TWENTY THREE POINT FIVE

INSIGHTS

February 2026

45Z: The New Rules of Value Capture in U.S. Renewable Fuels

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Overview

The Treasury's proposed rules for the 45Z Clean Fuel Production Credit mark a structural shift in the U.S. renewable fuels market. The guidance consolidates fragmented federal incentives into a single production-based tax credit but layers on gating requirements that will reshape who captures value and under what conditions. The core implications: domestic production becomes non-negotiable; feedstock must originate from the U.S., Mexico, or Canada starting in 2026; foreign ownership triggers hard disqualifications; and SAF loses its federal premium after 2025. For producers, importers, and investors, the message is clear: eligibility is now the strategic chokepoint. The winners will be those who move early—not just on molecules, but on feedstock access, governance, and operational discipline.

1. The Market Backdrop: Why 45Z Matters Now

The U.S. renewable fuels market has never operated on a single policy or price. It's a layered system: federal programs, state programs, corporate decarbonization commitments, and contract math. That stacking dynamic is exactly why sophisticated players have been able to create real value and why the next set of rules matters so much.

The 45Z Clean Fuel Production Credit is the center of gravity for the next phase. It attempts to unify historically fragmented federal fuel incentives into a single production-based tax credit tied to lifecycle emissions performance. The guidance that just came out - Treasury/IRS proposed rules plus preamble is important not because it creates the market (the market is already here), but because it rewrites who gets paid, for what, and under what conditions.

At a high level, 45Z pays producers, not blenders, based on the applicable cents-per-gallon amount and the fuel's emissions factor. But the devil is in the gating items: domestic production, feedstock origin, foreign-entity restrictions, anti-double-crediting rules, and a more stringent certification and traceability mindset.

If you're a producer, importer, trader, developer, lender, investor, or strategic partner deciding where to deploy scarce feedstock and capital, these rules change the map.

2. Executive Summary: The Changes That Move Markets

The credit becomes structurally domestic - then North American on feedstocks

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To qualify, fuel must be produced at a qualified facility in the United States (including territories) and sold in a qualified sale. Starting after December 31, 2025, transportation fuel must be derived exclusively from feedstock produced or grown in the United States, Mexico, or Canada. **Translation:** 2026+ economics will increasingly be set by USMCA-qualified feedstock access and proof.

Imports and blending: moving it here is not the same as making it here

The guidance draws a bright line between production and minimal processing. Adding additives to make imported FAME meet spec, dehydrating imported hydrous ethanol, or blending ethanol with gasoline are all examples of minimal processing - ***not production***.

Translation: importing finished or near-finished fuel and 'finishing' it in the U.S. is not a 45Z monetization strategy – which had been an optionality play in the past.

SAF loses its federal premium after 2025

For fuel produced on or before December 31, 2025, SAF receives a higher applicable amount than non-SAF. For fuel produced after that date (which is to say anything that comes forward now), the base and alternative amounts revert to the same structure for all fuels.

Translation: if SAF's economics depend on a persistent federal lift, that lift drops away starting 2026 (inflation adjustments aside).

Foreign entity restrictions become a gating issue

A taxpayer cannot be a specified foreign entity for taxable years beginning after July 4, 2025, or a foreign-influenced entity (with a limited exception) for taxable years beginning after July 4, 2027. *Translation: your capital stack and governance can make a project ineligible even if the molecules are clean.*

No double crediting changes pathway economics

A fuel is not eligible if produced from a fuel for which a section 45Z credit is allowable. The preamble is explicit: only the first transportation fuel in a production chain qualifies. It flags that SAF produced from ethanol (as a primary feedstock) and hydrogen produced from RNG may not qualify.

Translation: some upgrading pathways may see structural repricing—not because the chemistry fails, but because the tax value may get trapped upstream.

Lifecycle scorekeeping shifts: ILUC excluded, negative CI capped

For fuel produced after December 31, 2025, the emissions rate excludes indirect land use change. But negative emissions rates are generally prohibited (cannot be less than zero) unless the primary feedstock is animal manure, and the limitation also applies to transportation fuels used as production inputs.

Translation: you may get relief from ILUC debate, but you lose the upside from deeply negative CI claims (except manure-based cases).

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3. What This Means for Producers: SAF and Renewable Diesel

3.1 The value stack shifts toward eligibility, then feedstock, then CI optimization

45Z eligibility isn't just 'make low-carbon fuel.' It's 'make low-carbon fuel that checks every gating box': qualified facility in the U.S., registered producer status, qualified sale, feedstock origin (post-2025), and no disqualifying foreign status.

Once eligibility is secure, value capture becomes a feedstock game. In 2025, broad feedstock optionality remains, and many players will maximize flexibility while the window is open. From 2026 onward, USMCA feedstock becomes a premium commodity—not just an input, but a compliance key.

3.2 SAF: short-term lift, medium-term squeeze, certification reality check

Through 2025, SAF benefits from higher applicable amounts relative to non-SAF. From 2026 onward, the special SAF applicable amount is effectively repealed, and SAF competes on the same basis as other fuels.

Now layer on certification. For each year a taxpayer claims 45Z for SAF, it must obtain certification from an unrelated person, include it with the required forms, and use qualified certifiers tied to recognized sustainability and verification regimes. The certifier list explicitly calls out entities and accreditation frameworks that international operators will recognize—including ICAO scheme approvals and certification programs such as ISCC, RSB, and ClassNK, plus verification paths tied to ASTM and ISO standards and LCFS verifier frameworks under CARB.

Practical takeaway: SAF developers should assume the U.S. federal tax credit now expects a global-grade audit trail, not a handshake and spreadsheet.

3.3 Renewable diesel: strong position, but feedstock and traceability become the choke point

RD's market strength doesn't vanish. But the rules push the value conversation away from 'can you make it' toward 'can you prove it': origin, chain-of-custody, and CI substantiation.

Note also: the regs address commingled storage. If fuels with different emissions rates are held in common storage, sales are treated as pro rata portions. Operations and logistics discipline will have an economic impact. Sloppy commingling can dilute credit value.

4. Imports, Foreign Entities, and Blenders: Who Wins, Who Loses

4.1 Finished-fuel imports: reduced federal monetization options

The 'minimal processing' examples are the blunt instrument here: imported near-spec product that gets finished in the U.S. is not considered produced in the U.S. for 45Z purposes. Importers of finished RD/SAF should expect diminished ability to compete on 'credit embedded in the molecule' and greater pricing pressure if domestic producers can monetize 45Z.

4.2 Feedstock imports: the real cliff is 2026

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The post-2025 requirement that fuel must be derived exclusively from feedstock produced or grown in the U.S., Mexico, or Canada is the policy edge. Non-USMCA UCO, tallow, and other imported feedstocks may still flow, but their value to 45Z-claiming producers is impaired after 2025. Expect contract restructuring: tighter representations on origin, stronger audit rights, and sharper price differentials.

4.3 Foreign ownership and control: the quiet deal killer

The foreign-entity restrictions are written as a credit 'no-go,' not a disclosure item. This pushes diligence into governance details and investor rights—especially for projects with international strategic investors, cross-border JVs, or structured financing vehicles.

4.4 Blending in the U.S.: allowed physically, but doesn't grant credit ownership

Blending is treated as minimal processing, not production. The credit is eligible for the taxable year when the qualified sale occurs (with related-party attribution rules addressed). The market will continue to contract around the question: who is the 'producer' and who controls the qualified sale—and that will flow through to offtake pricing.

5. Optionality, Risks, and Upsides: How Market Dynamics Shift

Optionality that shrinks

Import-and-finish strategies shrink because minimal processing does not qualify as production. **Fuel-to-fuel upgrading optionality** shrinks where the primary feedstock is itself a 45Z transportation fuel, due to anti-double-crediting. **Extreme negative-CI arbitrage** shrinks because negative CI is generally floored at zero (except manure).

Risks that rise

Eligibility risk becomes binary: one broken link—feedstock origin, ownership status, production location, registration, documentation—can erase credit value. **Supply-chain risk** concentrates: the 2026 feedstock-origin rule makes 'qualifying molecules' a constrained input. **Operational risk** matters more: commingling and tracking can change credit math.

Where smart players can build durable advantage

North American feedstock platforms (collection, rendering, aggregation, traceability) gain strategic value because they unlock eligibility, not just supply. **Integrated producers** with control of feedstock, production, and documentation can win margin without heroic assumptions. **Manure-based RNG pathways** retain special upside due to the negative-CI exception. **Institutional-ready SAF platforms** (high-quality certification, robust measurement, defensible chain-of-custody) will be more investable as diligence expectations rise.

6. For European Leaders: Why This Feels Different Than RED II

If you're used to European compliance markets under the RED framework, the key mental shift is this: In the EU, the market is fundamentally mandated - obligated parties must meet targets, and value accrues

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inside a compliance architecture. In the U.S., 45Z is fundamentally voluntary—it's a tax credit incentive paid to the producer when eligibility conditions are met and a qualified sale occurs.

Three practical context clues that help Europeans read the nuance:

Industrial policy is explicit. The post-2025 requirement to use U.S./Mexico/Canada feedstock is not subtle—it's a supply-chain localization lever.

ILUC is treated differently. For post-2025 fuel, 45Z excludes ILUC from the emissions rate.

The audit trail is converging. SAF certification frameworks reference internationally familiar schemes and verification standards; in practice, you will recognize the compliance posture even if the market mechanism is different.

The takeaway for international investors: U.S. value can look bigger in headline terms, but it is often more contract-driven and more eligibility-sensitive than European mandate markets. In Europe you manage compliance; in the U.S. you manage eligibility, substantiation, and monetization.

7. What to Do Now: A 30/60/90-Day Playbook

In the next 30 days: protect eligibility

Map your pathway chain and identify any fuel-to-fuel exposure (e.g., ethanol-to-SAF) that could be impaired by anti-double-crediting. Audit your ownership and control posture against the specified foreign entity and foreign-influenced entity restrictions. Confirm your facilities qualify and that you're meeting core eligibility requirements: U.S. qualified facility, registration, and qualified sale mechanics.

In the next 60 days: secure the feedstock moat

Identify which volumes are U.S./Mexico/Canada origin and build documentary support for chain-of-custody ahead of 2026. Re-cut contracts: add origin representations and warranties, audit rights, and 'change in law' pricing logic that anticipates 2026. For SAF: build your certification plan and verify your verifier capacity - don't assume the market has unlimited certifier bandwidth.

In the next 90 days: re-price the strategy

Run two scenarios for each asset: 2025 economics (with SAF premium) vs. 2026+ economics (no SAF premium plus USMCA feedstock constraint). Stress-test logistics and commingling assumptions—operational details can change credit outcomes.

If you are investing, decide whether you are underwriting: (a) production margin, (b) feedstock access, (c) eligibility and legal durability, or (d) certification and traceability capability. The winning platforms will be those that control at least two of these.

8. How We Can Help @ 23.5

We wrote this brief because it's the kind of synthesis we'd want if we were allocating capital, negotiating offtake, or pressure-testing a growth thesis in renewable fuels. The 45Z guidance is dense, but the strategic implications are not complicated once you pull out what changes the math.

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If you're navigating this space—as an operator, investor, or board—and want a partner who can cut through complexity without getting lost in it, we'd welcome the conversation.

Sources and Further Reading

Selected primary sources and practical references (links current at time of writing):

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