# Proposed I.R.C. §45Z Regulations

*Roger McEowen (roger.mceowen@washburn.edu) – Washburn University School of Law*
*Ag Law and Taxation Blog: https://agriculturallaw.lawprofessorsblogs.com/*
*February 2026*

**Overview**

On February 3, 2026, the Department of the Treasury and the IRS officially unveiled the long-awaited proposed regulations[1] for the I.R.C. §45Z Clean Fuel Production Credit. The proposed regulations are more than just a technical update; it represents a historic pivot in how the U.S. government incentivizes energy. By formally integrating the sweeping changes from the One Big Beautiful Bill Act (OBBBA) of 2025, these rules transition the industry away from traditional, technology-specific subsidies toward a performance-based, technology-neutral framework. For the first time, the tax code treats a gallon of fuel as a carbon-reduction service, rewarding producers based on the precision of their lifecycle emissions rather than the raw volume of their output. Crucially, the 2026 guidance also cements a "North American First" strategy, excluding foreign feedstocks and standardizing credit rates to ensure that the multi-billion-dollar incentive primarily fuels domestic agricultural and energy independence through 2029.

> **Note:** The 2026 guidance requires a Certificate of Origin (Form 8011) for every feedstock load, shifting the burden of proof to the grain elevator or aggregator to ensure no overseas tallow or used cooking oil is blended into the domestic supply chain. Form 637 registration remains the mandatory "first-step" for any producer before they can even begin to track feedstocks for credit eligibility.[2]

**The Mechanics of Value**

At the heart of these regulations is a simple yet powerful formula. Unlike old credits that gave a flat rate per gallon, the 45Z credit scales based on your Carbon Intensity (CI) score.

**Key Pillars of the 2026 Guidance**

- **The North American Mandate:** To qualify for production after December 31, 2025, feedstocks must be grown or produced in the U.S., Canada, or Mexico—effectively ending the era of imported waste oils from overseas.

[1] REG-121244-23.
[2] The producer must be registered under Section 4011using Form 637 before the credit can be claimed.

- **The ILUC Revolution:** By "removing" Indirect Land Use Change (ILUC) penalties, the IRS has drastically lowered the "entry bar" for domestic corn ethanol and soy biodiesel.[3]
- **The SAF Reset:** The 2025 OBBBA amendments, confirmed in this guidance, have eliminated the $1.75 Sustainable Aviation Fuel (SAF) premium, capping all clean fuels at a maximum rate of $1.00 per gallon (assuming labor requirements are met).[4]

**Application to Ethanol Producers**

For ethanol producers, the February 2026 guidance is a "windfall" moment. While many plants were initially worried they wouldn't qualify for significant credits under the original 2022 rules, the 2025 legislative changes have fundamentally shifted the math in their favor.

**The "ILUC bonus" - a lower entry bar.** Before the 2026 guidance, many ethanol plants hovered right at the 50 CI (carbon intensity) qualification threshold because of "Indirect Land Use Change" (ILUC) penalties - a controversial metric that blamed ethanol for deforestation elsewhere.

- **The Change:** The IRS has officially removed ILUC penalties from the calculation.[5]
- **The Impact:** This immediately drops the average plant's CI score by 20–25 points. Even "business-as-usual" plants that make no changes to their operations can now qualify for an estimated $0.35–$0.45 per gallon in credits.[6]

  **Note:** Because an ethanol plant's credit is tied to the CI of the corn it buys, the CI score creates a new market for farmers. For the first time, a bushel of "low-CI corn" is worth more than a bushel of standard corn. So, for example, if a farmer lowers their corn's CI score by 20 points, they have effectively generated roughly $0.30 per bushel of additional value for the ethanol plant. The CI score provides the mathematical proof needed for the plant to share that "carbon bonus" with the farmer.[7]

[3] The IRS didn't technically "remove" the ILUC penalty, it merely provided a pathway to outrun it. By using the Section 45Z-GREET model, producers can use specific "bundles" of farming practices to lower the carbon footprint of their feedstock, effectively neutralizing the land-use penalties that previously made the math impossible.

[4] If these prevailing wage and apprenticeship requirements are not met during the construction or alteration of a facility, the credit drops to a "base rate" or $.20/gallon.

[5] The One Big Beautiful Bill Act (OBBBA), Section 70521(g)(1) explicitly directs that for fuel produced after December 31, 2025, the "emissions rate" (which determines the tax credit value) shall be calculated without regard to emissions attributed to indirect land-use change (ILUC). By removing ILUC, a factor that typically penalizes crop-based biofuels like corn ethanol and soy biodiesel for the hypothetical carbon cost of converting new land to agriculture, the OBBBA significantly lowers the CI scores for these fuels, making them eligible for higher tax credits.

[6] While the IRS has removed the penalty, the GREET model (or the successor FD-CIC) still requires a baseline land-use value, which is now zeroed out or significantly subsidized. More specifically, under the 45ZCF-GREET model mandated in the proposed regulations, the ILUC value for corn ethanol produced after 2025 is set to 0.0. This is what creates a 20-25 point "windfall." Under the proposed regulations, negative emissions rates are prohibited for any fuel unless the fuel is derived from animal manure. Also, taxpayers cannot "grandfather" an old model. The most recent model that the Treasury publishes must be used for each year.

[7] A facility's CI score cannot be negative, effectively capping the credit at $1.00/gallon.

**CCS - the "golden ticket" to high credits.** Carbon Capture and Storage (CCS) has moved from a "nice-to-have" to a financial necessity for maximum profitability. Adding CCS typically shaves another 30 points off a plant's CI score. An ethanol plant with CCS can reach a CI score in the 12–15 range, unlocking a credit of roughly $0.70–$0.75 per gallon. The 2026 rules clarify that you cannot "double dip" with §45Q (the carbon sequestration credit). However, the guidance shows that for many plants, the 45Z credit is worth nearly 3x more than the 45Q credit, making it the preferred choice for ethanol-CCS operations.

> **Observation:** When combined with the "zero ILUC" baseline and CSA practices, CCS can push a plant toward a CI of 0, unlocking the full $1.00 per gallon credit.[8] For a standard ethanol plant, the Section 45Z credit almost always would be the preferred credit once the plant's CI score drops below 41 (definitely below 35).[9]

**The North American feedstock advantage.** For years, domestic producers have competed with imported feedstocks. The new "North American Only" mandate changes the competitive landscape. Credits are only available for fuel produced from feedstocks grown in the U.S., Canada, or Mexico. This removes the threat of "cheap" imported sugarcane ethanol from Brazil or used cooking oil from Asia undercutting domestic corn-based fuel. It effectively creates a protected economic zone for North American corn and soy.

**Mid-Stream Certainty:** The "Related Party" Fix. One of the biggest technical hurdles for ethanol producers was how to handle sales to their own marketing arms or intermediaries. The 2026 guidance introduces a "Look-Through" rule. Producers can now sell to a related party or a dealer, and as long as that fuel is eventually sold to an unrelated person for use in a vehicle, it counts as a "Qualified Sale." This allows plants to maintain their existing distribution chains without losing the tax credit.

**Tracking CSA Practices**

The profitability of a modern ethanol plant is no longer determined just by the price of corn, but by the carbon intensity (CI) of that corn. To capitalize on this, the 2026 guidance introduces a sophisticated accounting system to track "Climate-Smart Agriculture" (CSA) practices from the field to the fuel tank.

**The "book and claim" vs. "mass balance" debate.** For the ethanol industry, how corn is tracked is as important as how it is grown. The 2026 regulations address two main accounting methods:

- **Mass Balance (The Strict Path):** This requires physical "segregation" or strict ratio tracking. If a plant buys 1,000 bushels of "low-carbon corn," it must prove those exact physical molecules (or a strictly proportional amount) were processed into the fuel.

[8] From a revenue standpoint, a 100-million-gallon plant using Section 45Q would earn roughly $17-$20 million annually. That same plant, however, optimized under Sec. 45Z with CCS and CSA corn, could earn $70-$85 million annually.
[9] Assumes an $85/ton sequestration rate and a capture efficiency of approximately 4.2 lbs. of C02 per gallon of ethanol. Also, it is important to note that both the Section 45Q credit and the Sec. 45Z credit cannot be claimed for the same facility in the same tax year. The choice between the two credits is an annual election. Also, because Section 45Z is a temporary credit and Section 45Q is not, a facility will likely claim the Section 45Z credit through 2029 and pivot back to Section 45Q if Section 45Z is not extended beyond 2029.

- **Book and Claim (The Flexible Path):** This decouples the "carbon attribute" from the physical grain. A farmer can sell corn to a local feed mill, but sell the "carbon credit" (the proof of no-till or cover cropping) to an ethanol plant elsewhere.

  **Note:** While the industry has pushed hard for Book and Claim to avoid "distorting grain flows," the February 2026 guidance leans toward a Mass Balance approach for the first point of aggregation. However, it provides a pathway for "Environmental Attribute" trading once the USDA FD-CIC model is finalized later this year.[10]

**The new verification standard - ISO 14065.** The proposed regulations mandate a rigorous third-party verification chain. Farmers must use the USDA Feedstock Carbon Intensity Calculator (FD-CIC) to generate a "Biofuel Feedstock Report." Any entity claiming a CSA reduction must be audited by a verifier accredited to the ISO 14065 standard. From the grain elevator to the ethanol plant, every "hand-off" must include a sustainability declaration.

**Quantifying the farm-gate value.** The 2026 proposed regulations confirm that specific farming practices now have a direct "per-bushel" dollar value. Based on current CI scoring, here is how those practices translate to the I.R.C. §45Z credit:

| CSA Practice | Estimated CI Reduction | Estimated Credit Value (per bushel of corn)* |
|---|---|---|
| **No-Till Farming** | -5 to -8 pts | $0.08 – $0.12 |
| **Cover Cropping** | -6 to -10 pts | $0.10 – $0.15 |
| **Enhanced Efficiency Fertilizer** | -2 to -4 pts | $0.03 – $0.06 |
| **Full CSA Package** | -15 to -22 pts | $0.25 – $0.35 |

**Assumes 2.8 gallons of ethanol per bushel and a $1.00 max credit rate.*

**Note:** The cost of verification must be factored into the above numbers to arrive at a net profit figure for a farmer. The estimated data/audit cost is $.02 per bushel for no-till farming; $.03 per bushel for cover cropping. This makes the estimated full CSA package compliance cost to be $.05 per bushel, and the resulting credit value to be $.20-$30 per bushel for the full CSA package.

**Data Privacy and the "Qualified Certifier"**

Producers were concerned about sharing sensitive farm data with the government. The 2026 regulations address this by allowing "Qualified Certifiers" to act as a buffer. The certifier reviews the farm's private data (GPS coordinates, fertilizer receipts) and issues a simplified Certificate of Carbon Intensity to the ethanol plant, protecting the farmer's proprietary information.

The IRS has scheduled a public hearing on these specific verification rules for May 28, 2026.

[10] Mass Balance likely requires Identity Preserved (IP) grain handling. This means elevators may need to designate specific "low-CI bins" which increases operational costs for the mid-stream.

**CO2 Pipelines**

While the technology to capture CO2 exists at ethanol plants today, the infrastructure to move it (the pipelines) is currently the biggest bottleneck in the entire I.R.C. §45Z economy. As of early 2026, the CO2 pipeline situation is a mix of legal battles and "groundbreaking" delays. Here is the current reality:

While several major projects have secured permits in North Dakota and Iowa, they are facing a massive wave of resistance and court challenges. In South Dakota, new 2026 laws have made it much harder for private companies to use eminent domain. Thus, most of the massive "trunk" pipelines are not expected to be fully operational until 2027 or 2028 at the earliest. The I.R.C. §45Z is a temporary credit (currently set to expire at the end of 2029). If the pipelines aren't finished until 2028, ethanol plants may only have one or two years to actually collect those high-value CCS credits before the program ends.

Since the pipelines aren't ready, ethanol producers are looking at three "Plan B" strategies to lower their CI scores and stay competitive:

- **On-Site Sequestration:** If an ethanol plant happens to be sitting directly on top of the right kind of rock formation (common in parts of Illinois and North Dakota), they can drill a deep "Class VI" injection well right on their own property. They capture the CO2 and pump it straight down—no pipeline required.
- **CO2 Utilization:** Some plants are capturing the gas and selling it to the food and beverage industry (for carbonation) or for industrial uses. While this doesn't always count as "permanent storage" for the highest tax credits, it does help lower the overall plant footprint.
- **The CSA Pivot:** This is the most important one. Because they can't rely on CCS pipelines yet, plants are doubling down on CSA practices. By sourcing corn from farmers who use no-till and cover crops, a plant can drop its CI score significantly without spending a dime on carbon capture hardware.

In some limited cases, CO2 is being liquefied and moved by truck or rail, but the scale is tiny compared to what a pipeline can handle. An ethanol plant produces hundreds of thousands of tons of CO2, and moving that by truck is like trying to empty a swimming pool with a teaspoon.

> **Note:** The IRS released these proposed regulations knowing full well that the pipelines aren't ready. This is why the “removal” of the ILUC penalty and the CSA rules are critical - they give ethanol plants a way to earn a "baseline" credit (around $0.35–$0.45/gal) while they wait for the pipeline legal process to unfold.[11]

**Conclusion**

The proposed regulations mark a turning point for the American energy landscape, transforming the tax code into a powerful engine for decarbonization and rural economic growth. By “removing” historical barriers like ILUC penalties and establishing a "North American Only" feedstock mandate, the IRS has effectively cleared the runway for domestic ethanol and biodiesel producers to lead the energy transition. The IRS released the 45Z guidance with the understanding that the ethanol industry needed a bridge. Without the CSA rules, a standard corn ethanol plant would struggle to get below the statutory 50 kg CO2e/mmBTU threshold required to even start earning

[11] See footnote 3, supra.

credits. By allowing "book-and-claim" or specific feedstock accounting for Climate-Smart Ag, the IRS is essentially providing a survival mechanism – a bridge that allows plants to monetize their CI reduction immediately.

> **Observation:** A significant concern is that the Section 45Z credit will lead to increased vertical integration. If meat packers or grain giants control the CI data from the farm to the fuel pump, they may capture the entire tax credit, leaving the independent farmer/rancher with the costs of implementation but none of the rebate.

However, the true legacy of I.R.C. §45Z will be found in the fields. The shift toward rigorous, data-driven "Climate-Smart Agriculture" means that a farmer's data is now as valuable as their crop. As we move toward the May 28 public hearing and the finalization of the USDA's carbon calculator, the message to industry stakeholders is clear: the most profitable gallon of fuel is no longer just the one that burns most efficiently, but the one with the most transparent and verifiable