



**Growth Energy™**  
Expanding America's Bioeconomy

December 14, 2024

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 Standard (CFS). 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; 123 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 biofuels which, according to recent data from Environmental Health and Engineering, today's bioethanol reduces greenhouse gas emissions (GHG) by nearly 50 percent compared to gasoline and can provide even further GHG reductions with additional readily available technologies.<sup>1</sup> 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.<sup>2</sup>

### **Expanding Specified Source Feedstocks**

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. As a byproduct of corn bioethanol production, we appreciate the

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

<sup>2</sup> [https://ww2.arb.ca.gov/sites/default/files/2022-07/E15\\_Final\\_Report\\_7-14-22\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2022-07/E15_Final_Report_7-14-22_0.pdf)

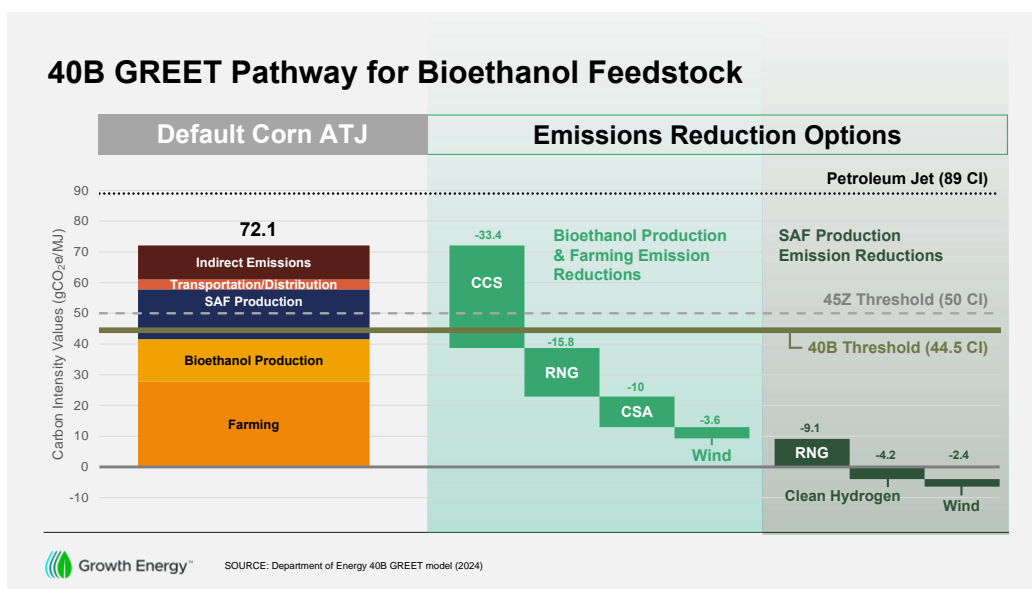
recognition and inclusion of corn stover in the list of specified source feedstocks. We encourage Ecology to also recognize corn kernel fiber.

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

While Ecology currently allows book-and-claim accounting for a variety of fuels, bioethanol producers are unable 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. We encourage Ecology to take advantage of book-and-claim accounting for sourcing low-CI power by allowing all fuel types to access this CI reduction tool.

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

In order for Washington to take advantage of ethanol’s ability to reduce carbon emissions, Ecology should consider recognizing 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.<sup>3</sup> Allowing appropriate credit will help bioethanol producers continue to further innovate and lower their carbon intensity, while providing key incentives for farmers to adopt these 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.<sup>4</sup>



<sup>3</sup> <https://www.anl.gov/article/argonnes-pivotal-research-discovers-practices-technologies-key-to-sustainable-farming>

<sup>4</sup> <https://home.treasury.gov/news/press-releases/jy2307>

The latest research from the Energy Futures Initiative Foundation provides insight on how on-farm practices can help drive down the CI score.<sup>5</sup> With relatively minimal costs, a variety of these practices can make significant reductions in CI, and the use of cover crops can account for as much as a 45% potential reduction.

Decarbonization measures		CI reduction potential (% of ethanol CI)	Cost	Feasibility	
				Feasibility for widespread adoption	Readiness for adoption
Corn yield improvement		0.7%	< zero	High	Near term
Adopt climate-smart agricultural practices	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 <sub>2</sub>	Medium	Near term
Use low-carbon fertilizers	Blue ammonia-based fertilizers	10%	\$29 (with 45Q) to \$100/tCO <sub>2</sub>	Medium	Mid term
	Green ammonia-based fertilizers	10%	\$0 (with 45V) to \$526/tCO <sub>2</sub>	Medium	Mid term
Use renewable diesel in farm machinery		< 4%	\$127 to \$139/tCO <sub>2</sub>	Medium	Near term
Use renewable diesel for corn transport		< 2%	\$127 to \$139/tCO <sub>2</sub>	Medium	Near term

### **Revising Land Use Change Penalty Based on Current Science**

Currently, Washington’s greenhouse gases, regulated emissions, and energy use in technologies (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 gCO<sub>2</sub>e/MJ.<sup>6</sup> The ILUC value 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, it is important to note that Oregon assigns an ILUC penalty of 7.6g/MJ. We request Ecology consider aligning WA-GREET’s ILUC value for cornstarch bioethanol with Oregon’s value. 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.

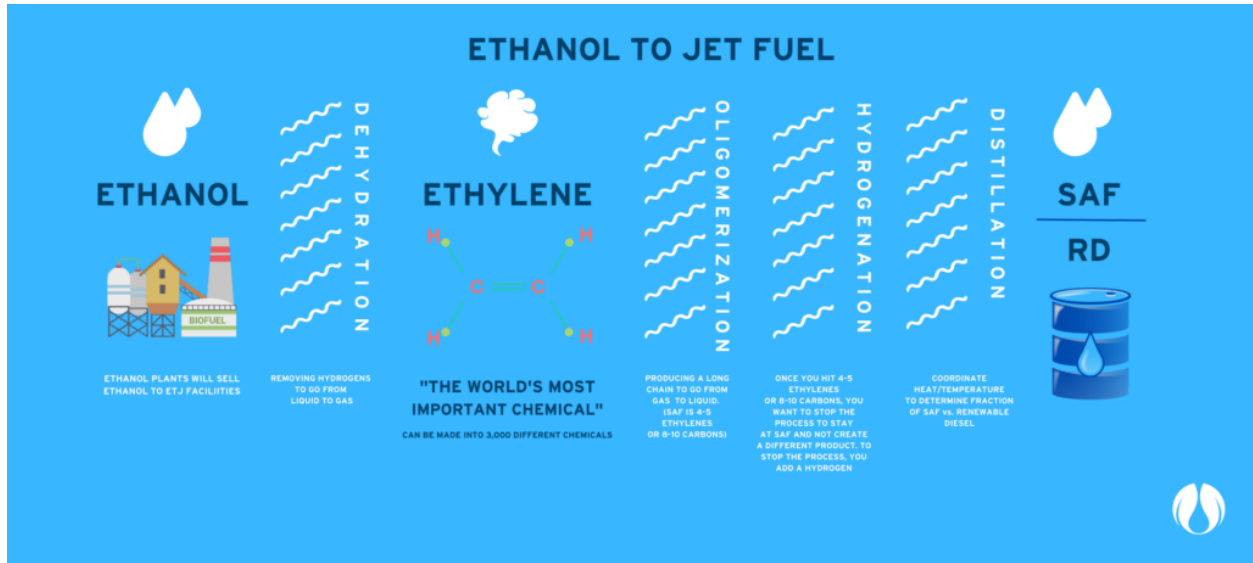
### **Bioethanol’s Role in SAF Production**

The opportunity for biofuels to contribute to the aforementioned carbon emissions reductions is evident in the aviation industry and the use of sustainable aviation fuel (SAF). With current technologies, farm-based feedstocks of bioethanol and corn oil are the primary source of clean, renewable energy that can be used to produce volumes large enough to meet demand. While Ecology’s proposed changes and the request for comments on those changes does not include modifications to the state’s carbon lifecycle analysis or the valuation of land use change penalties,

<sup>5</sup> [https://efifoundation.org/wp-content/uploads/sites/3/2024/09/ethanol-roadmap\\_executive-summary.pdf](https://efifoundation.org/wp-content/uploads/sites/3/2024/09/ethanol-roadmap_executive-summary.pdf)

<sup>6</sup> <https://iopscience.iop.org/article/10.1088/1748-9326/abde08/pdf>

Growth Energy believes these issues are critical to the success of SAF. Alcohol-to-Jet SAF, when the policy and carbon intensity modeling is done correctly, can be a crucial component to Washington's ambitious goal of aviation decarbonization.



More broadly, we look forward to continuing to work with you as the proposed changes to the CFS are considered further, and to ensure the role of biofuels in making Washington's fuel mix more sustainable and help the state achieve its ambitions climate goals through the use of bioethanol.

Thank you in advance for your consideration.

Sincerely,

Chris Bliley  
Senior Vice President of Regulatory Affairs  
Growth Energy