



What is the Republicans' plan for the Clean Fuels Production Tax Credit?

The GOP in Congress has passed their mega bill that finances tax cuts for corporations and the super-rich with deep cuts to climate protections and the social safety net. This drastically unpopular agenda will kick millions off their health insurance and stick consumers with higher electricity bills. Hidden within the numerous harms of this bill are some seemingly esoteric changes to a niche biofuel tax credit that will supercharge some of the biggest biofuel polluters.

The 45Z Clean Fuels Production Credit was created by the Inflation Reduction Act in 2022 to incentivize the production of biofuels in the transportation sector. 45Z is a shift away from its predecessor, which expired in 2024 and offered a flat subsidy to blenders per gallon of biodiesel. 45Z is instead a production incentive for all biofuels that increases based on emissions reductions. This sliding scale offers a value of \$1 per gallon for ground transportation and \$1.75 for aviation if a biofuel is produced with zero emissions. Crucially, the credit requires that indirect land-used change emissions are counted while calculating the value of the credit. This is an important consideration for biofuels, as subsidies driving up biofuel demand have caused the conversion of carbon rich land into crop land and is a driver of deforestation globally. The subsidy begins this year and is scheduled to expire in 2027.

The GOP bill creates a massive expansion to the so-called 45Z Clean Fuels Production credit by increasing the tax credit's lifespan and significantly loosening its eligibility requirements. According to the latest estimates, these changes are expected to cost taxpayers an additional [\\$25.7 billion](#). Even this high price tag is a likely underestimation, as there were last minute changes to the GOP plan that makes the cost appear lower while keeping all of the harms. In reality, this newly supercharged 45Z will cost closer to the [\\$45 billion](#) of an earlier version of the bill that extended the credit through 2031. This is because it is unlikely that Congress will allow the tax credit to expire in 2029. However, every estimate of these changes represents a massive increase in the baseline cost of the tax credit, which was estimated in 2024 to cost only [\\$8.4 billion](#).

	ORIGINAL 45Z	GOP VERSION
Estimated additional cost of subsidy	\$8 billion	\$25.7 billion
Length of the credit extension	Expires 2027	Extended through 2029

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Treatment of Indirect Land Use Change (ILUC) emissions	Must be included in lifecycle emissions	Eliminated
Status of Imported Feedstocks	Temporarily excludes imported Used Cooking Oil	Bans feedstocks outside of North America.
Treatment of negative emissions	Does not explicitly address	Allows negative emissions only for factory farm gas.
Treatment of factory farm biogas	Sets national average for factory farm methane	Requires manure-specific designations
Treatment of SAF booster	Booster for SAF	Booster for SAF removed.

Friends of the Earth reviewed the impact of the proposed changes on existing emissions models as well as comments from the industry itself. The results reveal that the GOP bill will be a windfall for the biofuels most likely to worsen climate change:

- Corn starch-based ethanol is newly able to qualify for the credit based on the elimination of the land use requirement. The GOP bill will allow refiners of corn ethanol to claim a subsidy worth \$0.10 a gallon without implementing any changes to their production practices. The benefits could be further increased due to the USDA's Climate Smart Agriculture (CSA) initiative, a third-party verification system that allows dubiously verified emissions reductions to count towards the tax credit.
- The changes to 45Z will further displace the infamous 45Q credit as the biggest subsidy driving carbon infrastructure like the Summit pipeline, which will transport captured CO₂ from ethanol operations. The GOP's new 45Z could be roughly three times as profitable for ethanol-CCS operations compared to the already generous 45Q.
- The subsidy for soybean oil-based diesel will nearly double, increasing from \$0.33 per gallon to as much as \$0.62.
- Eliminating land use requirements will collapse the difference in incentives between soy and its main competitor, used cooking oil (UCO). Big Oil refiners in the biofuel business seem poised to respond by prioritizing dirtier soy over cleaner UCO.
- The GOP bill includes language heavily supportive of biogas captured from factory farms and used as vehicle fuel. By encouraging "negative emission rates" these changes could supercharge the value of the credit for factory farm biogas. One publicly traded bioenergy company estimates the subsidy could rise as high as \$9.00 per gallon equivalent.



Who are the winners from Republicans' secret giveaway?

It should come as no surprise that the industries poised to gain the most from this secret giveaway are some of the worst polluters. First generation biofuels like ethanol and soy attempt to justify their subsidization by claiming to be cleaner alternatives to fossil fuels. But, in reality, these fuels can be even worse for the climate than fossil fuels. Globally, demand for biofuels is a driver of deforestation. Domestically, biofuel production and combustion have severe impacts on air and water quality.

Ethanol and soy are some of the most prevalent biofuels in the U.S., due in large part to incentives and mandates such as the Renewable Fuel Standard (RFS). But blending ethanol into the gasoline supply may have increased transportation emissions above what would have been emitted by just fossil fuels. A recent literature review from the [World Resources Institute](#) highlights the fact that these so-called first-generation biofuels likely increase net global emissions, largely due to land use impacts and the climate cost of agricultural inputs.

Factory farm methane biogas operates from a similar playbook. This methane gas is highly subsidized by state and federal 'clean' fuel incentives. These subsidies create a market distortion that encourages livestock owners to concentrate and increase methane gas produced for sale (along with co-pollutants from factory farms). Due to the high subsidization of factory farm biogas, there is essentially a penalty against regenerative practices that could actually decrease the overall climate impact of animal agriculture. The lack of any meaningful federal regulation of factory farm emissions has compounded this issue, as there is little to no accountability for the industry making bold claims of zero or net negative emissions from factory farm biogas. In reality, the perverse incentive to increase methane biogas emissions for capture and sale could actually increase the climate impact of factory farms.

Subsidizing Corn — again

The corn ethanol industry has been attempting to gain access to a new subsidy for over a decade, after Congress killed the [Volumetric Ethanol Excise Tax](#) in 2011. The removal of indirect land-use change emissions could tip the scales and restore direct tax subsidies to corn ethanol for the first time in 14 years.

According to the Argonne National Lab's GREET model, the default sample value for corn ethanol is 51 kilograms of CO₂ per mmBTU. This would make corn ethanol just barely ineligible for the lowest value of 45Z. However, now that the indirect land use effects are removed, the default would drop to a carbon intensity score of 45 kgCO₂/mmBTU. This results in a subsidy of \$0.10 per gallon for business-as-usual production.

Although this might seem like a tiny giveaway, it amounts to a major windfall for the thin margins of the ethanol industry. Ethanol profitability varies widely based on variable crop prices, but in 2024, producers only claimed an average net profit of [8 cents per gallon](#). For ethanol producers who can newly qualify for the 45Z credit based on Republicans' changes, even a few extra cents per gallon is a major boon.

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Purchasing soil carbon credits and other offsetting gimmicks could drive the subsidy even higher without changing basic industry practices. The USDA's Climate Smart Agriculture program offers ethanol and other biofuels the ability to claim dubiously verified emissions reductions that would further boost the 45Z credit value. If finalized, these offsets could grant the biofuel industry [over \\$5 billion](#) from 45Z credits every year without making any changes to their current practices.

Subsidizing carbon capture — even more

The ethanol industry has become increasingly interested in carbon capture and sequestration (CCS) as an opportunity to use climate incentives to prop-up their industry. Compared to applications in the power sector and heavy manufacturing, the deployment of CCS at ethanol refineries is among the cheapest and least technically complicated applications of the technology, costing between [\\$25-35 per ton](#) compared to [\\$50-100 per ton](#) in the power sector.

The most famous (or notorious) incentive for CCS is the 45Q tax credit. Although the subsidy has existed in some form since 2008, it was supercharged in 2022 by the Inflation Reduction Act and the GOP bill took this a step further by equalizing the credit value for capturing CO2 for underground storage and capturing CO2 for enhanced oil recovery (EOR). It currently offers \$85 per ton of CO2. While this is likely a welcome development for the ethanol industry and its grand plans for CO2 pipelines across the Midwest, it may not even be their subsidy of choice. Consider Green Plains.

Green Plains is a major ethanol producer that has begun to invest in CCS as a subsidy chasing tactic. By the end of this year, Green Plains will have deployed CCS in three of its Nebraska ethanol refineries, which together produce 287 million gallons of ethanol annually. In a [press release](#) from January, the company crowed that deploying CCS at one of these refineries would reduce the carbon intensity score from 51 to 19 kgCO2/mmBTU. This is the difference between being completely ineligible for 45Z and earning \$0.62 per gallon. Now the GOP elimination of land use effects only make this giveaway even more generous, reducing on paper the carbon intensity score to only 13 kgCO2/mmBTU for a subsidy value of \$0.74 per gallon. In other words, Congress has increased the value of the subsidy for ethanol by 20 percent with the stroke of a pen.

This supercharged subsidy far outpaces the value of 45Q. For the Green Plains CCS investments, if they capture 800,000 tons of CO2 based on annual ethanol production of 287 million gallons, the 45Q tax credit pencils out to only \$0.24 a gallon. In other words, the proposed expansion of 45Z is approximately triple the subsidy for 45Q.

Subsidizing soy — not quite as much

The soy diesel industry has mixed feelings about 45Z. The core of their complaint is that the 45Z production credit is less lucrative for them than older expired blenders credits, which gave a flat subsidy not tied to climate benefits. 45Z links value to carbon reductions, which puts dirty fuel like soy at a disadvantage to cleaner alternatives. This has been a problem for soy, which is already struggling to compete with alternative biodiesel feedstock, used cooking oil (UCO).

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Although the UCO market is plagued with prevalent fraud issues, genuine UCO is generally a cheaper and cleaner biodiesel feedstock than soy. The sliding scale of 45Z that linked value with emissions reductions threatened to further boost UCO over dirtier soy.

However, the Republicans' changes to 45Z will obscure the emissions difference between UCO and soy in order to offer both feedstocks a similar subsidy. The [Illinois Soybean Association](#) estimates that soy biodiesel would receive \$0.33 per gallon before the GOP changes to the credit. But by ignoring indirect land use change emissions, the credit could gain them an additional \$0.29 cents per gallon.

While gaining up to \$0.62 per gallon is still shy of what they used to earn under the blenders credit, it grants their key demand, that soy biodiesel is subsidized at the same level as much cleaner used cooking oil. This boost, combined with the permanent disqualification of imported UCO outside of North America, is an olive branch to the soy industry that will be paid for in cuts to social benefits.

Some of the biggest biofuel producers in the country are none other than leading Big Oil companies. It should come as no surprise that they are working to extract maximum benefits from biofuel subsidies while consuming the dirtiest feedstocks.

Consider refining giant Phillips 66. The company informed investors in [late 2024](#) that in anticipation of the new 45Z tax credit, it intended to burn through its inventory of higher carbon feedstocks before the end of the calendar year. This way the company could extract more money from lower carbon feedstocks after the new tax credit began in 2025. This suggests that if refiners can fully monetize the tax credit with dirtier feedstocks, then they are less likely to bother with cleaner feedstocks.

Marathon Petroleum Products, the largest refiner in the US, told investors a similar story. The company admitted in [May 2025](#) that issues with 'feedstock optimization' stopped them from effectively monetizing the 45Z tax credit during the first quarter of the year. Finding enough low carbon feedstocks turned out to be a challenge. This is where the new GOP bill could offer a helping hand. Eliminating the land use requirement and making dirtier fuels cleaner—at least on paper—could render supply problems moot. The end result? The fuels will get dirtier and tax credit payments will get higher.

Subsidizing factory farm methane — the sky's the limit

Factory farm methane benefits substantially from state and federal subsidies. Because methane biogas can be upgraded and pumped into fossil gas pipelines, the fuel is often implicated in convoluted offsetting schemes. Polluters hundreds of miles away can claim the "environmental attributes" of the captured methane. These gimmicks are often supercharged by the dubious idea that biogas is a source of negative emissions. This is based on the counterfactual assumption that burning biogas and emitting CO₂ is better than allowing super-polluting methane to escape. This questionable logic takes for granted the pollution and harm of factory farming and

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incentivizes producers to exacerbate it even further—potentially increasing actual emissions in the process.

The Clean Fuel Production credit under the Biden Administration was generous to factory farm biogas. There were, however, guardrails included to prevent runaway benefits. Because the credit value is calculated by multiplying an emissions factor by the eligible credit value, plugging a negative carbon intensity (CI) into the formula results in values that far exceed the supposed maximum value of the credit. To prevent mind-bogglingly high tax credit payments for factory farms, the Treasury Department set a default emissions rate by averaging together landfills, dairies and other biogas producers from across the economy. The result was a still generous emissions rate of -51g CO₂/MJ allows, resulting in a subsidy of around \$2 per gallon equivalent for road transportation.

Unfortunately, this subsidy is still not generous enough for factory farms. The GOP bill will direct the Treasury Department to reopen the -51 g CO₂/MJ national average assigned to all factory farm biogas and assign separate values based on manure type. It also blocks negative emission rates except for manure-based fuels. This would give industry the opportunity to continue pushing for a system similar to the California Low Carbon Fuel Standard (CA LCFS), which assigns recklessly negative CIs to factory farm biogas. One of the leading purveyors of biogas recently described the potential benefits of this scheme to investors.

Aemetis Inc, a California-based biofuel and biogas producer, said in May that under the current implementation of 45Z, it receives a subsidy of \$14 per mmBTU, or around \$2 per gallon equivalent. Aemetis further boasted that they are lobbying the Administration to approve a provisional emissions rate (PER) that would increase the value of the credit five times, up to \$70/mmBTU, or around \$9.00 per gallon equivalent.

This is a reckless level of subsidization. So called “renewable natural gas” from factory farm biogas costs between [\\$18.4- \\$32.6/mmBtu](#) to produce. In theory, the Trump Administration already has the authority to distort modelling assumptions for factory farm gas. However, GOP bill creates a roadmap for the Treasury Department to greenlight massive negative emission giveaways. Days before the Senate version of bill was first released, Aemetis [bragged](#) that its CEO had met with key lawmakers, members of the Trump White House, and representatives from the Departments of Treasury and Agriculture. These visits included a presentation on the importance of 45Z and factory farm biogas in advancing the Trump Administration’s energy agenda.

Who pays for this Republican giveaway?

One of the most egregious parts of this giveaway is that the government will be paying polluters for biofuels that they are already mandated or otherwise paid to produce. The Renewable Fuel Standard (RFS) is a program that mandates certain levels of biofuels are blended into our fuel supply. Originally intended to spur the development of cleaner alternatives to petroleum, this program has [instead subsidized dirty first generation fuels like soy and ethanol](#) - the same industries that stand to win big from the new GOP giveaway. Factory farm biogas has likewise

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benefited from special treatment under the RFS, and they can triple count their factory farm biogas for subsidization under the RFS, CA LCFS, and super-charged 45Z.

The cost of this giveaway extends beyond run-of-the-mill corporate cronyism—it will be paid for in cuts to our social safety net. But Americans will be doubly paying for these cuts through inflated food prices and higher pollution. Republicans supercharging this biofuel market distortion will also be felt globally. Edible oil markets, long dominated by the palm industry, are responding to price spikes driven in part by biofuels. This is inciting a new wave of land grabbing and deforestation while driving food prices even higher across the global South. These price spikes and carbon emissions from energy crops could be mitigated by reducing our biofuel consumption. But instead, Republicans are attempting to double down on biofuel subsidies that only benefit polluters.