



February 23, 2024

Commissioner Werfel & Secretary Yellen
Internal Revenue Service & the Treasury Department
Washington, D.C. 20460

Re: Support for proposed regulations: Section 45V Credit for Production of Clean Hydrogen and Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property; Docket ID No. IRS-2023-0066-0001

Dear Commissioner Werfel and Secretary Yellen,

On behalf of Clean Wisconsin, we provide these comments to the Internal Revenue Service (IRS) and the Treasury Department in support of the proposed clean hydrogen tax credits under section 45V and energy property treatment under section 48(a)(15) of the Internal Revenue Code. Clean Wisconsin is a statewide, environmental nonprofit organization that works on behalf of our 30,000 members and supporters to protect Wisconsin's air and water and advocate for clean energy and other climate solutions. Strict eligibility requirements for the 45V tax credit will ensure that only truly clean hydrogen production is incentivized, in furtherance of the goals of the Inflation Reduction Act and national climate commitments. **We urge the IRS and Treasury Department to adopt the regulations as proposed, as they are appropriately constructed to compensate clean hydrogen production.** Furthermore, we recommend the agencies adopt a temporal constraint to the 5% exception through the use of negative wholesale electricity prices to address incrementality from existing clean generators.

A potential clean, dispatchable resource

Electricity generation is the largest source of greenhouse gas emissions in Wisconsin, emitting 46.9 million metric tons of CO₂e tons per year.¹ Our state's electricity is still primarily generated by fossil fuels, with over three quarters of electricity produced by coal and gas power plants. Due to decreased renewable energy costs, more stringent regulations for fossil generation, and the urgency of climate change and inequitable air pollution burden, Wisconsin, like the rest of the country, is undergoing a critically needed transition to clean energy.

¹ Wisc. Dept. of Nat. Res., *Wisconsin Greenhouse Gas Emissions Inventory Report*, (December 2021), <https://widnr.widen.net/view/pdf/o9xmpot5x7/AM610.pdf?t.download=true/>.



Our electricity grid is becoming more distributed and weather-dependent with increased deployment of solar, wind, and battery resources. Clean, dispatchable sources of energy will be an important part of a reliable grid, and hydrogen could help provide that reliability and capacity service.

The proposed clean hydrogen tax credit includes three pillars that researchers have identified as necessary to ensure deployment of hydrogen-based energy results in decreases in greenhouse gas emissions: incrementality, temporal matching, and deliverability.² The three pillars are scientifically based and supported by law. The Inflation Reduction Act refers to hydrogen’s “lifecycle greenhouse gas emissions,” which has the same definition as in the Clean Air Act.³ This means accounting for hydrogen production’s greenhouse gas emissions, in order to meet the carbon intensity threshold, *must* include both direct and indirect emissions. The three pillars of incrementality, temporal matching, and deliverability can ensure that an expanding hydrogen production industry does not result in increased emissions. Clean Wisconsin supports the Treasury Department and the IRS’s inclusion of all three pillars in the proposed regulations.

The proposed lifecycle greenhouse gas emissions rates (kg/CO₂e per kilogram of hydrogen) are appropriately set. We urge the agencies to maintain the thresholds as proposed in order to only compensate truly clean electrolytic hydrogen production. Furthermore, we support the prevailing wage and apprenticeship requirements included in the proposed rule to help ensure a just transition to a clean energy economy..

1st pillar: Incrementality

A critical component of clean hydrogen production is that grid emissions are not increased by adding electrolytic hydrogen production. Diverting existing clean energy to hydrogen production could lead to increased fossil electricity generation for the load that those sources were previously serving. Per the proposed regulations, pre-existing minimal-emissions generation sources (i.e. nuclear, hydroelectric, wind, solar) are ineligible from providing electricity for 45V compliant qualified clean hydrogen. Incrementality exceptions for otherwise curtailed power

² Ricks, W., Xu, Qingyu, X., and Jenkins, J. *Minimizing emissions from grid-based hydrogen production in the United States*, 18 Environ. Res. Lett. (2023), <https://iopscience.iop.org/article/10.1088/1748-9326/acacb5/meta>.

³ 136 Stat. 1818



generation could be beneficial and the proposal seeks guidance on these exceptions for existing minimal generation resources.

Of the formulaic approaches to addressing incrementality from existing clean generators (part V.C.2.a.iii), Clean Wisconsin only supports a temporal constraint to the 5% exception through the use of negative wholesale electricity prices. Another alternative proposed that existing nuclear and hydroelectric generation could qualify as new sources at time of their relicensing – we do not support this approach. An analysis from the Rhodium Group found that a blanket exception for relicensed nuclear and hydroelectric generation could result in increasing emissions up to 358 million metrics tons of CO₂e by 2035.⁴ The proposal also suggests an alternative approach to existing minimal-emissions generation sources, one that applies a broad 5% exception for existing clean power. Without any temporal restrictions, a 5% exception could add nearly 1,500 MM tons of CO₂e emissions before 2035.⁵ The 5% exception to existing clean power is intended to capture otherwise curtailed existing clean energy, we support the inclusion of negative wholesale electricity prices (via LMPs) to temporally constrain the 5% exception.

2nd pillar: Temporal matching

We support the temporal matching requirements as proposed. Annual matching until 2028 is appropriate, as it gives sufficient time to develop hourly tracking systems. We applaud the Treasury Department and the IRS for not exempting preexisting hydrogen facilities built before 2028 from meeting the hourly matching requirements.

3rd pillar: Deliverability

The inclusion of the deliverability pillar ensures that clean energy is not stuck behind a transmission constraint, resulting in a closer thermal unit providing energy for hydrogen production. The DOE Grid Congestion Zones are an appropriate and transparent source of congestion considerations. We acknowledge more granular congestion zones would be more

⁴ Rhodium Group, *How clean will US hydrogen get? Unpacking Treasury's proposed 45V tax credit guidance* (2024), <https://rhg.com/research/clean-hydrogen-45v-tax-guidance/>

⁵ Id.



accurate, as transmission constraints occur within balancing areas, however, we do not have a more granular national source on congestion constraints to propose.

Conclusions

Wisconsin residents, farmers, and businesses are already experiencing the impacts of climate change from wildfire-fueled air pollution, drought, and flooding⁶. Clean hydrogen can be a valuable clean dispatchable energy source to help accelerate the transition from dangerous fossil fuels. It is imperative the Treasury Department and the IRS develop thorough and robust qualifications for the 45V tax credit. There is no cap to the amount of hydrogen production that will qualify for the tax credit, with a potential investment in this industry hundreds of billions of dollars.⁷ We must ensure that federal incentives for domestic hydrogen production do not worsen the climate crisis by increasing indirect and direct emissions. **We urge The IRS and Treasury Department to adopt the regulations as proposed.** If the agencies broaden the incrementality pillar to include otherwise curtailed existing clean resource, we urge them to include a temporal constrain of negative wholesale electricity prices.

Respectfully submitted,

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⁶ Wisc. Initiative on Climate Change Impacts, *Wisconsin's Changing Climate: Impacts and solutions for a warming climate* (2022), <https://wicci.wisc.edu/2021-assessment-report/>.

⁷ EPRI, *Impacts of IRA's 45V Clean Hydrogen Production Tax Credit* (2023), <https://www.epri.com/research/products/000000003002028407/>.