RENEWABLE FUELS ASSOCIATION

April 6, 2026

The Honorable Scott Bessent
Secretary
U.S. Department of the Treasury
Internal Revenue Service
Attention: Docket ID No. IRS-2026-0133 (REG-121244-23)
VIA REGULATIONS.GOV

Re: Comments on Proposed Rule Implementing Section 45Z Clean Fuel Production Credit (91 Federal Register 5160; February 4, 2026)

Dear Secretary Bessent,

The Renewable Fuels Association (RFA) is pleased to submit the following comments in response to the U.S. Department of the Treasury Internal Revenue Service's proposed rule implementing the Section 45Z Clean Fuel Production Credit (91 Fed. Reg. 5160; February 4, 2026).

RFA is the leading trade association for America's ethanol industry. Our mission is to drive growth in American-made renewable fuels and bioproducts for a better future. Founded in 1981, RFA serves as the premier organization for industry leaders and supporters. With over 300 members, we work every day to help America become cleaner, safer, and more economically vibrant.

If effectively implemented, the 45Z tax credit has the potential to stimulate domestic energy production, strengthen U.S. energy security, bolster rural economies, and support increased investment and innovation in the renewable fuels and agriculture sectors. The technology-neutral structure of 45Z is a crucial feature, allowing clean fuel producers to pursue the most economically efficient and practical pathways for reducing emissions and boosting domestic energy production.

However, for the 45Z program to truly drive innovation and value creation in the marketplace, Treasury and IRS must move expeditiously to finalize clear, stable, and practical implementing regulations. Clean fuel producers require clarity, certainty, and timeliness in the final 45Z regulatory framework to support near-term operational decisions

and longer-term capital investments. Further delays in finalizing the regulations will limit participation and undermine the intended benefits of the program.

We believe the final 45Z regulations must recognize the realities of today's biorefining and agriculture sectors and the complexities of our nation's transportation fuels marketplace. At the same time, final regulations must embrace an intuitive and manageable approach to registration, reporting, recordkeeping, and emissions rate modeling that creates a dependable operating environment and empowers investment.

Treasury has made meaningful progress in this proposal, particularly as it related to resolving previous confusion around the meaning of "qualified sale" and moving toward the statutorily-directed exclusion of indirect land use change (ILUC) emissions for tax year 2026 and beyond. These steps provide an important foundation for the final rule. However, as currently drafted, certain aspects of the proposal introduce inconsistencies and implementation challenges that may limit participation, create unintended market impacts, and reduce the near-term effectiveness of the program.

I. RFA strongly supports Treasury's proposed integration of important changes to the 45Z credit program, as directed by the *One Big Beautiful Bill Act*

With passage of the *One Big Beautiful Bill Act* (OBBBA)[1], Congress directed Treasury to undertake several important changes to the 45Z credit program. RFA supports Treasury's proposed approach to integrating crucial OBBBA-directed changes into the 45Z credit regulations and encourages Treasury to expeditiously finalize these modifications.

a. Removal of indirect land use change (ILUC) emissions from emissions rate determinations

OBBBA requires that, beginning on January 1, 2026, clean fuel emissions rate determinations "…shall be adjusted as necessary to exclude any emissions attributed to indirect land use change."[2]

In the proposed rule, Treasury confirms that, "For transportation fuel produced after December 31, 2025, the emissions rate of a fuel does not include any emissions attributed to indirect land use change."[3] RFA strongly supports the statutory exclusion of ILUC emissions from emissions rate determinations, based on the fact that empirical data provide no evidence that U.S. ethanol production has caused or contributed to such land use changes domestically or internationally.

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[1] One Big Beautiful Bill Act, P.L. 119-21, 139 Stat. 72. (July 4, 2025)
[2] *Id*., 139 Stat. 277.
[3] 91 Fed. Reg. 5196. (February 4, 2026)

We encourage Treasury and the Department of Energy (DOE) to move expeditiously to publish an updated version of the 45ZCF-GREET model that fully implements the removal of ILUC emissions from emissions rate determinations. Currently, it is not clear to taxpayers how Treasury and DOE will revise the 45ZCF-GREET model to reflect this change. The May 2025 version of 45ZCF-GREET includes both ILUC emissions and other "indirect emissions" impacts that are driven by the modeled changes in land use. Given the statute's direction to exclude "any" emissions attributed to indirect land use change, it is unclear how and whether Treasury and DOE will remove ILUC emissions only, or *all* indirect emissions associated with modeled land use changes. Removing all indirect emissions rather than removing only ILUC emissions would result in significantly different impacts for certain clean fuel pathways, including corn and sorghum-derived ethanol. Taxpayers need clarity as soon as possible on the specific approach that Treasury and DOE will take.

b. Prohibition of clean fuels derived from certain imported feedstocks from 45Z eligibility

OBBBA requires that, beginning on January 1, 2026, eligibility for the 45Z credit is limited to "…fuel[s]…exclusively derived from a feedstock which was produced or grown in the United States, Mexico, or Canada."[4]

RFA strongly supports OBBBA's limitation of 45Z eligibility to clean fuels produced only from feedstocks produced or grown in the United States, Mexico, and Canada. We appreciate that the proposed §1.45Z–4(f)(1) "…would provide that transportation fuel that is produced after December 31, 2025, must be exclusively derived from a feedstock that was produced or grown in the United States, Mexico, or Canada."[5]

However, as detailed more fully later in these comments, RFA believes it is crucially important that foreign feedstock restrictions do not result in undue tracking, certification, and reporting requirements for feedstocks and fuel pathways—like ethanol made from corn and sorghum—that do not rely on imports.

c. Clarified definition of "qualified sale"

In the OBBBA, Congress provided explicit discretion to the Treasury Department to "…prescribe additional related person rules…, including rules for related persons with respect to which the taxpayer has reason to believe will sell fuel to an unrelated person in a manner described in subsection (a)(4)."[6] The prescription of "related persons" directly effects what transactions constitute a qualifying sale under the 45Z credit program.

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[4] One Big Beautiful Bill Act, P.L. 119-21, 139 Stat. 276. (July 4, 2025)
[5] 91 Fed. Reg. 5175. (February 4, 2026)
[6] One Big Beautiful Bill Act, P.L. 119-21, 139 Stat. 277. (July 4, 2025)

RFA believes Treasury's approach to further defining "related person" and the proposed definition of "qualified sale" at §1.45Z-1(b)(29)(i)[7] appropriately clarify that a clean fuel sold by the producer to third parties, such as intermediary fuel marketers and brokers, retains eligibility for the 45Z credit. We also support the proposal at §1.45Z-4(g)(3)(i)[8] to provide a safe harbor for substantiating whether the sale of a transportation fuel is a qualified sale for the purposes of 45Z credit generation.

d. Restrictions relating to prohibited foreign entities

Congress expressly included provisions in the OBBBA prohibiting 45Z credit generation by a taxpayer that is "…a specified foreign entity (as defined in section 7701(a)(51)(B))" and a taxpayer that is "…a foreign-influenced entity (as defined in section 7701(a)(51)(D)…".[9]

RFA fully supports Treasury's proposal to implement the OBBBA's prohibition of 45Z eligibility for foreign entities and foreign-influence entities.

II. U.S. Treasury and the U.S. Department of Energy should immediately release an updated 45ZCF-GREET model that reflects OBBBA-directed changes

The Treasury Department, in consultation with the Department of Energy (DOE), has developed the 45ZCF-GREET model as the primary methodology for determining emissions rates for clean fuels eligible for the 45Z credit. DOE published the initial version of 45ZCF-GREET in January 2025 and a revised version in May 2025. With passage of the OBBBA in July 2025, Congress made important changes to the 45Z credit program, many of which were applicable beginning January 1, 2026.

However, as of April 6, 2026, Treasury and DOE had not yet published an updated 45ZCF-GREET model that integrates the changes directed by OBBBA. The changes to emissions rate determinations directed by OBBBA (i.e., exclusion of ILUC emissions) are expected to significantly impact the emissions rates for most clean fuel pathways included in the 45ZCF-GREET model, including corn- and sorghum-derived fuel ethanol. Taxpayers, including our member companies, urgently need access to the updated 45ZCF-GREET model in order to accurately determine emissions rates (and, in turn, 45Z credit values) for the 2026 tax year and beyond. Delays in the release of the updated 45ZCF-GREET model are creating substantial uncertainty and investment risk in the marketplace.

RFA urges Treasury, in consultation with DOE, to release the updated 45ZCF-GREET model (reflective of OBBBA-directed change) to taxpayers as soon as possible. If delays in the

[7] 91 Fed. Reg. 5193. (February 4, 2026)
[8] *Id.,* 5201.
[9] One Big Beautiful Bill Act, P.L. 119-21, 139 Stat. 279. (July 4, 2025)

release are primarily related to ongoing technical work involving integration of regenerative agriculture feedstocks (sometimes called "climate smart agriculture" or "CSA" feedstocks) and the feedstock carbon intensity calculator (FD-CIC), we encourage Treasury and DOE to bifurcate the process: release the updated 45ZCF-GREET model now without the FD-CIC module and continue work to integrate the FD-CIC module in a later version of the 45ZCF-GREET model.

a. The updated 45ZCF-GREET model should include distinct pathways for ethanol made from corn kernel fiber and sorghum kernel fiber feedstock

Numerous stakeholders, including RFA, have repeatedly encouraged Treasury and DOE to include distinct pathways for ethanol derived from corn kernel fiber (CKF) and sorghum kernel fiber (SKF) in the updated 45ZCF-GREET model. CKF- and SKF-derived ethanol is ubiquitously produced by U.S. fuel ethanol facilities as a fuel product that is separate and distinct from corn and sorghum (i.e., starch-derived) ethanol. Both the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) allow ethanol producers to utilize separate pathways and accounting for ethanol volumes derived from CKF and SKF for the purposes of the Renewable Fuel Standard (RFS) and Low Carbon Fuel Standard (LCFS), respectively. According to EPA registration data, more than 110 U.S. ethanol biorefineries have approved pathways for CKF and SKF ethanol eligible for cellulosic biofuel (D3) RIN credits under the RFS program,[10] and more than 84 million gallons of this fuel were produced in 2025.[11] Approximately 2 percent of the total ethanol volume produced by these registered facilities is derived from CKF and SKF.

We believe Treasury should similarly provide distinct pathways and accounting for CKF- and SKF-derived ethanol in the 45ZCF-GREET model. Notably, CKF- and SKF-derived ethanol offers extremely low emissions rates (typically 15-25 kgCO2e/MMBtu) that can significantly contribute to the goals of the 45Z program. The May 2025 version of 45ZCF-GREET does not offer separate pathways for CKF- and SKF-derived ethanol, instead requiring ethanol producers to account for those volumes as part of their total ethanol production volume. Without explicit pathways and accounting for CKF and SKF feedstock, the 45Z regulations could discourage further investment and innovation in this low-cost, low-emissions technology.

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[10] U.S. EPA. "Registered Companies and Facilities in EPA's Fuel Programs." (April 3, 2026) https://www.epa.gov/fuels-registration-reporting-and-compliance-help/registered-companies-and-facilities-epas-fuel

[11] U.S. EPA. "Public Data for the Renewable Fuel Standard." (April 3, 2026) https://www.epa.gov/fuels-registration-reporting-and-compliance-help/public-data-renewable-fuel-standard

b. *The 45Z program and updated 45ZCF-GREET model should not inadvertently discourage or penalize facilities that use combined heat and power (CHP) systems*

Over the past two decades, many U.S. ethanol producers have integrated the use of combined heat and power (CHP) (often referred to as "co-generation") as a means of enhancing efficiency, reducing energy costs, and lowering the lifecycle emissions of the ethanol they produce. As of 2021, nearly 40 U.S. ethanol biorefineries had installed CHP systems.[12] Integration of CHP requires substantial investment by ethanol producers (often $20-$40 million per facility), with an expected payback period of four to five years. Grant and loan programs administered by DOE, USDA, and EPA have often provided funding and technical assistance to clean fuel facilities investing in CHP systems based on the fact that the technology represents a "…proven and effective near-term energy option to help the United States enhance energy efficiency, ensure environmental quality, promote economic growth, and foster a robust energy infrastructure."[13]

However, the current 45Z program and 45ZCF-GREET model put these investments at risk by applying incongruent emissions accounting rules that penalize the use of CHP systems, disadvantaging clean fuel producers who have made major investments in this proven technology. We believe the 45Z program's penalization of CHP is unintended and can be corrected with simple changes to the 45ZCF-GREET model.

While the May 2025 version of 45ZCF-GREET appears to provide facilities with CHP systems the ability to use energy attribute certificates (EACs) to reduce emissions associated with electricity inputs for onsite power generation, the model does not correctly account for those emissions reductions. Specifically, if the taxpayer uses EACs of any magnitude in row 26 of the model ("Onsite Behind-the-Meter (BTM): EAC"), the resulting emissions rate for the fuel does not change. In other words, the emissions intensity of fuel inputs into a CHP system (typically natural gas) are fully counted by the model even if the user applies EACs to offset emissions from the fuel source used for BTM electricity generation.

While the model allows the user to enter inputs for BTM electricity and appears to allow for the use of EACs to offset BTM electricity-related emissions, the model architecture simultaneously requires that all fuel used to generate that electricity be fully included in

[12] S.R. Schill. "Revisiting CHP." Ethanol Producer Magazine (July 24, 2021). https://ethanolproducer.com/articles/revisiting-chp-18395 ("A U.S. DOE database shows 37 ethanol producers with CHP—combustion turbines, boiler/steam turbines and back pressure steam turbines.")
[13] DOE. "Combined Heat and Power: Effective Energy Solutions for a Sustainable Future." (December 1, 2008). https://www.energy.gov/sites/prod/files/2013/11/f4/chp_report_12-08.pdf

the facility energy balance. As a result, applying EACs to BTM electricity has no practical impact on the emissions rate of the fuel produced.

This outcome is inconsistent with the 45ZCF-GREET "User Manual," which explicitly contemplates the use of EACs for behind-the-meter electricity. The manual states that "for behind-the-meter (BTM) power generation entered into 45ZCF-GREET, EACs must be generated and retired," demonstrating that EACs are intended to have a functional role in the accounting of on-site electricity generation.[14]

The perverse result of the current treatment of CHP in 45ZCF-GREET is that clean fuel facilities that invested substantial capital in highly-efficient CHP systems are disadvantaged in emissions rate determinations. Indeed, the emissions rates for corn ethanol facilities using CHP systems are overstated by the May 2025 45ZCF-GREET model by approximately 1.5 to 3.0 kgCO2e/MMBtu compared an identical facility without CHP that purchases 100 percent of its electricity from the grid and offsets electricity-related emissions with EACs. RFA is aware of several ethanol facilities with CHP systems that have chosen to idle those systems in order to secure lower modeled emissions rates from the 45ZCF-GREET model. This outcome is counter to the objectives of the 45Z program, which is to stimulate greater energy efficiency, lower emissions, and investment in new technology.

Treasury can resolve this inconsistency by clarifying that when EACs are applied to metered electricity consumption, including BTM electricity, the associated fuel inputs used to generate that electricity may be adjusted, reallocated, or excluded to prevent double counting. This approach would ensure that EACs operate consistently across both grid-supplied and on-site electricity.

Absent this clarification, the current framework produces inconsistent outcomes by allowing facilities that purchase grid electricity and apply EACs to reduce the carbon intensity (i.e., emissions rate) of their fuel while denying equivalent treatment to facilities that generate electricity on site using efficient CHP systems. We do not believe the intent of Congress or the Treasury is to disadvantage facilities using CHP to produce reliable, efficient baseload power and process generation from natural gas.

Additionally, if Treasury allowed for flexible, book-and-claim accounting treatment for renewable natural gas (RNG) as process fuel, the ethanol producer with CHP could procure and retire EACs tied to RNG usage, thus allowing a much lower emissions rate to be assigned to on-site electricity generation.

[14] DOE. "Guidelines to Determine Life Cycle Greenhouse Gas Emissions of Clean Transportation Fuel Production Pathways Using 45ZCF-GREET." (May 2025), at 24.

Importantly, any of the options Treasury might choose to rectify this problem must be properly reflected in the updated 45ZCF-GREET model.

III. U.S. Treasury and the U.S. Department of Energy should work with the U.S. Department of Agriculture to finalize and integrate workable, equitable, and science-based technical guidelines for regenerative agriculture feedstocks and an updated FD-CIC calculator

Treasury's proposed rule signals that the Department intents to integrate a feedstock carbon intensity calculator (FD-CIC) into a future iteration of the 45ZCF-GREET model, allowing taxpayers to adjust emissions rates based on the use of certain regenerative agriculture practices for feedstock production (sometimes called "climate smart agriculture" or "CSA"). Treasury states that, "Following publication of the final version of USDA FD–CIC, the Treasury Department and the IRS anticipate that a section 45Z-specific version of the Feedstock Carbon Intensity Calculator (FD–CIC) module will be included as an input to the DOE's 45ZCF–GREET model (45ZCF FD–CIC) used for calculating carbon intensity adjustments under section 45Z for feedstocks that are produced using certain agricultural practices."[15]

While RFA generally supports the recognition of regenerative feedstock cultivation practices in the 45Z program, it is crucial that emissions rate calculator tools, supply chain management protocols, and certification and audit requirements are science-based, market-ready, and transparent.

RFA provided extensive comments in response to both USDA's June 2024 Request for Information (RFI) on the use of regenerative feedstocks to reduce emissions rates and USDA's January 2025 interim final rule and beta version of the USDA FD-CIC, and we incorporate those comments here by reference.[16] While the beta version of USDA FD-CIC marked significant improvement over previous versions of the DOE's FD-CIC, we remain concerned that the calculator could disadvantage clean fuel producers and farmers in certain regions based solely on their location and uncontrollable geographical factors.

We are also concerned that the approaches to regenerative feedstock certification, accounting, recordkeeping, verification, and auditing contemplated by USDA's technical guidelines may be overly complex and may discourage broad adoption by farmers and

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[15] 91 Fed. Reg. 5172. (February 4, 2026)

[16] RFA comments on *Procedures for Quantification, Reporting, and Verification of Greenhouse Gas Emissions Associated with the Production of Domestic Agricultural Commodities Used as Biofuel Feedstocks* (89 Fed. Reg. 53585; June 27, 2024). Available at: https://ethanolrfa.org/file/2841/RFA%20Comments%20on%20Climate-Smart%20Farming%20Practices%20RFI%20USDA-2024-0003.pdf; RFA comments on *Technical Guidelines for Climate-Smart Agriculture Crops Used as Biofuel Feedstocks* (Docket ID USDA-2024-0003; March 18, 2025). Available at: https://ethanolrfa.org/file/2940/RFA%20CSA%20Comments%203-18-25.pdf.

clean fuel producers. Thus, RFA encourages Treasury to work closely with USDA and DOE to develop simplified and straightforward protocols for certification, accounting, recordkeeping, verification, and auditing that can be efficiently adopted by farmers and clean fuel producers.

Moreover, the timing of implementation for regenerative feedstock rules and the FD-CIC calculator should be carefully considered. The 2026 planting season is already well underway; decisions regarding cropping mixes, field preparation, input procurement, and other agronomic practices have already been made. Unfortunately, farmers and clean fuel producers generally lacked the information, modeling tools, and clear protocols necessary to make informed decisions about potential opportunities in 2026 for leveraging regenerative feedstocks for the purposes of 45Z credit program. Crops being planted now will be used as feedstock for clean fuel production later this year and well into 2027.

In addition, Treasury's proposal notes that it "…anticipate[s] that 45ZCF FD–CIC may be used for fuel produced and sold *in 2025* even though 45ZCF FD–CIC likely will be published in 2026."[17] While this intended retroactive flexibility is welcomed, there is concern that farmers and clean fuel producers generally lacked the information necessary regarding the expected data, modeling tools, recordkeeping, certifications, and audit protocols required to properly integrate regenerative feedstocks into emissions rate calculations for the purposes of 2025 tax year 45Z credit generation. It is also unclear how and whether clean fuel producers would be able to amend 45Z credit claims made for tax year 2025 based on past use of regenerative feedstocks.

Given these timing challenges for regenerative feedstock crops cultivated in 2025 and 2026, RFA believes Treasury must consider the application of appropriate safe harbor provisions for clean fuel producers who make good faith efforts to apply rules and calculation tools (i.e., once they are finalized) to past activities involving the use of regenerative feedstocks.

a. U.S. Treasury should work with the U.S. Department of Agriculture to finalize market-based approaches for regenerative agriculture feedstock supply chain management

As outlined in detail in our previous comments responding to USDA's RFI and interim final rule, RFA is concerned that implementation of rigid supply chain management requirements for regenerative feedstocks could significantly disrupt established grain markets and discourage farmer adoption of regenerative agriculture practices.

[17] 91 Fed. Reg. 5172. (February 4, 2026) (emphasis added)

If Treasury's final rules require that physical feedstock commodities grown using regenerative agriculture practices be rigidly tracked through the supply chain and delivered to clean fuel production facilities, this could cause significant distortions in established grain flows and pricing. These unintended grain procurement and pricing impacts would extend beyond individual clean fuel facilities and could affect broader market stability.

Even certain mass-balancing approaches for tracking regenerative feedstock could result in market distortions and unnecessary economic burdens that would likely deter farmers from pursuing broad adoption of regenerative agriculture practices and deter clean fuel producers from sourcing this feedstock.

To avoid these unintended consequences, RFA recommends that Treasury, in consultation with USDA, adopt supply chain management protocols that allow verified regenerative feedstock attributes to be "decoupled" from physical bushels of grain. The emissions reduction value associated with the regenerative agriculture practices can be verified by a qualified third party and offered for sale by the farmer as a separate instrument/certificate on a centralized registry. Those certificates could then be purchased by a clean fuel producer using "book and claim" chain-of-custody accounting, without regard to the geography or physical location of either the farmer producing the feedstock or the clean fuel production facility.[18]

When they are decoupled, the emissions reductions related to the regenerative feedstock production practices can be transferred separately from the farmer/grain supplier to the clean fuel producer (i.e., the entity registered with IRS under 45Z) via a dedicated instrument/certificate. In such a system, the buyer (fuel producer) and seller (farmer or grain supplier) need not be connected via a physical supply chain. Under a decoupled system, the buyer "books" a specific quantity of regenerative feedstock at the time of purchase and then "claims" the emissions reduction associated with the feedstock when calculating the emissions rate of their fuel. As a result, the buyer owns the emissions reduction benefits of the feedstock without physically possessing the specific feedstock at their biorefinery. Still, it is the buyer's purchase of the regenerative feedstock-related emissions reductions that incentivizes the farmer's adoption of the regenerative agriculture practices.

A book-and-claim regenerative feedstock approach as described above would not preclude parties from using contracts to secure the physical bushels of regenerative feedstock (i.e., keeping the environmental attributes coupled with the physical grain) and using mass balance or identity-preserved (IP) approaches if they instead prefer those

[18] ISO 22095:2020. "Book-and-claim" is a chain-of-custody model "in which the administrative record flow does not necessarily connect to the physical flow of material or product throughout the supply chain."

chain-of-custody models. In these cases, rather than decoupling the certificate from the physical bushels, the two flows would remain coupled through the supply chain via mass balancing or IP and the buyer would purchase both the physical grain and the regenerative feedstock attributes from the same farmer/grain supplier.

IV. U.S. Treasury should adopt a more flexible Provisional Emissions Rate (PER) process that allows for efficient characterization of new technologies and incremental emissions-reducing improvements at existing clean fuel facilities

As Treasury recognizes in the proposal, "Many stakeholders have expressed the urgent need for guidance to clarify the scope and mechanics of the PER process…" and RFA appreciates that the proposed regulations endeavor to provide greater clarity.[19]

However, we believe the provisional emissions rate (PER) process, as proposed, does not offer the flexibility intended by Congress and does not reflect how emissions reductions occur in the ethanol sector. In ethanol production, emissions rate reductions are typically driven by incremental improvements and new technologies at existing facilities, not by entirely new production pathways. As proposed, the PER framework is unavailable to clean fuel producers whose pathways are represented in the emissions rate table (i.e., 45ZCF-GREET model).

The proposed PER framework requires taxpayers to submit an emissions value request (EVR) and FEED-level documentation for a multi-agency review process. We are concerned that Treasury and DOE have designed the proposed PER process to contemplate only new fuel and feedstock pathways, while overlooking the possibility that existing clean fuel production facilities may adopt novel technologies and new technologies that are not able to be appropriately characterized through the emissions rate table and 45ZCF-GREET model.

Treasury should ensure the PER process is available for clean fuel producers who are making incremental improvements and adopting new technologies (i.e., that are not able to be accurately captured in existing 45ZCF-GREET pathways), supported by operational data, and governed by clear timelines and transparent criteria. Without these changes, the PER process risks discouraging innovation, investment, and new technology adoption at existing clean fuel facilities.

V. Energy Attribute Certificates (EACs) must be retained as a practical, market-based tool for reducing emissions rates

[19] 91 Fed. Reg. 5172. (February 4, 2026)

RFA believes Treasury should clarify its intent to retain energy attribute certificates (EACs) as a practical, market-based tool for reducing emissions rates at clean fuel production facilities. EACs, including renewable energy certificates (RECs), are an important mechanism for ensuring that the energy security and efficiency goals of the 45Z program are met, and clean fuel producers need assurance that this tool will remain available for the life of the 45Z program. Based on feedback from our member companies, the overwhelming majority of clean fuel producers are utilizing EACs to reduce emissions rates under the program, with the return on these investments being shared throughout the rural, agricultural communities where renewable fuel production facilities operate today.

a. Treasury should clarify the EAC "placed in service" requirement for existing clean fuel production facilities

Treasury should ensure that EAC requirements related to incrementality, temporal matching, and deliverability are workable and consistent with existing energy markets. Specifically, the proposal's definition of "placed in service" with respect to the incrementality rule is creating confusion among clean fuel producers whose facilities have been in operation for many years prior to creation of the 45Z program.

Treasury states that "a taxpayer's facility is considered placed in service in the first taxable year it produces a transportation fuel…"[20] and this date serves as the benchmark for a 36-month "lookback" period for the beginning of commercial operations at the electricity-generating facility to which the EAC is related. The example provided in the proposal (referring to an ethanol fermentation facility) suggests that the facility did not produce "transportation fuel" until such fuel had an emissions rate that was less than 50 kgCO2e/MMBtu.[21]

The problem that arises is many existing ethanol production facilities do not have knowledge of the "first taxable year" in which they produced a "transportation fuel" with an emissions rate that is less than 50 kgCO2e/MMBtu. Using the required methodology for non-SAF transportation fuel (i.e., 45ZCF-GREET), it is highly likely that some ethanol facilities produced "transportation fuel" with an emissions rate that is less than 50 kgCO2e/MMBtu many years ago (and preceding creation of the 45Z tax credit in the *Inflation Reduction Act of 2022*).[22] For example, an ethanol production facility may determine by inputting its 2019 operational data into the 45ZCF-GREET model that it first produced "transportation fuel" in the 2019 tax year, and therefore the "placed in service" date would be January 1, 2019. Treasury's proposed regulations seem to indicate that the

[20] 91 Fed. Reg. 5197 (February 4, 2026).
[21] *Id*.
[22] *Inflation Reduction Act of 2022*, P.L. 117-169, 136 Stat. 1818 (August 16, 2022).

producer in this example may utilize EACs related to an electricity generating facility with a commercial operations date of no earlier than January 1, 2016.

RFA encourages Treasury to verify that our interpretation of the "placed in service" rule is correct. This interpretation would best support the goals of the 45Z program by opening the EACs market more broadly and allowing many existing clean fuel facilities to use EACs of an older vintage from established renewable electricity generating facilities.

VI. The interaction of "undenatured fuel ethanol" and "denatured fuel ethanol" for 45Z credit generation must be clarified

Treasury's proposed rule implementing the 45Z credit adds "undenatured fuel ethanol" to the definition of "Low-GHG ethanol," which is a "transportation fuel" eligible for the credit if certain criteria are met.[23] The newly proposed definition for "Low-GHG ethanol" is:

> *"Low-GHG ethanol*. The term *low-GHG ethanol* means ethyl alcohol that is a liquid fuel that meets the specifications of ASTM D4806 for denatured fuel ethanol ***or ASTM D8651 for undenatured fuel ethanol*** for blending with gasoline and that has an emissions rate that is not greater than 50 kilograms of CO2e per mmBTU."[24]

In combination with other definitions and provisions of the proposed rule, the addition of undenatured fuel ethanol to the definition of "Low-GHG ethanol" creates potentially problematic internal inconsistencies in the regulation that could result in significant unintended consequences in the marketplace.

Specifically, the proposed regulation's double-crediting prevention rules state that a transportation fuel "must not be produced from a fuel for which a section 45Z credit is allowable."[25] The proposed regulation further defines "Produced from a fuel for which a section 45Z credit is allowable" as follows:

> "*Produced from a fuel for which a section 45Z credit is allowable*. A fuel is *produced from a fuel for which a section 45Z credit is allowable* if a primary feedstock of the fuel meets the definition of a transportation fuel under paragraph (b)(34)(i) of this section, without regard to paragraph (b)(34)(i)(D) of this section."[26]

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[23] 91 Fed. Reg. 5161. (February 4, 2026) ("To qualify for a section 45Z credit, a taxpayer must: (i) produce a transportation fuel that meets the requirements for suitability, emissions rate, coprocessing, and prevention of double crediting; (ii) produce the fuel at a qualified facility in the United States, including in any U.S. territories; (iii) be registered as a producer of clean fuel under section 4101 at the time of production; and (iv) sell the fuel to an unrelated person in a qualified sale during the taxable year.")

[24] 91 Fed. Reg. 5191. (February 4, 2026) (emphasis added)

[25] 91 Fed. Reg. 5162. (February 4, 2026)

[26] 91 Fed. Reg. 5194. (February 4, 2026)

The problem that emerges is that undenatured fuel ethanol meeting ASTM D8651 *is the "primary feedstock"* for denatured fuel ethanol that meets ASTM D4806. Thus, a plain reading of the proposed regulation suggests that undenatured fuel ethanol would be the transportation fuel eligible for the 45Z tax credit, but the denatured fuel ethanol made from that undenatured fuel ethanol would be ineligible for the credit.

This is problematic because all fuel ethanol produced for consumption in the United States (more than 14.3 billion gallons in 2025) is denatured fuel ethanol that meets ASTM D4806. In addition, denatured fuel ethanol accounted for roughly half (approximately 1.1 billion gallons) of U.S. ethanol exports in 2025. Indeed, approximately 95 percent of the fuel ethanol manufactured by U.S. producers in 2025 was denatured fuel ethanol (i.e., for both domestic consumption and exports). While undenatured ethanol may be used in the United States as a feedstock for alcohol-to-jet sustainable aviation fuel (SAF), none of the fuel ethanol blended into motor gasoline in the United States is undenatured fuel ethanol. The modest volumes of undenatured fuel ethanol produced in the United States today are primarily exported and consumed as transportation fuel and other non-fuel products only in other countries.

U.S. producers add denaturant to fuel ethanol because longstanding regulations administered by multiple Federal agencies require them to do so. Most notably, the Renewable Fuel Standard regulations administered by EPA specify that ethanol must be denatured to be considered a "renewable fuel" and generate Renewable Identification Number (RIN) credits.[27] EPA's regulations draw from longstanding regulations administered by the U.S. Treasury's Alcohol and Tobacco Tax and Trade Bureau (TTB).[28]

Without modification, the 45Z proposed rule's addition of undenatured fuel ethanol to the definition of "Low-GHG ethanol" (and, in turn, "transportation fuel") could create friction and inconsistency with other longstanding U.S. regulatory programs and requirements. If U.S. ethanol producers were required to treat undenatured fuel ethanol as the 45Z-eligible

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[27] 40 C.F.R. §80.2. Definitions. "Renewable fuel means a fuel that meets all the following requirements:

(1)

(i) Fuel that is produced either from renewable biomass or from a biointermediate produced from renewable biomass.

(ii) Fuel that is used in the covered location to replace or reduce the quantity of fossil fuel present in a transportation fuel, heating oil, or jet fuel.

(iii) Has lifecycle greenhouse gas emissions that are at least 20 percent less than baseline lifecycle greenhouse gas emissions, unless the fuel is exempt from this requirement pursuant to § 80.1403.

(2) Ethanol covered by this definition ***must be denatured*** using an ethanol denaturant as required in 27 CFR parts 19 through 21. Any volume of ethanol denaturant added to the undenatured ethanol by a producer or importer in excess of 2 volume percent must not be included in the volume of ethanol for purposes of determining compliance with the requirements of this part. (emphasis added)

[28] 27 C.F.R. §19-21.

transportation fuel *prior to adding denaturant*, it could create confusion, untenable new administrative burdens, and inconsistencies with existing EPA and Treasury regulations, while increasing the potential for accounting and recordkeeping errors.

VII. U.S. Treasury should clarify that only transportation and industrial fuels are eligible for 45Z credit generation

In order to qualify for the 45Z tax credit, the statute requires, among other criteria, that a "transportation fuel" must be "suitable for use as a fuel in a highway vehicle or aircraft." In the proposed rule, Treasury notes that Congress did not define the term "suitable for use."[29] Thus, Treasury proposes to define "suitable for use" as follows:

> "(ii) *Suitable for use as a fuel in a highway vehicle or aircraft (suitable for use)* — (A) *In general.* A fuel is *suitable for use as a fuel in a highway vehicle or aircraft (suitable for use)* if the fuel has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft, or may be blended into a fuel mixture that has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft. A fuel may possess this practical and commercial fitness even though use in a highway vehicle or aircraft is not the fuel's predominant use. However, a fuel does not possess this practical and commercial fitness solely by reason of its possible or rare use as a fuel in a highway vehicle or aircraft. ...***To be considered suitable for use, a fuel need not actually be used as a fuel in a highway vehicle or aircraft."***[30]

Treasury provides the following example to clarify the eligibility of "fuels" that may not ultimately be used in a highway vehicle or aircraft:

> "The proposed regulations would also clarify that actual use as a fuel in a highway vehicle or aircraft is not required. For example, diesel fuel that has practical and commercial fitness for use as a fuel in a highway vehicle or aircraft, but is ultimately used as marine fuel, would satisfy the 'suitable for use' standard."[31]

While Treasury's example implies that a "fuel" not used in a "highway vehicle or aircraft" must still be used for transportation (i.e., marine fuel), such a transportation fuel use requirement is not explicitly stated in the proposed regulation. RFA believes that the Congressional intent behind the 45Z Clean Fuel Production Credit program is that eligibility is limited to fuels used as transportation fuel or industrial fuel.[32]

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[29] 91 Fed. Reg. 5185. (February 4, 2026)
[30] 91 Fed. Reg. 5194. (February 4, 2026) (emphasis added)
[31] 91 Fed. Reg. 5167-5168. (February 4, 2026)
[32] See, for example, Senate Finance Committee. Clean Energy for America Act. Summary of the Chairman's Mark. (May 2021). ("TITLE II – INCENTIVES FOR CLEAN TRANSPORTATION. ...Fuels must be at least transportation grade – suitable for use in a highway vehicle or aircraft – but may be used for any business purpose, including as *transportation fuel, industrial fuel, or for residential or commercial heat*.") (emphasis

Under Treasury's proposed regulations, products that are "suitable for use" as fuel but not ultimately used as transportation or industrial fuel could be considered eligible for the 45Z credit because they possess "practical and commercial fitness for use as a fuel in a highway vehicle or aircraft." Notably, the producer of these fuels often lacks knowledge of the final use of the product (i.e., because it is sold to ultimate buyers through third-party marketers).

RFA believes Treasury can address this issue in the final rule by clearly defining that in order to retain eligibility for the 45Z credit, the fuel must be used as a transportation or industrial fuel. While the statute only specifies use in a "highway vehicle or aircraft," Treasury could clarify that all transportation and industrial fuel uses (e.g., including marine, rail, boiler fuel, generator fuel, turbine fuel, heating oil, etc.) are eligible for the credit. Treasury could also make clear in the final regulations that all non-transportation and non-industrial fuel uses are ineligible.

VIII. Foreign feedstock restrictions should not result in undue tracking, certification, and reporting requirements for feedstocks and fuel pathways that do not rely on imports

In implementing the OBBBA-directed prohibition on 45Z eligibility for fuels made from feedstocks originating outside of the United States, Mexico, and Canada, the proposed rule notes that Treasury is "request[ing] comments on possible approaches with respect to substantiating that any imported feedstocks meet the statutory sourcing requirements."[33] Treasury also notes that it is "interested in any industry practices to track feedstock source(s) that would mitigate potential taxpayer burden while being administrable for the IRS."[34]

As Treasury and IRS continue to contemplate mechanisms for administering the foreign feedstock prohibitions, RFA strongly recommends that Treasury refrain from placing any new feedstock tracking burdens on feedstocks and fuel pathways that do not rely on imports.

The amount of corn imported into the United States is so small as to be insignificant, with little or no evidence that the miniscule amount of corn imported is used as feedstock for clean fuel production. Indeed, nearly 99.9 percent of the current total U.S. corn supply was

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added). With regard to using a fuel for "any business purpose," while Treasury proposes to remove "use *as a fuel*" from the phrase "use *as a fuel* in a trade or business," this change is clearly designed to facilitate fuel sales through a third party (i.e., "intermediary dealers or wholesalers") for resale, not to facilitate 45Z credit eligibility for products not used as transportation fuels or industrial fuels.

[33] 91 Fed. Reg. 5175. (February 4, 2026)

[34] *Id*.

grown domestically, with imports accounting for just 0.13 percent.[35] Notably, the trivial amount of corn imported into the United States primarily comes from Canada. Similarly, the United States imports no sorghum whatsoever.[36]

It would be unreasonable and wasteful to require U.S. ethanol producers to conduct detailed point-of-origin tracking or maintain documentation for corn or sorghum feedstock when corn imports account for just 0.13 percent of the total U.S. corn supply, and sorghum imports are nonexistent. There is no reason to believe imports of these commodities will increase in the future.

Any additional recordkeeping and reporting burdens related to distinguishing feedstock imports from feedstocks produced or grown in the United States, Canada, and Mexico should be applied only to clean fuel feedstocks that are meaningfully reliant on imported supplies.

IX. U.S. Treasury should clarify several elements of Prevailing Wage and Apprenticeship requirements and provide safe harbors for good faith efforts to comply

While prevailing wage and apprenticeship (PWA) requirements are not the subject of Treasury's proposal, we believe the upcoming 45Z final rule presents Treasury with an opportunity to provide badly needed clarification and additional guidance on PWA.

Since the release of the final PWA regulations[37], clean fuel producers continue to experience significant confusion and frustration with the definitions of "alteration or repair" included in the final PWA rules. Some taxpayers (and their advisors) believe that the current definition of maintenance is so narrow that almost every activity is classified as a "repair." Others take a more expansive view. For taxpayers in the clean fuel industry, certainty as to whether an activity is a "repair" or "maintenance" is crucial, as failure to comply with the applicable requirements for repairs will prevent taxpayers from accessing the full credit amount. Normal maintenance and repairs should not be subject to PWA requirements, for all the reasons specified in previous comments submitted by stakeholders on this topic.

Further, "Prevailing Wage" in 45Z relies on Davis-Bacon Act wage determinations issued by the Department of Labor for the "locality" in which the facility is located, which means that a taxpayer must pay the wages set by DOL under general wage determinations for a geographic area. However, the unique geography of ethanol production and the relative novelty of the technology create situations where the DOL has insufficient data to issue a prevailing wage determination in some counties where these facilities are located. While

[35] USDA. World Agricultural Supply and Demand Estimates. (March 2026).
[36] *Id*.
[37] 89 Fed. Reg. 53,184. (June 25, 2024)

current IRS regulations provide a mechanism to request "supplemental wage determinations" or "additional classifications and rates for those localities or specific types of labor," that process creates additional burdens, delays, and uncertainty for the taxpayer.

The final PWA regulations also create uncertainty, confusion and undue administrative burden around compliance testing, potential penalties for extremely minor and inadvertent underpayment (with unrealistically narrow timeframes for correcting underpayment), and retroactive applicability of certain PWA rules.

While periodic reviews are important and necessary to ensure and demonstrate compliance with the PWA requirements, pursuant to regulation 1.45-7(c)(3)(iii)(B), taxpayers find themselves compelled to perform burdensome current quarterly reviews. RFA requests that additional guidance for the PWA rules instead allow for annual reviews for compliance.

Given the highly complex and often ambiguous nature of PWA requirements, we urge Treasury to consider providing safe harbor for clean fuel producers who are acting diligently and in good faith to comply with the PWA provisions.

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RFA appreciates the opportunity to provide these comments in response to Treasury's proposed rule implementing the 45Z credit. We look forward to continuing to engage with Treasury and the IRS as final regulations are developed. If you have any questions regarding these comments or desire additional information, please contact Jared Mullendore at 202.289.3835.

Sincerely,

Geoff Cooper
President and CEO