TAXPAYERS for COMMON SENSE

FACT SHEET

Section 45Z: Clean Fuel Production Credit

Section 45Z Clean Fuel Production Credit is a tax credit established by the Inflation Reduction Act. 45Z is intended to subsidize production of transportation fuel with low or no greenhouse gas (GHG) emissions.

Legislative History

Section 45Z, Clean Fuel Production Credit (CFPC) was included in the IRA to replace several existing, or "legacy" tax credits for production of various types of fuels. These include 40, 40A, 40B, Section 6426, and Section 6427 –tax credits for the production of biodiesel, renewable diesel, second-generation biofuel, sustainable aviation fuel, alternative fuels and fuels mixtures.

Eligibility

Eligible fuels must be suitable for use in a highway vehicle or aircraft, produced in calendar years 2025 to 2027, and be sold to an unrelated party. Eligible fuels must have an emissions rate that is not greater than 50 grams of carbon dioxide equivalent per million British thermal units (mmBTU) and not be derived from coprocessing specific materials and feedstocks. Eligible producers must register with the IRS and be located within the United States or its territories. Sustainable aviation fuel needs to meet additional requirements like not being derived from palm fatty acid distillates or petroleum and meeting the requirements of either ASTM International Standard D7566 or Fischer Tropsch provisions of ASTM International Standard D1655, Annex A1.

Credit Amount

The CFPC is designed as a sliding scale tax credit with a maximum value of $0.20 per gallon of nonaviation fuel and $0.35 per gallon of aviation fuel. These values are increased by fivefold if producers meet prevailing wage and registered apprenticeship requirements.

The actual credit amount is determined by multiplying the max credit value with the eligible fuel's emission factor. Therefore, the more GHG intensive a fuel is, the less a producer is qualified to claim.

Emission Factor = (50kg/mmBTU - Eligible Fuel's Emissions Rate) / 50kg/mmBTU
Credit Amount = Emission Factor * Max Credit Amount

For non-aviation fuels, emissions rates should be calculated based on the Greenhouse gases, Regulated Emissions, and Energy use in Transportation model (GREET) developed by Argonne National Laboratory, or a successor model. For aviation fuels, the emissions rate should be determined by the most recent Carbon Offsetting and Reduction Scheme for International Aviation which has been adopted by the

International Civil Aviation Organization, or any similar methodology that satisfies the criteria for determining lifecycle GHG under the Clean Air Act.

	Assumed Kg of CO2e per mmBTU	Emissions Factor	Does not Meet Prevailing Wage & Apprenticeship Requirements	Does Meet Prevailing Wage & Apprenticeship Requirements
Nonaviation Fuels	0kg/mmBTU	1.0	$0.2	$1
	10kg/mmBTU	0.8	$0.16	$0.8
	25kg/mmBTU	0.5	$0.1	$0.5
	40kg/mmBTU	0.2	$0.04	$0.2
	50kg/mmBTU	0	$0	$0
Aviation Fuels	0kg/mmBTU	1.0	$0.35	$1.75
	10kg/mmBTU	0.8	$0.28	$1.4
	25kg/mmBTU	0.5	$0.18	$0.88
	40kg/mmBTU	0.2	$0.07	$0.35
	50kg/mmBTU	0	$0	$0

Source: Congressional Research Service (CRS), 45Z Clean Fuel Production Credit.

Taxpayer Costs

The Joint Committee on Taxation estimates that the new 45Z credit will cost taxpayers $2.9 billion from FY2025 to FY2031.

Taxpayer Concerns

The implementation of the CFPC should ensure that the credit does not subsidize first-generation, food-based biofuels such as corn ethanol, which would undermine the public policy goal of reducing lifecycle greenhouse gas (GHG) emissions. In 2011, Congress eliminated the Volumetric Ethanol Excise Tax Credit (VEETC) for corn ethanol. If the CFPC is implemented in a way that subsidizes corn ethanol, not only will Congressional intent fail to be met, but GHG emissions may increase – instead of decrease. Numerous studies question the GHG reduction potential of food-based biofuels such as soy biodiesel and corn ethanol, with independent analysts finding that they may actually increase climate costs.

Lifecycle GHG calculation methods must ensure that indirect GHG emissions such as significant emissions from land use changes are included in emissions rate calculations. Additionally, the full lifecycle GHG emissions of fuels produced in facilities utilizing biomass sources for heat and/or power should be properly accounted for, and such facilities – and related fuels – should not be considered to be carbon neutral. Facilities burning wood for energy, for instance, cannot be assumed to be carbon neutral or zero-emission, and certain fuels and facilities can be associated with much higher GHG emissions, as compared to petroleum-based fuels. Various factors like feedstocks, alternate fate, time horizon and age of the trees used for fuel, production methods, and forest management regimes impact the emissions intensiveness of fuels. Implementation of CFPC must include the consideration of emissions from direct and indirect land use as well as other factors so that GHG emissions are not

underestimated, which is critical to ensure that CFPC does not continue to subsidize counterproductive climate-related policies at the expense of investment in more effective climate solutions.