



February 23, 2024

The Honorable Janet Yellen
Secretary
U.S. Department of the Treasury
1500 Pennsylvania Avenue, NW
Washington, DC 20220

Re: IRS. REG-117631-23

Dear Secretary Yellen:

Citizens for Responsible Energy Solutions (CRES) Forum submits the following comments in response to the request and notice by the Internal Revenue Service (IRS) for the Section 45V tax credit, as noticed by the U.S. Department of Treasury in Federal Register Notice 88 FR 89220.

CRES Forum is a 501(c)(3) non-profit organization founded in 2017 to educate Republican policymakers and the public about responsible, conservative solutions to address our nation's energy, economic and environmental security while increasing America's competitive edge. Our goal is to lower global emissions through U.S. policymaking to maintain a clean environment and mitigate the impacts of climate change.

ENCOURAGING CLEAN HYDROGEN PRODUCTION

The 45V clean hydrogen production tax credit (PTC) will help de-risk and incentivize investment in innovative hydrogen technologies in order to lower both emissions and cost. The ultimate goal for this PTC is that hydrogen technologies become competitive in the market on their own. For this to happen, however, Treasury guidance should adopt a balanced approach if hydrogen is to be a cost-effective, competitive decarbonization asset.

Much of the proposed guidance has centered around three elements that are meant to ensure that produced hydrogen has low lifecycle emissions. Those three elements, often termed the "three pillars," are: temporal matching, *deliverability and incrementality* (also called additionality).

Temporal matching. CRES Forum believes that the guidance generally gets most aspects of temporal matching right. However, we do have some concerns.

- Temporal matching would allow for verification that the amount of clean power sent to the grid “matches” the amount of power consumed by hydrogen production. The goal is to ensure that hydrogen production does not result in a net increase in emissions from dispatched generation. The draft guidance proposes a transitional period for phasing in hourly matching, whereby annual matching would be allowed for electricity generated before January 1, 2028. While some sectors may be able to meet hourly matching criteria, the hydrogen production market overall is not yet developed enough for hourly matching, and CRES Forum recommends greater flexibility with temporal matching and a longer transitional period than what is in the proposed guidance.
- Whether hourly, monthly or annual matching is used to qualify for the 45V PTC, CRES Forum suggests that Treasury allow some level of grandfathering. The cost of hourly matching could prove prohibitive for some facilities, and a more measured approach could allow these facilities to preserve the initial matching temporality for the life of the credit.

Deliverability. CRES Forum considers that Treasury guidance on this aspect is reasonable. U.S. energy production is still very regional. Deliverability seeks to ensure that electricity-based production obtains clean energy from local sources to circumvent potential electric transmission congestion issues.

Incrementality. CRES Forum is concerned that the proposed guidance on incrementality contradicts the administration’s own goals for hydrogen production and will undercut the development of a potential domestic clean energy economy.

- The incrementality requirement seeks to ensure electricity used for hydrogen production qualifying for the 45V credit comes from additional low- or zero-emissions sources. The apparent intention of the guidance is to prevent existing clean electricity generation that would be sent to the grid from otherwise being diverted to produce hydrogen.
- The proposed guidance stipulates that a facility generating electricity for hydrogen production cannot begin commercial operation more than 36 months before the hydrogen production facility is placed in service. Under certain circumstances, existing electricity generation may also satisfy the incrementality requirement. But investment decisions in production and infrastructure need clarity on whether or not a taxpayer can qualify for the tax credit.
- The guidance indicates a preference for new clean energy sources to produce hydrogen and is drafted in a way that makes it nearly impossible for existing hydropower or nuclear power plants to be utilized for 45V. Given the timing of permitting and constructing new nuclear or hydropower, it is unlikely that these two generation technologies will ever power 45V-benefited hydrogen production in a meaningful way, if at all, under the proposed guidance. Policies should focus on advancing clean hydrogen in a way that is agnostic to supporting technologies and not be designed to exclude efficient base load zero-emission sources.

- CRES Forum suggests that Treasury consider a phase-in period for incrementality, consistent with our recommendation for temporal matching. We believe this would allow for recognition that the U.S. electric grid is continually reducing the carbon footprint of its generation. The Energy Information Administration (EIA) has projected that over the next two years, most of the new generation added to the grid will come from zero-emissions sources.¹ Our increasingly low-carbon grid will be able to provide increasingly cleaner electricity for electrolyzer-sourced hydrogen generation.
- CRES Forum suggests that Treasury consider some level of grandfathering of existing clean energy facilities capable of producing clean hydrogen. 45V's goal is to drive investment into clean hydrogen production. Investors are not interested in a one-off project – they invest in businesses and sectors. Tax credit rules that are ostensibly set up to benefit only Hydrogen Hubs, but no additional projects, will affect investor decision-making and cause the administration's own production goals for clean hydrogen to fall short. High-performing resources such as nuclear and hydropower should not be shut out. CRES Forum believes that for current hydrogen production goals to be reached, all-of-the-above sources should be considered.
- The Section 45V PTC aims to encourage clean hydrogen production. Providing favorable opportunities for hydrogen production industries that effectively reduce more emissions than they create is crucial to U.S. decarbonization goals. The guidance for Section 45V should provide support for innovation in clean hydrogen technologies that are potential key pathways to reducing CO₂ emissions. However, this will not be accomplished if the industry is hamstrung before it gets off the ground. Treasury guidance for 45V should allow sufficient flexibility for enough producers to be able to take part in creating a hydrogen economy and achieving production at scale.

GREET model. According to the Department of Energy (DOE), the Greenhouse Gases, Regulated Emissions and Energy use in Technologies (GREET) model was developed by DOE's Argonne National Laboratory to evaluate lifecycle emissions to inform RD&D directions and performance goals. DOE states that "45VH2-GREET is the model that has been adopted by the U.S. Department of the Treasury to determine emissions rates for purposes of the Clean Hydrogen Production Tax Credit under Title 26 of the U.S. Code, Section 45V."² As such, the 45VH2-GREET model is updated annually, and it is incumbent upon the user to ensure they are using the correct version. This raises several issues for developers of clean hydrogen using natural gas as a feedstock:

- Since 45VH2-GREET can change annually, CRES Forum suggests that Treasury consider allowing a particular version of the model that a taxpayer relied on to be frozen, in order to create more stability. Rehashing the criteria to qualify for the tax credit creates uncertainty in making an investment decision. The 45VH2-GREET model should provide sufficient flexibility to allow for natural gas emissions improvements and other technologies to develop.

- Today, most hydrogen production is from the steam reforming of natural gas, but this pathway is disadvantaged by the proposed rules. The current 45VH2-GREET model assumes a national average of carbon intensity (CI) for natural gas and does not consider the specific CI of the natural gas that a hydrogen producer uses. This neglects the investment in lowering upstream emissions that a producer might make and disadvantages those who can produce hydrogen that is cleaner than the national average. The proposed guidance disregards the fact that the 45V tax credit was written to be based on the lifecycle emissions of hydrogen produced, and not on the method used to produce it. The rules should not disadvantage a particular feedstock or technology, and should be feedstock and technology-neutral, as Congress intended. We believe that producers using natural gas to make hydrogen should be able to input their own data into the 45VH2-GREET model so that all clean hydrogen produced qualifies for 45V.

IN CONCLUSION

CRES Forum views clean hydrogen as having a great potential to reduce carbon emissions. This potential is enhanced if the right incentives are put in place to spur investment and advance innovation to the point of providing hydrogen technologies with a pathway to becoming competitive on their own. The Section 45V production tax credit, as originally envisioned in statute, was intended to significantly reduce costs for clean hydrogen development. However, if not revised to allow more flexibility in the production of hydrogen, Treasury's proposed rules may create significant barriers and limit the opportunity to reduce emissions from industrial processes. In addition, the restrictive guidance could slow the scale-up of hydrogen production and the successful development of a hydrogen economy more broadly. Hydrogen production is poised to be a key vehicle for the United States to assert global energy leadership and enhance its competitiveness, but only if the industry is allowed sufficient room to grow. Greater flexibility is needed for a potential hydrogen economy to develop and to encourage increased investment in clean hydrogen technologies. Innovative hydrogen production pathways utilizing "all-of-the-above" feedstocks should be encouraged and allowed to develop without undue hindrance.

CRES Forum encourages Treasury to focus the guidelines for the Section 45V production tax credit on achieving the original intent of the statute. Please address any questions in regard to these comments to Richard Campbell at rcampbell@cresenergy.com.

Respectfully,



Heather Reams
CRES Forum President