INDEPENDENT ENERGY PRODUCERS ASSOCIATION

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United States Department of the Treasury
Internal Revenue Service

RE: REG-117631-23

Introduction

The Independent Energy Producers Association (IEP) writes in support of the Internal Revenue Service (IRS) guidance on the 45V Clean Hydrogen Production Tax Credit (PTC) (Section 45V of the Internal Revenue Code), pending amendments as outlined in our comments. IEP is California's oldest and leading nonprofit trade association, representing the interest of developers and operators of independent energy facilities and independent power marketers. IEP members collectively own and operate approximately one-third of California installed generating capacity, which includes renewable products derived from hydrogen. IEP's interest in the PTC stems from our members' growing interest and investment in the hydrogen industry, utilizing new and existing renewable energy resources and facilities. We appreciate the work of the Department of the Treasury and the Biden Administration to offer guidance on eligibility for the PTC and we are confident, with the proposed amendments below, the final guidance will boost the clean hydrogen production market.

Incrementality

IEP respectfully requests amendments to the qualifying energy attribute credit (EAC) requirements. The proposed regulations create three rules for a taxpayer to be eligible for an EAC. First, the production facility may not draw electricity from generating facilities that are 36 months older than the hydrogen production facility ("incrementality"). California has abundant existing renewable energy resources, including solar, wind, hydropower, geothermal, and biomass.[1] In December of 2023, the California Independent System Operator (CAISO) achieved 4.572TWh of renewable generation and peaked for the year at 8.416TWh in July 2023 in renewable generation.[2] In the peak month of July 2023, the wind and solar energy curtailment for the CAISO was 57,876MWh—these are existing megawatt hours that can be captured by clean hydrogen production. These numbers are impressive

[1] https://www.eia.gov/state/analysis.php?sid=CA
[2] https://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-Jul2023.html; https://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-Dec2023.html.

but do not account for the entirety of California's renewables portfolio. Utilizing existing renewable resources is necessary to achieving an affordable and swift transition to a clean hydrogen economy. Today, the permitting process for clean energy projects and transmission projects take between 4.5 years to more than a decade[3] to complete. Allowing existing renewable energy facilities to be eligible for EAC credits will ensure clean hydrogen production will ramp up sooner and immediately reduce emissions once online.

Temporal Matching

IEP respectfully requests temporal matching be amended from an hourly matching to a monthly matching, allowing the electrolyzer to run consistently rather than ramping up and down which may impact economic viability and durability. The four types of electrolzyers on the market vary in ability to ramp up and down, which impacts costs of doing so, and the ramping process may impact the durability of the electrolyzer. For example, the alkaline electorlyzer can only be ramped up and down if pressurized; the anion exchange electrolyzer can ramp up and down at similar costs to the alkaline but experiences degradation; proton exchange membrane electrolyzers have ramp capability but include costly materials; and, solid oxide elctrolyzers are able to ramp but will suffer a shorter lifetime use if ramped frequently.[4] Permitting monthly temporal matching will enable whatever electorlyzer is suitable for the clean hydrogen producer to run consistently and limit cost and durability obstacles.

These proposed regulations reflect the European Union's Renewable Fuels on Non-Biological Origin (RFNBO) efforts, defined as "renewable liquid and gaseous fuels of non-biological origin," to direct industry production of ammonia, chemicals, oil refining, and green steel to utilize at least 42% renewable hydrogen by 2030.[5] Renewable hydrogen production in the EU promotes temporal matching, however, it is on a monthly matching basis rather than hourly, as suggested by these proposed guidelines.[6]

Deliverability

[3] https://cleanpower.org/resources/u-s-permitting-delays-hold-back-economy-cost-jobs/
[4] https://www.energypolicy.columbia.edu/demystifying-electrolyzer-production-costs/; https://www.hydrogeninsight.com/electrolysers/green-hydrogen-which-type-of-electrolyser-should-you-use-alkaline-pem-solid-oxide-or-the-latest-tech-/2-1-1480577
[5] https://assets.publishing.service.gov.uk/media/65a69960867cd800135ae959/dft-rtfo-guidance-for-renewable-fuels-non-biological-origin.pdf.
[6] https://assets.publishing.service.gov.uk/media/65a69960867cd800135ae959/dft-rtfo-guidance-for-renewable-fuels-non-biological-origin.pdf.

IEP respectfully recommends reconsideration of the EAC eligibility requirement that the renewable energy resource that powers the production of clean hydrogen be derived from the same region as identified In the Department of Energy's 2023 National Transmission Needs Study, otherwise known as deliverability. Requiring clean hydrogen producers to source their renewable electricity from the same region risks an insufficient amount of renewable energy being available for the clean hydrogen production within the region and doesn't account for the highly successful inter-region energy exchange market known as the Western interconnection. The Western Interconnection includes over 9 states and 2 Canadian states, expecting to exchange over 61.7 GW of renewable power in the next decade.[7] Utilizing this existing market ensures a balance of renewable energy exchanges across the West, boosting this necessary partnership as more extreme weather impacts peak load predictions, increasing the need to rely on regional partners for clean energy production.

Conclusion

IEP is appreciative of the commitment the Biden Administration has illustrated in clean hydrogen investments and our members look forward to helping grow the clean hydrogen economy with workable PTC guidance.

Signed,

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https://iepa.com/

[7] https://www.wecc.org/Administrative/State%20of%20the%20Interconnection.pdf.