Growth Energy™
Expanding America's Bioeconomy

March 23, 2026

OAL Reference Attorney
Office of Administrative Law
300 Capitol Mall, Suite 1250
Sacramento, California 95814

RE: OAL File Number 2026-0316-04 - Readoption of Emergency Amendment and Adoption of Vehicle Emissions Regulations

Via electronic submittal – staff@oal.ca.gov

To Whom It May Concern:

Thank you for the opportunity to comment on the proposed readoption of emergency amendment and adoption of vehicle emissions regulations. Growth Energy is the leading voice of America's biofuel industry, representing 97 ethanol plants producing more than 9.5 billion gallons of bioethanol annually, and 128 associate members related to the production process, and tens of thousands of biofuel supporters around the country. Our members operate and support biomanufacturing facilities at the heart of America's bioeconomy, delivering a new generation of plant-based energy and climate solutions. Our industry is working to bring better and more affordable fuel choices for consumers, improve air quality, and protect the environment for future generations.

As the state of California's lawsuit challenging the federal government's revocation of waivers previously granted to California to preempt the Clean Air Act and authorize enforcement of the Advanced Clean Cars II regulation, we write to strongly urge the Office of Administrative Law and the California Air Resources Board (CARB) consider in this, and any further emergency amendments, the important role bioethanol has played and can continue to play in California's efforts to decarbonize the transportation sector.

Recognizing The Role Bioethanol Plays in Decarbonization

As we have written in numerous comments in response to a number of CARB rulemakings and programs, bioethanol has led all biofuels to have been among the largest contributors to the success of California's emissions reductions through the Low Carbon Fuel Standard (LCFS) according to the Transportation Energy Institute.[1]

Data from Environmental Health and Engineering shows that bioethanol reduces greenhouse gas emissions by an average of 46 percent compared to gasoline and can provide even further GHG reductions with the utilization of readily available technologies.[2] The board has previously recognized the contributions bioethanol can make to carbon reductions. In 2011, CARB reported the average carbon

[1] https://www.transportationenergy.org/wp-content/uploads/2023/07/Decarbonizing-Combustion-Vehicles_FINAL.pdf
[2] https://iopscience.iop.org/article/10.1088/1748-9326/abde08/pdf

intensity (CI) for ethanol at 88 g/MJ. Through the end of 2022, the average recorded CI for bioethanol has decreased to 59.21 g/MJ, a 33 percent reduction in CI.[3]

Decarbonization of bioethanol can be maximized when all appropriate measures and techniques are properly recognized when calculating carbon emissions. This includes recognition of on-farm climate-smart agriculture practices that prevent release of soil carbon and tools used by biorefineries to reduce CI for biofuels. Research conducted by the Energy Futures Initiative Foundation (EFIF) provides insight on how on-farm practices can help drive down the CI score.[4] With relatively minimal costs, a variety of these practices can make significant CI reductions. As shown in the table below, the use of cover crops alone can account for as much as a 45% reduction.

		CI Reduction Potential	Cost	Feasibility: Widespread Adoption	Feasibility: Readiness for Adoption
Corn Yield Improvement		.7%	< zero	High	Near Term
Climate Smart Ag 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 $64/tCO$_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 45Z) 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

Along with the number of options listed above to decarbonize the feedstocks used to produce bioethanol, EFIF studied the width and breadth of GHG reduction options bioethanol producers have at the plant. As the table below shows, a wide range of on-plant reductions are available, many of which are ready for adoption in the near term.

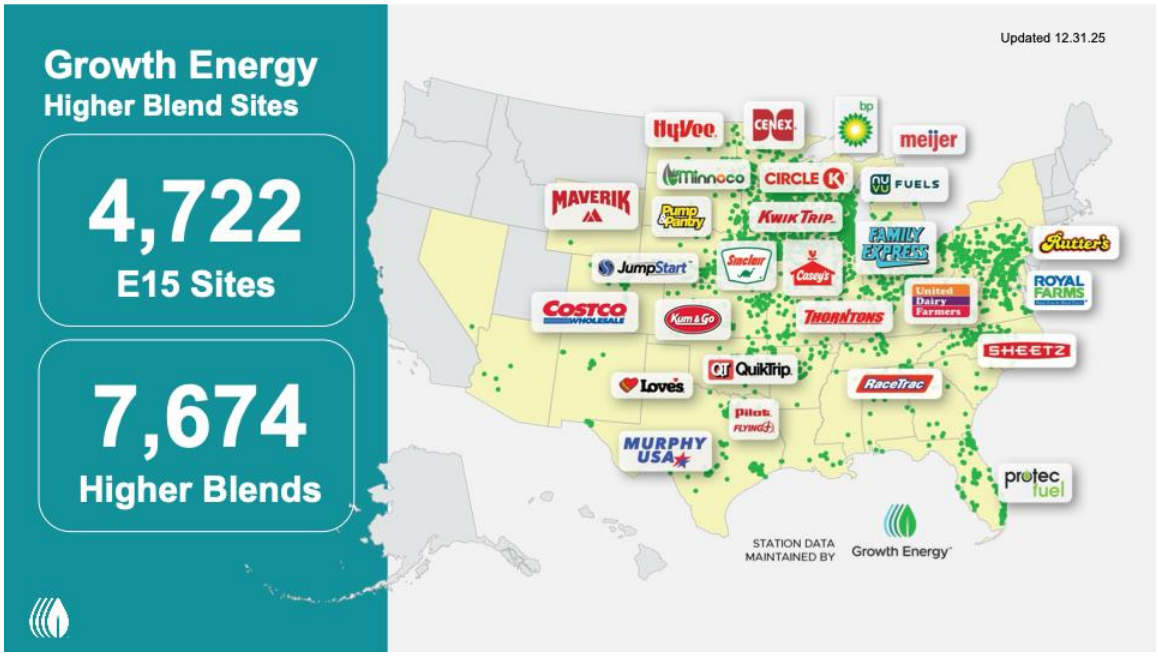
		CI Reduction Potential	Cost	Feasibility: Widespread Adoption	Feasibility: Readiness for Adoption
Ethanol Yield Improvement		6%	< zero	High	Near Term
Fermentation CCUS		57%	-$48 (with 45Q) to $37/ton CO$_2$	High	Near Term
Carbon-Free Electricity Use		6%	-$49 (PPAs) to $180/ton CO$_2$ (RECs)	High	Near Term
Decarbonize Thermal Energy Use	Fuel Switching to Hydrogen	37%	$124 (with 45V) to $412/ton CO$_2$	Medium	Long Term
	Fuel Switching to RNG	32-160%	$76 to $220/tCO$_2$	Medium	Mid Term
	Biomass CHP	37%	< zero	Medium	Mid Term
	Hydrogen CHP	37%	$71 (with 45V) to $376/tCO$_2$	Medium	Long Term
	RNG CHP	32-160%	$57 to 201/tCO$_2$	Medium	Mid Term
	CCUS - Thermal Energy Generation	37%	$21 (with 45Q) to 106/tCO$_2$	Medium	Mid Term
Renewable Diesel Use in Ethanol Delivery		<2%	$127 to 139/tCO$_2$	Medium	Near Term

[3] https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities
[4] https://efifoundation.org/wp-content/uploads/sites/3/2024/09/Ethanol_Roadmap.pdf

Carbon capture utilization and storage (CCUS) technology is an important GHG reduction tool for bioethanol producers. According to EFIF's research, it can reduce the CI of bioethanol by as much as 57% on its own. In fact, EFIF estimates that the combination of CCUS, the use of low carbon process heat at the bioethanol plant, and the inclusion of cover crops on the farm can reduce the CI for cornstarch bioethanol by as much as 140g CO2e/MJ.

Finalizing E15 Rulemaking

With the passage of the 2025-2026 state budget, funding was included to complete the analysis and rulemaking for the approval of E15, a fuel blend consisting of 10.5 to 15 percent bioethanol. It is a welcome and much-needed development in providing California drivers access to a more affordable, lower carbon fuel. We look forward to continuing to work with CARB to complete this process so that California drivers have access to the same more affordable fuel choices available to drivers at more than 4,700 retail locations in 34 states.



Consumers across the country have embraced E15's reputation as a more environmentally beneficial, more affordable fuel. This rapid expansion of retailers offering E15 began in 2012, shortly after the EPA approved it, at which time there were *zero* retailers offering it. Since then, drivers in America have relied on E15 to drive 205 billion miles. Fueling up with E15 would also save consumers 10-30 cents per gallon on average. In some locations in the United States, consumers saw more than $1 per gallon in savings.[5]

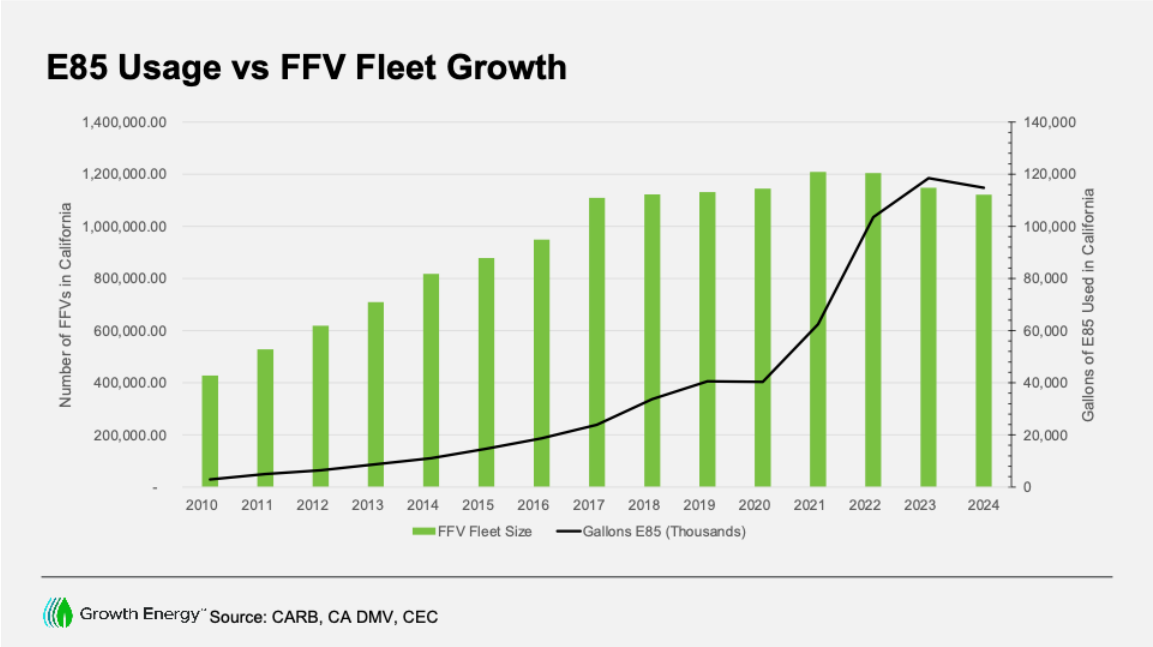
We encourage CARB to the E15 rulemaking, thus allowing California drivers access to E15 at a time of increased energy prices, which could persist if the current instability in the Middle East and Iran's actions to disrupt the global energy market continues.

[5] https://growthenergy.org/policy-priority/e15-and-higher-ethanol-blends/

E85, Flex-Fuel Vehicles, and CCUS

Additionally, California's existing approval of E85 has resulted in significant growth in its use in flex-fuel vehicles (FFVs)More than 118 million gallons of E85 were sold at 375 locations across the state in 2023 alone[6]. Additionally, the current size of California's FFV fleet stands at more than 1.1 million vehicles.[7] Despite the size of California's FFV fleet flattening, E85 usage continues to grow. There is a clear appetite and market for this environmentally beneficial fuel. The use of E85 will promote even greater reductions in GHG emissions and reductions of air toxics.

We continue to encourage CARB to implement policies that strongly incentivize and, as necessary, require the production and use of flex-fuel vehicles, as well as continued investment in infrastructure for expanded access to E85 in the state. In doing so, the Board will be achieving multiple goals: improving air quality and GHG emissions, reducing the state's dependence on fossil fuels, and providing consumers with an affordable choice to power their vehicles.



We encourage CARB to consider the value of fuel blends such as E85 in reducing light-duty vehicle emissions and how it can complement the state's GHG emissions reductions policies.

More broadly, we look forward to working as you work through the regulatory process to ensure the role of biofuels in making California's fuel mix more sustainable and help the state achieve its climate goals through the expanded use of bioethanol.

Thank you in advance for your consideration.

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[6] https://ww2.arb.ca.gov/sites/default/files/2025-04/Annual_E85_Volumes_Chart_4-11-25.pdf

[7] https://data.ca.gov/dataset/vehicle-fuel-type-count-by-zip-code

Sincerely,

Chris Bliley
Senior Vice President of Regulatory Affairs
Growth Energy