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U.S. Department of Treasury
Internal Revenue Service
CC:PA:LPD:PR (REG–117631–23)
Room 5203
P.O. Box 7604
Ben Franklin Station
Washington, DC 20044

RE: Comments on Proposed Regulations (REG–117631–23) for the Section 45 Clean Hydrogen Production Credit

To whom it may concern:

The Ohio Oil & Gas Association (OOGA) respectfully submits comments on the Notice of Proposed Rulemaking relating to the clean hydrogen production credit in Internal Revenue Code Section 45V (REG–117631–23, "**Proposed Regulations**") published by the Department of the Treasury ("**Treasury**") and the Internal Revenue Service ("**IRS**").[1] These rules are essential to ensuring that the Companies we represent have the certainty they need to expand their decarbonization investments and their role in the hydrogen economy. However, OOGA is concerned that the rules contain limitations and restrictions that are inconsistent with the statute and will threaten the Biden Administration's efforts to support the growth of America's clean hydrogen industry, which is necessary to achieve needed, substantial emissions reductions from critical industrial sectors.

The Ohio Oil & Gas Association (OOGA) is one of the largest and most active state-based oil and natural gas associations in the United States and has been the representative of Ohio's oil and gas producing industry since 1947. OOGA's members are involved in all aspects of the exploration, development, production and marketing of crude oil and natural gas resources in Ohio. The Association's members often rely on OOGA as their primary source of information on industry trends, activities, tax changes, legislation and regulatory issues. OOGA frequently participates in federal and state regulatory actions affecting the oil and gas industry.

The following critical changes to the Proposed Regulations are needed so that the lifecycle greenhouse gas ("**GHG**") emissions rate calculated with respect to a particular producer gives credit to carbon intensity ("**CI**") reduction efforts within the well-to-gate framework of the statute.

1. **Treasury/IRS Should Allow Producers to Use Actual Upstream Methane Loss Rates in the Calculation of Well-to-Gate GHG Emissions of the Hydrogen Produced.**

[1] 88 Fed. Reg. 89220 (Dec. 26, 2023).

The Proposed Regulations direct producers to calculate their well-to-gate GHG emissions for purposes of determining eligibility for the Section 45V credit using the most recent Greenhouse gases, Regulated Emissions, and Energy use in Transportation model ("**GREET Model**" or "**45VH$_2$–GREET**"). However, one of the fixed assumptions (also referred to as background data) in the GREET Model is the upstream methane loss rate. This is the rate at which methane (CH_4, which is the primary component of natural gas) is lost between when it comes out of a well and when it reaches the hydrogen production facility.

Treating this rate as background data means that it only varies based on the hydrogen production pathway and feedstock selected. The variable reflects the national average methane loss rate across all producers in that category, regardless of the location or other factors impacting the carbon intensity of the feedstock (i.e. regionality) or the specific emissions reduction measures a producer may have taken to minimize its actual methane leakage rate to produce responsibly sourced gas ("**RSG**").[2] Currently, the background assumption in the GREET model for this variable is 0.9 percent (0.9%) per MMBTu[3]. However, many clean hydrogen producers have reduced their upstream methane leakage rates down to a fraction of that assumed number.

Producers are now meticulously tracking upstream methane loss rates. They do this not just because they are committed to reducing GHG emissions and the impact of our clean hydrogen production on the environment, but because the Environmental Protection Agency ("**EPA**") also requires this information. Pursuant to strict data collection standards set forth by the EPA, the actual methane lost is measured between when it leaves the well and when it arrives at our hydrogen production facility and that information is reported to the EPA on an annual basis. Producers attest to the accuracy of that number under penalty of perjury, and the data is readily auditable by a third party.

In the preamble to the Proposed Regulations, Treasury and the IRS asked for comment on the "readiness of verification mechanisms that could be utilized for certain background data in 45VH$_2$–GREET if it were reverted to foreground data in future releases." The upstream methane loss rate is a data point that can be readily verified to the hundredth of a percentage-point today with industry-leading mechanisms that withstand the scrutiny of the EPA and third-party auditors. OOGA respectfully requests that the final regulations allow each producer to use its individualized data points —and not the average background assumption in the GREET Model— to calculate its actual well-to-gate emissions for purposes of Section 45V.

While we expect that some future version of the GREET Model might revert the upstream methane loss rate to foreground data, clean hydrogen producers need the final regulations to support calculations that incorporate the actual data for this variable now. This is necessary to

[2] RSG is natural gas that has been produced responsibly with a low carbon intensity, measured, and verified using credible informed standards. This high-fidelity data is reported by producers to the EPA and verified by independent third parties, such as the MiQ Certification program, which has been operational for 3+ years and now certifies over 20% of US production.

[3] As noted in Section 2.4.2 of the U.S. Department of Energy's Guidelines to Determine Well-to-Gate Greenhouse Gas Emissions of Hydrogen Production Pathways using 45VH2-GREET 2023, the methane rate of 0.9% is derived from the Updated Natural Gas Pathways in GREET 2022 published by Argonne National Laboratory in October 2022. See Table 4 which reflects 206.6 grams of CH4 per MMBTu, or 0.9% (1MMBTu = 22,380.5 grams).

ensure that RSG may serve as a feedstock for clean hydrogen and enable it to qualify for the maximum available Section 45V credit if the thresholds are met.

Some of our members produce what's commonly referred to as blue hydrogen, which in our case pairs either steam methane reforming or autothermal reforming of renewable natural gas with carbon capture and sequestration. Further, many of our members are investing tens of millions of dollars to minimize CI throughout their processes, achieving a level of GHG emissions that would clearly qualify them for the maximum Section 45V credit. However, because the Proposed Regulations require use of the GREET Model and Treasury has proposed to lock the upstream methane loss rate as a default "background" value, they will no longer be eligible for the full Section 45V credit. Such a rule undermines the investments our members are making to reduce emissions and is inconsistent with the policy behind the provision, which was designed to reduce the costs of all qualifying clean hydrogen to fuel the energy transition.

In the alternative, we ask you to determine that clean hydrogen produced from RSG feedstock is distinct from the hydrogen production pathways utilizing natural gas that already are included in the most recent GREET model and expressly confirm that producers utilizing RSG feedstock are able to petition the Secretary for a provisional emissions rate ("PER") determination that takes into account the upstream methane loss rate reflected in their EPA-certified data. Expanding access to the PER process in this way could serve as an interim measure, only until DOE updates 45VH_2-GREET to make the upstream methane loss rate "foreground data."

2. **Use of a Small Percentage of Hydrogen to Power Production of Hydrogen and Co-Products Is a Qualified Use.**

Section 1.45V(d)(2) of the Proposed Regulations provides an anti-abuse provision that a verifiable use include neither "(i) use of hydrogen to generate electricity that is then directly or indirectly used in the production of more hydrogen, nor (ii) venting or flaring of hydrogen."[4] There are times when this anti-abuse rule should not apply, such as when a facility utilizes some of the qualified clean hydrogen, which otherwise would be emitted as waste gas, to power components of its facility to create process efficiencies and lifecycle emission reductions.

It would be wasteful to not utilize waste heat and fuel (which may contain hydrogen) to power the on-site operations of the hydrogen production facility. Such facility configurations are designed specifically to create efficiencies across the value chain and eliminate the wasteful production of hydrogen and emissions of carbon oxides, including for the qualified clean hydrogen at the facility. OOGA requests that Treasury and IRS clarify that there are acceptable usages of qualified clean hydrogen produced for generating power on-site when it creates efficiencies and eliminates emissions.

3. **The Final Rule Should Utilize Energy–Based Accounting.**

In response to Treasury's request for comment on alternative co-product accounting methods (e.g., mass allocation vs. energy allocation, etc.) that can better represent the CI of the qualified

[4] See also 88 Fed. Reg. 89234 (describing the proposed anti-abuse rule in the preamble).

clean hydrogen, our members currently use energy allocation. Hydrogen's energy content by mass is disproportionately high compared to other fuels, so allocation on a mass-basis is improper. Our members would not produce or sell hydrogen for its mass. Normalizing CI by mass-based accounting methods would result in a disproportionately small denominator, increasing CI of a product mathematically but not practically. Therefore, the GREET guidelines should recognize methods such as energy allocation for accounting that do not artificially skew CI, even with regards to co-products, to better ensure the accurate representation of the well-to-gate GHG emissions of the hydrogen production.

Conclusion

Congress did not intend for 45V to exclude qualified clean hydrogen produced from natural gas, or any other feedstock, from qualifying for the maximum credit, if the lifecycle GHG emissions rates satisfied the statutory thresholds. Absent change making the upstream methane loss rate "foreground" data in the 45VH_2 GREET, these rules will dissuade clean hydrogen producers who intend to utilize RSG feedstock with carbon capture, utilization, and sequestration from investing in clean hydrogen projects. OOGA respectfully requests that Treasury and the IRS issue final regulations for Section 45V that embrace a lifecycle GHG emissions calculation that is technology-neutral and does not discriminate against any feedstock or production process, if the hydrogen production facility meets the performance-based lifecycle GHG emission rates established in 45V as evidenced by verifiable and certified data based on the best available science. Clean hydrogen producers who invest in equipment and processes that reduce carbon emissions below GREET Model default values should be rewarded for their efforts, not excluded from benefiting from the full credit.

The Association appreciates the opportunity to comment on and suggest revisions to the U.S. Treasury's proposed 45V Clean Hydrogen Production Tax Credit. If finalized in its current form, the proposed guidance would disincentivize hydrogen producers from using low methane intensity natural gas which could hurt blue hydrogen projects. We look forward to continuing to work with the Agency in its development of the proposed rule.

Respectfully submitted,

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