

Final Rule: Section 45V Credit for Production of Clean Hydrogen

On January 3, 2025, the Department of the Treasury (Treasury) and the Internal Revenue Service (IRS) will release the final rules for the section 45V Credit for Production of Clean Hydrogen.

According to Treasury and the IRS, the final rules are designed to provide additional clarity and investment certainty to the clean hydrogen industry, especially participants in the Department of Energy (DOE)'s Regional Clean Hydrogen Hubs program, while adhering to the Inflation Reduction Act's emissions requirements.

Disclaimer: This alert is based on explanatory material detailed by the administration.

Future 45VH2-GREET Guidance

According to Treasury and the IRS, an updated version of the 45VH2-GREET model will be released in the coming weeks.

GREET Lock-In

Under the final rules, hydrogen producers will have the option of using the version of the 45VH2-GREET model that was the most recent at the start of the facility's construction for the duration of the credit.

Electrolytic Hydrogen

The final rules continue to maintain the three requirements for Energy Attribute Certificates (EACs), the "three pillars," from the proposed rule with several key differences. According to Treasury and the IRS, these safeguards are crucial to ensure that clean hydrogen production's additional strain on the grid does not cause significant indirect emissions.

- **Time-matching**: The final rules require that hydrogen facilities adhere to hourly matching rules starting in 2030. This represents a two-year extension of the annual matching transition from the proposed rule.
 - **Hourly accounting option**: Once hourly matching is required, hydrogen producers can determine their emissions on an hour-by-hour basis if their annual emissions are under the 4 kg CO₂ to 1 kg H₂ Clean Hydrogen Production Standard. Until 2030, clean hydrogen producers will be subject to the annual accounting calculation initially proposed.
- **Deliverability**: The final rules maintains the requirement that clean power must be sourced from the same region as the hydrogen producer, as derived from the DOE's National Transmission Needs Study. The final rules add certain clarifications and provide a pathway to demonstrate electricity sales between regions.
- **Incrementality**: Like the proposed rules, the final rules define electricity generation as incremental if operations and/or increases in capacity begin within 36 months of the hydrogen facility being placed in service. However, the final rules provide three additional pathways for demonstrating incrementality. *(continued next page)*

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Demonstrating Incrementality

The Final Rule provides three additional pathways for demonstrating incrementality:

- **Nuclear Avoided Retirements**: If a nuclear plant meets certain thresholds for proving a risk of retirement and dependence on hydrogen production, up to 200 MW of electricity per reactor will be considered incremental.
- **State Policies**: Electricity generated in states with GHG emissions policies paired with clean energy standards or renewable portfolio standards meeting certain criteria will be considered incremental. Treasury has determined that Washington and California currently meet these criteria, but other states could meet these criteria with future policy changes.
- **New Carbon Capture and Sequestration (CCS)**: Electricity from a source that has added CCS in the 36 months before the hydrogen facility is placed in service.

Methane-Based Hydrogen

- **Upstream Methane Leakage**: While the forthcoming version of 45VH2-GREET will base upstream methane leakage rates on a default national value, future releases of 45VH2-GREET will incorporate project-specific rates based on data from the Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP).

Renewable Natural Gas (RNG)

- **Natural gas alternatives**: The final rules include guidance on how to claim the credit for a wider range of alternatives sourced from biogas and fugitive methane, including wastewater, animal manure, and landfill gas, along with coal mine methane. The final rules provide clarity on calculating lifecycle GHG emissions for these sources, including by considering emissions in counterfactual scenarios and not blending the emissions intensities of feedstocks.
- **First productive use**: The final rules do not include the first productive use requirement from the proposed rules. Instead, the final rules factor in the likelihood that a source would otherwise be productively used.
- **Book-and-claim**: The final rules provide further detail regarding the information that book-and-claim systems will need to provide. Taxpayers will be able to begin using these systems starting in 2027, once the Secretary of Treasury determines that a system has met the necessary requirements.