February 26, 2024

VIA ONLINE PORTAL: https://www.regulations.gov/commenton/IRS-2023-0066-0001

CC:PA:LPD:PR (REG-117631-23)
Room 5203
Internal Revenue Service
P.O. Box 7604
Ben Franklin Station
Washington, DC 20044

Re: Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property

Dear Department of the Treasury and Internal Revenue Service,

We appreciate the opportunity to share our thoughts on Section 45V Credit for Production of Clean Hydrogen. The United States Hydrogen Alliance (USHA) is a non-profit trade association dedicated to building the U.S. hydrogen economy. Our organization represents hydrogen companies actively deploying clean technologies across the country.

We are writing to share our perspective on several key program areas for your consideration. These requests and concerns address methane, 45V H2 GREET pathways, development of market mechanisms, grid electricity, temporal matching, the anti-abuse rule, and EAC's.

We ask for flexible access to low greenhouse gas (GHG) methane sources (e.g. renewable natural gas (RNG), responsibly sourced gas (RSG)) to reduce GHGs and the levelized cost of hydrogen (LCOH). Methane-splitting technologies produce both hydrogen and solid carbon; solid carbon is a commercial product. The proposed regulations do not clearly address how this carbon will be treated as valorized, which is important for purposes of allocating the GHG emissions. The 45V H2 GREET model guidance document and the model itself indicate that only steam, oxygen, and nitrogen may be valorized. We urge the Treasury Department to include the concept and definition of valorization in the final regulations, and to permit solid carbon to be treated as valorized when the carbon is sold or used to produce an end product that will be sold. We also ask for the inclusion of distinct upstream

methane types (e.g., RNG, RSG, different basins/regions) in foreground data in the 45VH2-GREET model to incentivize demand for lower-GHG methane, along with support for development of market mechanisms (e.g., energy attribute certificates (EACs)) to validate distinct methane carbon intensity.

The 45V H2 GREET model does not yet have a pathway for methane splitting technology. We request that a new pathway be added by Argonne National Laboratory as soon as possible, with our input and collaboration where possible. We also suggest that the Treasury Department allow us to obtain a provisional emissions rate (PER) in parallel, based on our own data and verification, until the new pathway is available. We further propose that the Treasury Department guarantee optionality between PER and 45V GREET data, and also provide certainty on life cycle analysis methodology for the lifetime of a project to reduce risk and accelerate project investment and clean hydrogen production.

The proposed regulations use large North American Electric Reliability Corporation (NERC) regions to determine the baseline GHG emissions score for grid electricity used to produce hydrogen, but smaller areas (the transmission needs studies areas) to determine the eligibility of EACs to offset those emissions. This disadvantages producers in localities like Oregon that have invested in a clean grid, by placing them in a much larger pool of generally dirtier power generation for finding a baseline GHG score, while then limiting them for purposes of buying EACs (Oregon has limited access to non-hydroelectric renewable electricity). We recommend that the Treasury Department use the same or similar regions for both purposes or allow for exceptions for states and other jurisdictions that have a substantially clean electricity grid attributable to both local generation and purchased power.

The proposed regulations base the amount of tax credit available per kilogram of hydrogen on an annual average GHG score. This creates a risk for hydrogen producers that must purchase EACs to reduce their GHG score, as they may lose tax credits for the entire year if they are not able to procure enough EACs due to matters beyond their control, such as weather events, market fluctuations, or supply disruptions. This is particularly troubling in 2028 and later, when EACs must be matched to hydrogen production on an hourly basis. We suggest that the Treasury Department allow hydrogen producers to choose between claiming 45V credits based on an annual average GHG score or only for those kilograms of hydrogen that can be demonstrated to have a sufficiently low GHG score, using the independent verification methods already required in the proposed regulations.

The anti-abuse rule needs more clear guidelines, specifically regarding the limitations on using qualified clean hydrogen to produce hydrogen. Hydrogen can be produced and consumed in the same process,

only the net clean hydrogen output should be eligible for tax credit claims (net hydrogen produced from a facility compared to gross hydrogen from the entire process).

The proposed regulations require that any EACs purchased to reduce the GHG emissions score for hydrogen be generated at an electricity generation facility that has a commercial operations date (COD) that is no more than 36 months prior to the date on which the hydrogen production facility was placed in service. The proposed regulations do not clearly define how to determine COD for refurbished electricity generation facilities. We request that the Treasury Department clarify that the 80/20 rule, which analyzes the proportion of used to new equipment in a refurbished facility, should apply for purposes of determining COD for EACs.

We also would like to support any hydrogen generation that is coming from nuclear, hydropower, or any other zero or low carbon electricity and renewable electricity, as this will further the country's decarbonization goals.

We at the United States Hydrogen Alliance thank you for your time and consideration. Please reach out to us if you have any questions.

Respectfully,

R. Bekemohammadi

Roxana Bekemohammadi
Founder and Executive Director
United States Hydrogen Alliance