks, both of which are byproducts from the cornstarch bioethanol production process.

¹ <https://iopscience.iop.org/article/10.1088/1748-9326/abde08/pdf>

² https://ww2.arb.ca.gov/sites/default/files/2022-07/E15_Final_Report_7-14-22_0.pdf

Clarification of REC Eligibility with Respect to Federal Programs

Currently, the CFP allows pathways using renewable thermal certificates or renewable energy certificates (REC) via book-and-claim accounting. However, restrictions are in place that prevent those RECs from being “used or claimed in any other program or jurisdictions with the exception of the federal [Renewable Fuel Standard] and the Climate Commitment Act.”

The Inflation Reduction Act of 2022 included the creation of a new federal clean fuels production tax credit, commonly called 45Z. The 45Z tax credit provides a federal incentive for biofuels producers to produce lower CI liquid fuels, with an incentive inversely proportional to the CI of the fuel. This is an important component of national efforts to reduce carbon emissions.

Understandably, the 45Z credit is not currently listed in the CFP’s rules. But without a clarification in CFP’s rules, it may force biofuels producers into a choice of participating in either Washington’s CFP or the federal 45Z credit. We believe this would be detrimental to the CFP and may inadvertently *increase* emissions in the transportation sector by reducing the amount of low carbon biofuels imported and used in the state. We strongly encourage Ecology to address this discrepancy by adding clean fuels production tax credits derived from the Inflation Reduction Act of 2022 to the list of excepted from this prohibition.

Expanding the Use of Low-CI Power Book-and-Claim Accounting

While Ecology currently allows book-and-claim accounting for a variety of fuels, it may be unclear as to whether bioethanol producers are able to utilize it. Allowing biofuels producers to source contracted low-CI power via power purchase agreements incentivizes the generation of cleaner electricity. This would position Washington as a national leader, encouraging the use of low-CI power in other states as the vast majority of biofuels used in Washington is produced out of state. But doing so would depend on allowing book and claim accounting. We encourage Ecology to clarify the ability of bioethanol producers to utilize book-and-claim accounting for sourcing low-CI power.

Continuous Review of Carbon Intensities

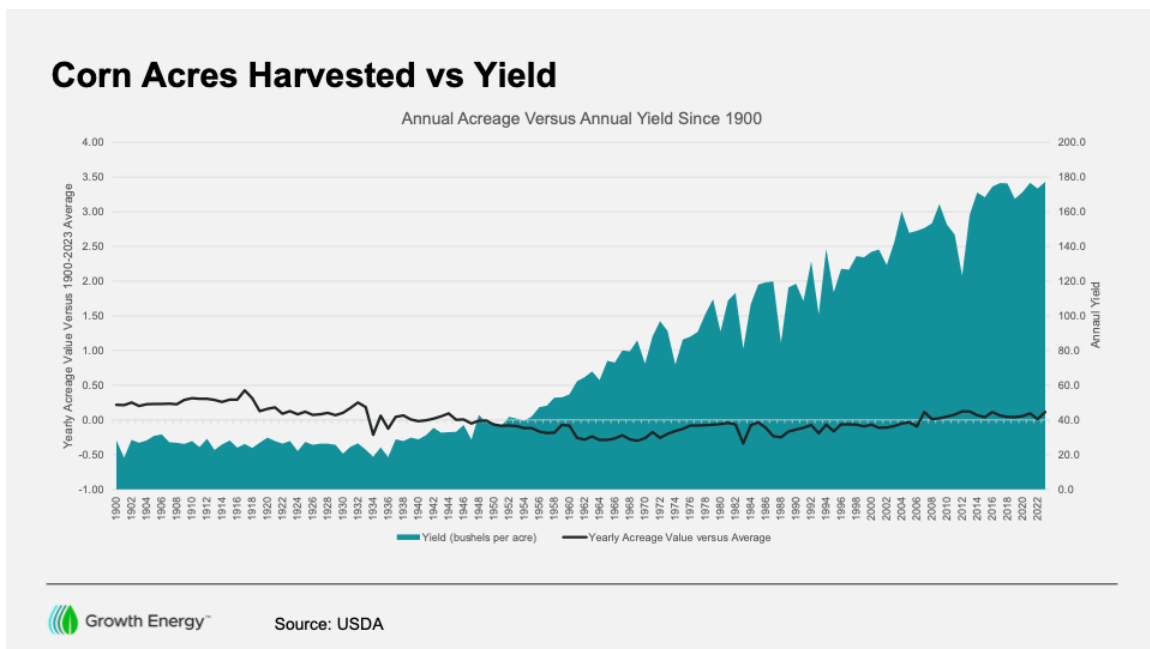
We appreciate Ecology’s efforts to make the CF as responsive to “the most up-to-date science and lifecycle analysis models” as possible. We agree with that goal and applaud Ecology for proposing more regular reviews of carbon intensities for fuel pathways. However, we believe this more frequent review process is for naught without recognition of the significant contributions to carbon intensity reduction by processes and tools biofuels producers have access to.

Ecology’s statutorily mandated review of carbon intensities “every three years, or sooner if ecology determines that new information becomes available that warrants an earlier review” is already required to consider changes to methods to calculate lifecycle emissions, “including changes in: GREET, WA-GREET, CA-GREET; or methods to quantify indirect land use change.” As mentioned below, we believe it is essential to the viability of the CFP that, in considering “the most up-to-date science”, per the Preliminary Regulatory Analyses, Ecology’s next review of carbon intensities for bioethanol pathways include a revised indirect land use change (ILUC) value and recognition of climate-smart agricultural practices that have been shown to reduce carbon intensity.

Revising Land Use Change Penalty Based on Current Science

Currently, Washington's greenhouse gases, regulated emissions, and energy use in technologies (WA-GREET) assigns an indirect land use change (ILUC) penalty of 19.8g/MJ for cornstarch bioethanol. This number is largely based on outdated and flawed data. A review of the more recent science over the last 5 years indicates a decreasing trend in land use values with the newer data indicating values closer to 4 gCO₂e/MJ.³

Concerns over land use change factors are unfounded relative to cornstarch bioethanol. In fact, the United States is planting grain corn on roughly the same number of acres as was planted in 1900.⁴ At the same time, the per acre yield has increased more than 600%.⁵ As shown in the graph below, the number of acres harvested annually have consistently hewn to the average since 1900.



WA-GREET's ILUC value for bioethanol should reflect the latest science that better addresses innovation and increasing yields in agriculture. We recognize that Ecology is not considering changes to land use change factors or the Tier 2 WA-GREET model in this proposed rulemaking. However, as Ecology considers alignment with other states' clean fuel programs and interaction with federal clean fuels incentives, it is important to note that Oregon assigns an ILUC penalty of 7.6g/MJ. Additionally, the ILUC value assigned to cornstarch bioethanol in the Biden administration-written rules for the federal 45Z Clean Fuels Production Tax Credit is 5.75 gCO₂e/MJ.

³ <https://iopscience.iop.org/article/10.1088/1748-9326/abde08/pdf>

⁴ https://www.nass.usda.gov/Publications/Todays_Reports/reports/croptr19.pdf,
https://www.nass.usda.gov/Charts_and_Maps/Field_Crops/cornac.php

⁵ <https://www.agry.purdue.edu/ext/corn/news/timeless/YieldTrends.html>

We request Ecology consider aligning WA-GREET’s ILUC value for cornstarch bioethanol with Oregon’s value or the value assigned by the federal 45Z tax credit. By recognizing the latest science and adjusting the ILUC penalty, Ecology can allow bioethanol to continue its ability to further reduce GHG emissions within the state’s legacy vehicle fleet.

Recognizing the Carbon-Reduction Values of Farm-Level Climate Smart Ag Practices

To maximize ethanol’s carbon emission reduction potential, Ecology should recognize farm-level climate-smart agriculture practices. There has been a wealth of data, including a recent study done by Argonne National Laboratory (ANL), that show the possibility of a 35 percent reduction in carbon intensity through adoption of current best on-farm practices such as cover crops, no till, low carbon fertilizer use, and other innovations.⁶ Allowing appropriate credit will encourage bioethanol producers to innovate and reduce carbon intensity, while providing incentives for farmers to adopt effective conservation practices.. In the 40B guidance for SAF production, the U.S. Department of Treasury acknowledged the role climate-smart agricultural practices play in reducing GHG emissions in the aviation industry.⁷

The latest research from the Energy Futures Initiative Foundation provides insight on how on-farm practices can help drive down the CI score.⁸ With relatively minimal costs, a variety of these practices can make significant CI reductions. The use of cover crops can account for as much as a 45% reduction.

Decarbonization measures		CI reduction potential (% of ethanol CI)	Cost	Feasibility	
				Feasibility for widespread adoption	Readiness for adoption
Adopt climate-smart agricultural practices	Corn yield improvement	0.7%	< zero	High	Near term
	No-till farming	6%	< zero	High	Near term
	4R nitrogen management	4%	< zero	High	Near term
	Enhanced efficiency fertilizers	4%	< zero	Medium	Near term
	Cover crops	45%	\$24 to \$64/tCO ₂	Medium	Near term
Use low-carbon fertilizers	Blue ammonia-based fertilizers	10%	\$29 (with 45Q) to \$100/tCO ₂	Medium	Mid term
	Green ammonia-based fertilizers	10%	\$0 (with 45V) to \$526/tCO ₂	Medium	Mid term
Use renewable diesel in farm machinery		< 4%	\$127 to \$139/tCO ₂	Medium	Near term
Use renewable diesel for corn transport		< 2%	\$127 to \$139/tCO ₂	Medium	Near term

Flexibility on Mass Balance Reporting

We appreciate Ecology’s efforts to provide flexibility for liquid fuel producers with respect to tracking carbon intensity for comingled fuels and consider the addition of mass balance reporting for liquid fuels at the facility level. We also understand the concern Ecology has that, were a liquid fuel producer allowed to utilize mass balancing at the state level rather than facility level, it could impact reporting “that is not reflective of what is actually consumed in Washington.” We encourage Ecology to reconsider allowing mass balancing at the state level and include a mechanism ensuring fuels reported for use in Washington have not been exported outside of the state.

⁶ <https://www.anl.gov/article/argonnes-pivotal-research-discovers-practices-technologies-key-to-sustainable-farming>

⁷ <https://home.treasury.gov/news/press-releases/jy2307>

⁸ https://efifoundation.org/wp-content/uploads/sites/3/2024/09/ethanol-roadmap_executive-summary.pdf

We look forward to continuing our work with you as the proposed changes to the CFS are considered. We aim to ensure biofuels contribute to a more sustainable Washington fuel mix and help the state achieve its climate goals through bioethanol.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Chris Bliley". The signature is stylized with a large, looping "C" and "B".

Chris Bliley
Senior Vice President of Regulatory Affairs
Growth Energy