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Via Federal eRulemaking Portal at www.regulations.gov

Internal Revenue Service
P.O. Box 7604, Ben Franklin Station
Washington, D.C. 20044

The Honorable Lily L. Batchelder
Assistant Secretary (Tax Policy)
Department of the Treasury
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Re: Request for Comments to the Notice of Proposed Rulemaking for Section 45V Credit for Production of Clean Hydrogen, REG–117631–23

Secretary Batchelder,

Eneus Energy, Inc. ("**Eneus**") respectfully submits the comments herein in response to REG–117631–23, request for comments to the notice of proposed rulemaking regarding the Section 45V ("**45V**") credit for production of clean hydrogen (the "**Proposed Regulations**"). We appreciate the work of the staff at the Internal Revenue Service ("**IRS**"), Department of Treasury ("**Treasury**"), and Department of Energy ("**DOE**") to issue the Proposed Regulations and prioritize guidance that will facilitate the use of Section 45V clean hydrogen credit.

Eneus supports the Administration's emissions reduction, decarbonization and clean energy growth goals, and we believe it is critical that the Administration continue to nurture this nascent market to reduce market entry barriers and enable the growth in scale of green hydrogen/ammonia facilities

that will secure multiple billion-dollar investments and long-term value for the USA. We would like to thank the Administration for taking a leadership stance in both encouraging the growth of the green hydrogen/ammonia space – and ensuring that that growth happens in a manner that is truly *green*. There is significant potential to accelerate the decarbonization of numerous sectors, including agriculture, heavy industry, maritime shipping, long-haul road transport, aviation, the power sector, and others, using clean hydrogen in the form of green ammonia. Eneus is broadly supportive of the "three pillars" requirements applicable to environmental attribute certificates ("**EACs**").

We write to request guidance and make recommendations on certain specific matters within the Proposed Regulations.

Current uncertainties around the calculation and guarantee of PTC

Uncertainty around the calculation and guarantee of PTC could limit the ability of early movers in the green hydrogen space to make needed investments in a timely manner. These uncertainties include:

1) There is no clear guidance on whether PTC compliance is calculated on a total facility basis or by kilogram at time of production basis. Without knowing the process by which CI is calculated, there is a risk of letting very small amounts of non-qualifying energy impact an entire facility's eligibility for the PTC. We believe the PTCs should be paid at the kilogram level, rather than the facility level. Furthermore, the first pathway stacks the odds against a project by requiring a full year of compliance with very little room to maneuver. Exceeding, even just slightly, the emission thresholds due to the inherent uncertainty of renewable energy availabilities could cause a plant to miss out on a full year of PTCs. As an alternative, we support monitoring compliance at the kilogram level, with American taxpayers only supporting those kilograms that are fully compliant.

2) The Proposed Rules stipulate that 45VH2-GREET and the "regions" as defined pursuant to the National Transmission Needs Study by DOE, as applicable to deliverability requirements, may be modified from time to time. We would propose that the IRS create a safe harbor for "regions" and accept that the region that was applicable to the facility the year in which it commenced construction remain the applicable region for the duration of the 10-year 45V credit. Unpredictable modification exposes producers to significant risk that at some point within the 10-year 45V eligibility period they may either lose eligibility entirely to receive 45V credits or change the applicable amount that they can receive and originally qualified with the year the facility was originally placed in service. This kind of variability would have enormous consequences on the ability to secure financing for such capital-intensive projects. The applicable amount of the 45V credit is included in financial models, and as a production tax credit, it is therefore tethered directly to 45V pricing for tax credit monetization. For example, in a tax credit transferability transaction, the value of the credit must be known in order to establish pricing and compensation mechanics, which can fluctuate depending upon predicted likely production scenarios, similar to the 45Y PTC for renewable energy generation. If the "regions" are modified in a way where the applicable deliverability region for the producer changes from one year to the next, this could, without warning or notice, completely undermine any long-term procurement contracts Eneus entered into. For example, Eneus could enter into a long-term EAC purchase agreement with a wind or solar facility located in the applicable region the year Eneus places a facility into service. These

agreements contain mandatory purchase obligations. If the "region" is modified such that suddenly, years later, this wind or solar facility is no longer located in an eligible "region" and the underlying EACs therefore no longer meet deliverability requirements, Eneus and other hydrogen producers would be put in the position of both potentially losing eligibility for 45V completely or reducing the applicable amount, and being obligated to purchase EACs that it does not need and cannot use for hydrogen production purposes for many more years.

3) The Proposed Regulations requested comments with regards to battery electric storage systems (BESS) and how BESS can be permitted to assist with hourly matching requirements. EACs are only generated when power is produced. However, the utilization of BESS can reduce a hydrogen facility's induced grid emissions, which is the primary purpose of implementing the "three pillars" framework. Accordingly, Eneus recommends that green hydrogen producers be allowed to contract for a BESS that is charged when the clean power is produced by wind/solar facilities and then discharged when the clean power is utilized by the clean hydrogen facility. We believe there should be flexibility for the BESS facilities to be located at the system level, anywhere in the same Deliverability region as the wind/solar facilities and the clean hydrogen facility. We believe this approach is fully consistent with the Administration's environmental objectives related to clean hydrogen and should not be controversial.

Renewable energy sourcing rules – Deliverability

Availability of renewable energy in MISO will be limited if the RTO remains split into two separate regions. The IRS has generally followed the current RTO structure for most of the country with the one exception of MISO, which has been split into two regions called the Midwest (MISO North) and Delta (MISO South). If a green hydrogen developer was looking to develop a plant in Delta, the ability to support hourly matching based purely on renewable capacity is effectively limited to parts of Arkansas, Louisiana, Mississippi, and a small portion of Texas. Options like virtual power purchase agreements tied to other MISO locations are unavailable, eliminating wind energy support from more fruitful locations in the northern part of the MISO region. Solar capacity is the only true option available within the Delta layout. Hourly and seasonal diurnal profiles for wind projects in MISO North which are materially different from solar profiles in Arkansas and Louisiana, and they would be beneficial to Delta projects, but they would not be available based on the split. Also note that the Midwest region includes certain non-MISO systems, such as AECI, so the currently proposed system is slightly larger than MISO-North itself. Critically, all of MISO operates as a single system, so we believe the currently proposed split is inconsistent with actual operations. If helpful, we would look to the EU's recently adopted regulations and guidance for Renewable Fuels of Non-Biological Origin (RFNBO). In the RFNBO guidance, "Geographical Correlation" is deemed to be satisfied if the renewable electricity facilities and the green hydrogen facility are located in a region that operates with the "same rules". By that logic, we believe the MISO is one region, as it operates with a single system of rules throughout. We understand from the recent COP 28 that there is a general desire on the part of the Biden Administration to establish consistency with the EU in terms of clean hydrogen regulations. (See further discussion below.) Further, for any green hydrogen project in the US, if the developer is willing and able to purchase transmission service or otherwise schedule energy from one region to another, we believe that should be sufficient to satisfy Deliverability requirements.

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Hydrogen pressure requirements

Within 45VH2-GREET 2023, users must produce hydrogen at a pressure no lower than 300 psia or incur a CI penalty equivalent to the electrical need for pressurization. In the green ammonia process, hydrogen compression will occur in the ammonia synthesis loop. Guidance should not therefore penalize hydrogen that is produced at a pressure < 300 psia with a CI penalty equivalent to the electrical need for pressurization. The pressurization will occur in the syngas compressor, and this would result in a double penalty.

GREET Hydrogen production pathways

Currently, there are eight production pathways listed. We would suggest expanding the 8th pathway to include high-temperature water electrolysis that incorporates heat from sources other than nuclear plants. For example, waste heat from certain ammonia production technologies should be eligible under this pathway too, without requiring the developer to apply for a new PER. We believe this should be non-controversial and likely was simply an oversight by the drafters of the guidance.

Compatibility with European Union Renewable Fuels of Non-Biological Origin ("RFNBO") rules

The ability to compete on an even playing ground within the European Union (one of the leading current global markets for green hydrogen and green ammonia) will be difficult. The 45V guidance is stricter than the EU RFNBO requirements on several points, as described below:

1) Incrementality: 45V rules should similarly provide a transition period coupled with grandfathering. Note that we support the IRS' suggestion that already-operating wind, solar, and even nuclear facilities be considered as "incremental", if the clean hydrogen developer is able to show that the life of the wind, solar, or nuclear facility is extended from an otherwise early retirement by virtue of a new PPA with the clean hydrogen developer. We think this is a better solution than allowing a certain percentage of all operating power generation (whether clean or not) to be counted as "incremental", which was also suggested as an option in the draft guidance.

2) Hourly matching: 45V rules implement hourly matching starting on January 1, 2028. Such a requirement will hinder first movers. We call for this date to be tied to the date on which a facility commences construction, rather than when it is placed in service. We also call for a grandfathering to be allowed for projects that commence construction prior to January 1, 2028.

3) Deliverability: For the EU, the geographical correlation (similar to deliverability) level has been set at 'bidding zone level' – "the largest geographical area in which bids and offers from market participants can be matched without the need to attribute cross-zonal capacity". We support this approach as pragmatic and clear and would argue that this would give more clarity to early movers, notably in the MISO region.

4) As the aim of the IRA is to both promote grid decarbonization and clean hydrogen production, we would support the EU RFNBO clause that exempts clean grids with high renewable energy levels (such as ERCOT WEST) or nuclear penetration to be exempted from the above rules, and we would suggest similar consideration in the US.

We appreciate your consideration of the recommendations and requests for confirmation discussed herein and look forward to the issuance of proposed regulations and other guidance applicable to 45V. Eneus shares the Administration's goals to kick-start the green hydrogen economy – and to do it in an environmentally responsible way.

Respectfully,

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