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February 26, 2024

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Room 5203
Internal Revenue Service
P.O. Box 7604
Ben Franklin Station
Washington, DC. 20044

Re: World Energy Comments on Proposed Regulations Relating to the §45V Credit for the Production of Clean Hydrogen; §48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property (REG-117631-23).

World Energy appreciates the opportunity to comment on regulations proposed by the U.S. Department of Treasury (Treasury) and the Internal Revenue Service (IRS) to implement the §45V credit for the production of clean hydrogen (§45V credit) and the §48(a)(15) election to treat clean hydrogen production facilities as energy property.

About World Energy:

World Energy is a low-carbon solutions provider focused on helping the world's leading companies make their carbon net-zero commitments real. The company is delivering ever-better solutions at an ever-greater scale to efficiently cut, accurately account, and transparently report carbon emissions reductions in operations based in air and on water, rail, and road. Founded on Earth Day in Boston in 1998, the company has been commercializing, producing, and distributing low-carbon fuels for more than two decades.

World Energy is one of the largest and longest-serving advanced clean energy suppliers in North America. We are the world's first producer of sustainable aviation fuel (SAF) and remain leaders in the field of renewable fuels. We have seven renewable fuel facilities across the United States and Canada and are converting two of them to the production of SAF. Our facility in Paramount, CA, where we produce SAF today, is in the final stages of conversion from a petroleum refinery to a 100% renewable fuels bio-refinery. In Houston, we are converting our biodiesel facility into a SAF bio-refinery. When completed, World Energy's facilities together are projected to increase production capacity to approximately 700 million gallons of low carbon fuels per year, including approximately 550 million gallons of SAF. We anticipate our facility in California will be the first of its kind for the production of 100 percent clean hydrogen, where it will produce approximately 65,000 metric tons of clean hydrogen per year.

World Energy is a necessary leader in North America in the effort to expand the production and use of clean hydrogen. In addition to our clean hydrogen facility in California, we are also moving forward on a major clean hydrogen facility in Canada. On August 23, 2022, World Energy CEO and Founder Gene Gebolys was joined by Canadian Prime Minster Justin Trudeau and German Chancellor Olaf Scholz at the site of World Energy's project in Stephenville, Newfoundland and Labrador, for the signature of an

agreement between Canada and Germany. This agreement will stimulate the development of World Energy's clean hydrogen production from wind power through electrolysis.

When complete, the facility in Stephenville will supply 250,000 metric tons of clean hydrogen annually to global markets becoming Canada's first large-scale clean hydrogen facility. This is a massive strategic imperative for both North America and Europe because it will provide access to clean hydrogen and ammonia, fundamental building blocks of manufacturing, which will provide a real alternative for Russian natural gas. This clean hydrogen eventually can also be used for SAF production creating a fuel solution that starts green and ends green and therefore further driving down the carbon emissions in the aviation sector.

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World Energy offers the following perspective on proposed regulations to implement the §45V credit and the election to treat clean hydrogen facilities as §48 energy property.

Modifications or retrofits to existing facilities to produce clean hydrogen:

The §45V credit should be administered in a way that rewards the deployment of new clean hydrogen production infrastructure. Towards this end, the proposed regulation clarifies that simply changing fuel inputs in the hydrogen production process would not qualify as a facility modification. The proposed regulation would also apply the 80/20 rule in situations where an existing facility is retrofitted to establish a new placed in-service date to produce clean hydrogen and claim the §45V credit. To reward the deployment of clean hydrogen production infrastructure and to avoid the unintended consequence of putting new clean hydrogen facilities at a competitive disadvantage, it is appropriate to incorporate these provisions relating to modifications and retrofits of existing facilities in the final regulations governing the §45V credit.

Renewable Natural Gas (RNG) and the production of clean hydrogen:

RNG is produced by capturing biogas at landfills, wastewater facilities, and animal agriculture operations that would otherwise be flared or vented into the atmosphere. Impurities are removed from the biogas using cleaning and conditioning equipment, and the resulting RNG is indistinguishable from conventional natural gas and is fully fungible in existing natural gas infrastructure.

The climate mitigation benefits of displacing conventional natural gas with RNG are well-documented. The United Nations Intergovernmental Panel on Climate Change notes that methane is 28 times more potent as a greenhouse gas (GHG) when compared to carbon dioxide when measured over a 100-year timeframe. According to the Environmental Protection Agency (EPA), landfills and manure management account for 15% and 8% respectively of domestic methane emissions. The production of RNG helps reduce methane emissions from these and other sources. Accordingly, the GHG lifecycle analysis used by the EPA to administer the Renewable Fuel Standard (RFS) and the California Air Resources Board (CARB) to administer the state's Low Carbon Fuel Standard (LCFS) recognize the lifecycle GHG mitigation benefits of RNG.

The regulations governing the §45V credit should be structured in a way that recognizes GHG reductions from using RNG both as a feedstock and as a source of electricity in the production of clean hydrogen. As a practical matter, clean hydrogen producers who utilize RNG will need access to a reliable and

abundant supply of the fuel; therefore, the regulations governing the use of RNG should avoid cumbersome requirements that could artificially constrict the use of a feedstock that has the potential to significantly reduce GHG emissions associated with the production of clean hydrogen.

Principles for incorporating RNG into the §45V credit regulatory structure:

World Energy offers the following principles for consideration as Treasury and IRS finalize regulations governing the use of RNG to produce clean hydrogen:

- Book and claim accounting is commonly used in both public and private sector transactions involving both conventional natural gas and RNG. Further, RNG typically moves from its point of production to end users via pipelines. To the degree feasible, existing documentation associated with book and claim transactions should be utilized to track the non-direct use of RNG in the production of clean hydrogen.

- Attestation requirements can be used in tandem with book and claim accounting to ensure RNG used to produce clean hydrogen is not double-counted and used to generate compliance credits under programs such as the RFS and LCFS.

- Book and claim accounting combined with attestation obviates the need for strict geographic or deliverability requirements that could hinder the ability of hydrogen producers to access RNG as a low-carbon feedstock or source of electricity to produce clean hydrogen.

- Expanded production and use of RNG mitigates GHG emissions by capturing emissions that would otherwise be flared or vented into the atmosphere at landfills, wastewater treatment facilities, and animal agriculture operations. There are no land use changes associated with RNG projects. Given the untapped opportunity of potential biogas sources, it is unrealistic to assume that RNG will be diverted from other uses, such as transportation applications, to produce clean hydrogen.

Conclusion:

World Energy appreciates the opportunity to comment on proposed regulations to administer the §45V credit. We look forward to working with both Treasury and the IRS to implement these important provisions that will allow for the use of SAF and clean hydrogen technology to sustainably meet the nation's climate goals.

Sincerely,

Scott Lewis

Scott Lewis
President
World Energy (WE) Supply Zero