



LIUNA!

February 26, 2024

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VIA ELECTRONIC SUBMISSION

Internal Revenue Service
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Re: Comments on Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property (IRS and REG-117631-23)

Dear Sir or Madam:

The Laborers' International Union of North America (LIUNA) submits the attached comments in response to the request for comments on *Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property*.

Your time and attention to the attached are appreciated. Should you have any questions, please contact this office.

With kind regards, I am

Sincerely yours,

BRENT BOOKER
General President

bks

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COMMENTS OF THE LABORERS' INTERNATIONAL UNION OF NORTH AMERICA ON THE SECTION 45V CREDIT FOR PRODUCTION OF CLEAN HYDROGEN; SECTION 48(a)(15) ELECTION TO TREAT CLEAN HYDROGEN PRODUCTION FACILITIES AS ENERGY PROPERTY (IRS AND REG-117631-23)

The Laborers' International Union of North America (LIUNA) submits these comments in response to the Department of Treasury (Treasury) and the Internal Revenue Service's (IRS) Notice of Proposed Rulemaking of the Inflation Reduction Act's (IRA) Section 45V Production Tax Credit (PTC) of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property. 88 Fed. Reg. 89220-89255 (Dec. 26, 2023). Thank you for the opportunity to comment on these proposed changes.

LIUNA is a diverse union representing over half a million members, most of whom work in the construction industry. LIUNA members work on private and publicly funded projects, including all forms of large-scale energy projects; generation and distribution systems, hydrogen, natural gas and carbon dioxide pipelines, carbon capture and sequestration facilities, and renewable energy projects such as wind, solar, nuclear and hydropower. As such, LIUNA has significant equity in the construction and production of hydrogen and the subject matter of the proposed regulations.

Hydrogen energy is a game-changer for the energy sector. Once fully operational the federally established hydrogen hubs will advance our country's net-zero carbon energy goals by helping decarbonize carbon-heavy industries and supplying the grid with a consistent and reliable source of energy that can meet growing demand. For LIUNA, the creation of the hydrogen hubs will additionally provide significant work hours for our members for years to come.

As of today, three of the proposed seven hydrogen hubs, selected by the Biden Administration's Department of Energy (DOE) to receive federal funding assistance, have signed a Project Labor Agreement (PLA); the California Hub (ARCHES), the Mid-Atlantic Hub (MACH2), and the Pacific Northwest Hub (PNWH2). Three of the remaining four hubs are undergoing negotiations, which will likely result in prominent labor contracts: The Heartland Hub, the Appalachian Hub (ARCH2), and the Midwest Hub (MachH2). LIUNA understands and supports the employment opportunities this sector will provide for our members in many parts of the country.

LABOR STANDARDS WITHIN THE 45V TAX CREDIT

A primary objective of the IRA is to reduce emissions across every sector of the economy while also creating good-paying jobs. The IRA's intention in attaching labor standards requirements is to ensure local wages are not undermined by contractors who win bids by undercutting local labor standards and to encourage the hiring of qualified apprentices. The construction of hydrogen hub facilities required for clean energy production is labor intensive. LIUNA applauds the Biden Administration and the respective agencies for the incorporation of strong labor standards within the IRA, specifically for the 45V hydrogen production tax credit. The regulations, entitled *Increased Credit or Deduction Amounts for Satisfying Certain Prevailing Wage and Registered Apprenticeship Requirements* (88 Fed. Reg. 89220), which are

incorporated by reference in this notice of proposed rulemaking (“NPRM”), will help guarantee that the jobs created by this tax credit will be high-road, family-supporting jobs. While we understand that these provisions are outside of the scope of this proposed rulemaking,¹ we strongly support the continued incorporation of these labor provisions in 45V. LIUNA further refers Treasury to our public comments on the rulemaking regarding IRA prevailing wage and apprenticeship requirements.²

TEMPORAL MATCHING REQUIREMENT CONCERNS

Treasury has requested comments on hourly versus annual temporal matching for the purchase and use of Energy Attribute Certificates (EACs). The guidance proposes an extremely strict timeline to introduce and require hourly time matching of EACs. Starting January 1, 2028, hubs will be required to shift from annual to hourly time matching in order to qualify for the hydrogen PTC. As noted in the proposed guidance, “[h]ourly tracking systems for EACs are not yet broadly available across the country and will take some time to develop.” (88 Fed. Reg. 89233). Even if a proposed hydrogen project is permitted and constructed in a timely manner, its start date will likely surpass the 2028 mandate, thereby immediately requiring hourly matching, giving developers no time to properly understand and comply with a new standard that has never been imposed on the energy industry before.

Given the size and complexity of these hydrogen hubs, their construction will take several years to complete. The permitting process for large-scale hydrogen projects alone will be challenging, as the regulatory process is highly technical and time-consuming. Right now, the average timeline for a project to complete its National Environmental Policy Act (NEPA) review is 4.5 years.³ Moreover, if the proposed additionality (incrementality) requirements from this guidance are included in the final rule, it will further delay every hub’s production start date, as the average timeline to permit transmission projects is at least two years longer (6.5 years).⁴

Requiring hourly temporal matching places burdens on the hydrogen industry that are unnecessary to prove carbon intensity and will inevitably skyrocket costs for hydrogen energy. According to a study of 40 hydrogen production scenarios throughout the country, which compared costs between hourly matching and annual matching, it revealed that “[h]ourly matching results in significantly higher costs for hydrogen production than annual matching for all 40 scenarios.”⁵ In some cases, production costs of hourly matching increased over 100 percent when compared to annual matching. Allowing EACs to be purchased and then used when energy costs and grid demand are lower would significantly lower production costs

¹ 88 Fed. Reg. 89255, fn. 4

² Comment from Laborers' International Union of North America re: IRS-2023-0042-0171.

³ Council on Env'tl Quality, Exec. Office of the President, Environmental Impact Statement Timeline (2010-2018), (June 12, 2020).

⁴ U.S. Dept. of Energy, Lawrence Berkeley National Laboratory, Record Amounts of Zero-Carbon Electricity Generation and Storage Now Seeking Grid Interconnection (April 13, 2022).

⁵ Am. Council on Renewable Energy & E3, *Analysis of Hourly & Annual GHG Emissions* (April 2023).

without raising emissions. “An hourly matching requirement with the same net CO₂ emissions as an annual matching requirement produces higher hydrogen production costs across markets.”⁶

A major factor in the proposed hourly temporal matching (and incrementality) is to ensure green hydrogen energy is produced with clean, renewable energy and not offset by fossil fuels. The ACORE/E3 study, however, finds that “[a]n hourly matching requirement does not ensure lower GHG emissions related to an annual matching requirement...”⁷ Of the 40 scenarios discussed in the study, 25 resulted in lower emissions than hourly matching while 15 scenarios resulted in higher emissions than hourly matching. Yet, only 6 of those 15 scenarios exceeded 0.45kgCO₂ emissions—the threshold that drops the PTC from three dollars to one dollar—and would require an overbuild of renewables to meet the highest credit amount. While the study assumes that all energy is additional wind and solar, it does not account for legacy renewable energy that can run when wind and solar are offline, nor does it account for curtailment.

Having been involved with the construction sector for over a century, LIUNA has extensive experience with project financing and development. LIUNA is deeply concerned that these potential higher production costs will more than likely create uncertainty among large loan financiers, consequently making projects infeasible. As a result, this will jeopardize a substantial amount of work for thousands of LIUNA members if projects are unable to seek proper financing.

Hourly matching is not required on any other form of renewable energy production. Hydrogen should be no different. LIUNA believes annual matching will better incentivize hydrogen production and help ensure long-term investment. If, however, hourly temporal matching is included in the final guidance, LIUNA asks that the requirement, at a minimum, be pushed to a more realistic time, such as 2031.

ADDITIONALITY/INCREMENTALITY CONCERNS

The IRS requests comments on whether existing zero carbon generated energy with a Commercial Operation Date (COD) that is beyond the proposed 36 months should apply and satisfy the proposed incrementality requirement. As mentioned above, this “one for one” incrementality proposal has never been required on any other type of renewable energy production. The intent of the hydrogen PTC was not to overregulate hydrogen but rather to incentivize the production of it. LIUNA, therefore, believes that the limitations of the proposed requirement are overly restricting and threaten the viability of all hydrogen projects.

Several of the hydrogen hub applications for the DOE loan were contingent on using existing renewable energy to provide power for producing green hydrogen. Several of the proposed hubs have threatened to withdraw their hydrogen hub proposal if the 36-month threshold is finalized due to financial concerns.

⁶ Id. at 7.

⁷ Id. at 7.

Similar to hourly temporal matching concerns, incrementality requirements will lead to higher operating costs. Incrementality effectively means only new wind and solar energy, as there are no hydropower or nuclear facilities that fall within the 36-month window, nor are there any new proposed plans for either kind of facility. Therefore, depending on the area and market, a developer will potentially need to finance, permit, and construct two separate large-scale construction projects simultaneously (a new renewable energy project and the hydrogen hub) in order to satisfy the incrementality standard as it is currently proposed.

Cost increases will be exacerbated if the final guidance includes both an incrementality requirement (to use new wind and solar) and the proposed hourly temporal matching requirement because it will only allow electrolyzers to run 50 percent of the time. Either eliminating any incrementality requirements or granting the use of legacy renewable energy will curb costs and boost production by allowing hydrogen producers to purchase EACs when wind and solar energy is offline and/or when grid demand is low. As the IRA intended, LIUNA asks that legacy renewable energy be applicable to any incrementality in the final rule.

Congress' original intent, as reflected in the IRA PTC language, did not include any further requirements as it could restrict the expansion of the hydrogen industry. LIUNA asks that curtail power be included and that 20 percent, as a minimum, should be allowed to meet any incrementality requirements for the production of green hydrogen. Decarbonization standards or deadlines should be put in place that would allow states to increase that percentage. Not only will this help contain costs, it will allow for legacy renewables to qualify. In addition, states with existing clean energy laws should be exempted from any proposed incrementality requirements.

STATES EXEMPTIONS

Treasury seeks comments on whether and how to provide alternative approaches to identifying circumstances in which there is minimal risk of significant induced grid emissions for certain existing electricity generating facilities.

If Treasury includes incrementality requirements in the final rule, states that have clean-energy laws and deadlines on fossil fuel generation should satisfy such requirements. Specifically, state Renewable Portfolio Standards (RPS) or Renewable Energy Standards (RES) that include a 100 percent clean or carbon-free deadline for generation should be allowed to sell EACs from existing renewable generation, thereby satisfying any proposed incrementality requirement. Furthermore, if a proposed hub spans across more than one state in which at least one of those states has a 100 percent clean energy goal within their RPS or RES, that state's current renewable energy production should apply and satisfy any incrementality requirement.

Incrementality, along with the other standards that make up the "Three Pillars", is based on a standalone point in time and does not account for future projects nor the rapid expansion occurring within the wind and solar sectors. Data clearly shows a reduction in CO₂ emissions over the last ten years.⁸ This reduction, coupled with the substantial tax incentives provided by

⁸ U.S. Env'tl. Protection Agency, Climate Change Indicators: U.S. Greenhouse Gas Emissions (Dec. 13, 2023).

the IRA for new renewable energy (and carbon capture) and the current amount of renewable energy trying to connect to the grid, is not accounted for in this NPRM. An assumption by Treasury that carbon emissions will stay stagnant despite historical investments in renewable energy is contradicted by the evident market trends.⁹

Finally, if any deliverability requirements are included in the final regulations, states that have an RPS or RES and are in the same geographic region, as defined by DOE's National Transmission Need Study, should also be able to provide existing renewable energy and satisfy any incrementality requirement.

NATURAL GAS FEEDSTOCK TO HYDROGEN PRODUCTION CONCERNS

As mentioned in the proposed rule, the 45VH2- Greenhouse gases, Regulated Emissions, and Energy used in Technologies model (45VH2-GREET)—the study used to calculate emissions within the IRA— includes “various production pathways.” One of which is the use of natural gas, such as steam methane reforming (SMR) and autothermal reforming (ATR), in conjunction with carbon capture and sequestration (CCS).

The NPRM, however, provides an extremely limited understanding on the 45V PTC by way of blue (natural gas) hydrogen or other forms of fugitive sources of methane, despite over half of the proposed hubs having a natural gas component to their respective hub's production. Congress intended for the 45V tax credit to be technology-neutral and to measure the carbon intensity of hydrogen production across all “colors” of production. Simply put, if a producer can show that their associated emissions of CO₂ is equal or below 0.45 kilogram per kilogram of hydrogen produced, the full three-dollar tax credit should be awarded. Or, if the production emissions fall within the second tier of the 45V scale (of 0.45-1.4 per kilogram of CO₂), the credit drops to one dollar per kilogram of hydrogen produced.

Blue hydrogen currently has a fixed-emissions number associated with upstream natural gas for the purposes of the 45V PTC. While utilizing the 45Q tax credit in lieu of 45V when using natural gas as a feedstock is allowed (45V and 45Q are not “stackable”), including a default number could potentially undervalue and undermine natural gas companies who are either actively investing or looking to invest in technologies that lower their upstream emissions rates.

If a hydrogen facility wants to produce hydrogen using both blue (natural gas) and green (electrolysis) and is able to prove that its lifecycle greenhouse gas emissions rates are lower than 0.45 kilograms of CO₂ per one kilogram of hydrogen, it should be awarded the highest 45V tax credit amount. This will also allow for more production of hydrogen, ensuring lower production costs. Hubs will be able to produce hydrogen even when wind and solar energy are offline (if legacy nuclear and hydropower are not applicable or available).

Treasury should not disincentivize a natural gas company's ability to seek cleaner emissions for hydrogen production. Hydrogen production by natural gas with sequestration storage will help

⁹ Env't Am., Renewables on the Rise 2021 (Nov. 21, 2021).

promote low-carbon hydrogen that can help boost the timeline in decarbonizing some of the industry's largest carbon-heavy producers, such as steel, concrete, and fertilizer. Measuring the PTC on carbon intensity creates a level playing field.

THE IMPACT OF THE NPRM ON LIUNA JOBS

The above concerns and requests are directly linked to our members' jobs with respect to the proposed hydrogen hubs. Industry partners are voicing concerns that if hourly time matching and incrementality are included as currently proposed, they will withdraw financial backing. Among other concerns, LIUNA worries that this proposal threatens the existence of potential hydrogen projects, including the seven hubs undergoing DOE's 4-phase application process. Financial and market viability is one of the five areas of criteria of DOE's approval process. DOE has the ability to pull a pending application at any point of the process (the "go/no-go" decision) if DOE believes a project is not meeting the necessary goals, including a hub's financial commitments.

The Biden Administration noted during the announcement of the \$7 billion federal investment in the proposed hubs that the program will leverage upwards of \$50 billion in private investment. The amount of direct and indirect jobs in the construction sector through the expansion of hydrogen energy is substantial. The deployment of the "green steel" industry, for example, is just one area that LIUNA would help foster. Currently, Mesabi Metallics is looking to invest approximately \$3 billion in green steel production in Minnesota. The proposed plant will utilize green hydrogen to produce a reduced iron product that will feed an electric arc furnace powered by green electricity. Mesabi has already committed to using LIUNA members for the construction of the facility, pending the outcome of this guidance. This is just one of many examples of indirect infrastructure investment associated with hydrogen that is at risk due to the proposed regulations. Other stakeholders alike have signaled to LIUNA that they will be unable to comply with both hourly temporal matching and incrementality.

LIUNA has similar concerns around the use of natural gas for blue hydrogen production. Treasury's NPRM may create arbitrary winners and losers for the 45V production tax credit. As previously mentioned, the original intent of this PTC was to promote the production of hydrogen in order to boost the hydrogen industry across all applicable sectors. Regulating the industry is inevitable, in time, but to do so before the industry is able to become competitive defies that intent.

For the last 125 years, LIUNA members have built America. The development of the hydrogen industry could create an entirely new wave of construction careers for LIUNA members. Treasury must promote policy that incentivizes all forms of production so Americans can go to work and build what is necessary to decarbonize all industries and promote clean energy.