

United States Senate

WASHINGTON, DC 20510

February 23, 2024

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

Dear Secretary Yellen:

As the Ranking Member of the Senate Committee on Environment and Public Works (EPW), I am a strong supporter of the development of a domestic hydrogen industry and want to ensure its success. To that end, I have serious concerns with the Internal Revenue Service's (IRS) draft guidance titled, "Section 45V Credit for Production of Clean Hydrogen."¹ As currently proposed, this guidance includes overly burdensome requirements that will stifle the capital-intensive investments necessary to develop the sector, regardless of the method used to produce the hydrogen.

The Administration has stated that "clean hydrogen is essential to achieving the President's vision of a strong clean energy economy."² However, the proposed guidance establishes "three pillars" that were not established in statute and will undermine bipartisan efforts to spur a hydrogen economy. These three pillars include deliverability, temporal matching, and incrementality requirements.³ The IRS's implementation of the 45V credit will have outsized influence on the success or failure of the nascent hydrogen industry. The significant additional investments necessary for compliance and resulting uncertainty in securing tax equity – particularly for projects already announced – that would be created by these extra-statutory factors undermine the potential of 45V to incentivize hydrogen production, especially in light of other economic pressures like inflation.

The 45V credit is technology-neutral and accessible by project sponsors regardless of their particular hydrogen production pathway, as long as they meet carbon emissivity targets.⁴ However, the requirements of the IRS guidance preclude certain means of hydrogen production from qualifying for the credit. The IRS also proposes to impose such strict requirements that

¹ Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property, 88 Fed. Reg. 89,220 (Dec. 26, 2023).

² The White House, *Biden-Harris Administration Announces Regional Clean Hydrogen Hubs to Drive Clean Manufacturing and Jobs*, <https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/13/biden-harris-administration-announces-regional-clean-hydrogen-hubs-to-drive-clean-manufacturing-and-jobs/> (last visited Jan. 10, 2024).

³ 88 Fed. Reg. at 89,228.

⁴ Inflation Reduction Act of 2022, Pub. L. 117-169, Title I, Subtitle D ("Energy Security"), Part 2 ("Clean Fuels"), Sec. 13204, 136 Stat. at 1935-41 (Aug. 16, 2022).

even “green” projects using electrolysis to produce hydrogen without carbon emissions would likely be ineligible without additional investments so significant that they would undermine the economic viability of a project.

Under the proposed guidance, producers would be required to obtain an energy attribute certificate (EAC),⁵ demonstrating fulfillment of the requirements of the proposed three pillars. The first pillar, deliverability, would require a project to source power from the same region in which the facility is located.⁶ This will impose additional compliance costs and prove a significant technical challenge as electrons are essentially a commodity – one indistinguishable from the next in terms of tracking from its generation source to its end-use.

The second pillar of concern that the IRS seeks to impose, also without any statutory basis, is temporal matching. Beginning in 2028, the IRS would require that hydrogen producers demonstrate that hydrogen is produced in the *same hour* that the electricity used for production is generated by the associated renewable energy source. As previously stated, electrons are indistinguishable and cannot be readily tracked back to a time, place, or generation source.

The technology to demonstrate compliance with temporal matching is not widely available, yet the IRS has staked the applicability of the credit on this flawed premise. The IRS itself acknowledges in its proposal that the technology to prove this requirement is met is not currently available throughout most of the United States.⁷ The IRS seeks to justify this requirement by citing a nongovernmental survey of nine tracking systems and concluding that hourly tracking may be widely available in the next few years. That is far from certain. The referenced survey was conducted by a third party, the Center for Resources Solutions (CRS).⁸ The IRS does not indicate that it has directly verified these claims and, as the CRS points out, these systems were originally developed to track monthly or quarterly data, not hourly.⁹ Of the nine systems surveyed, two declined to give a timeline of when their systems will be able to conduct hourly tracking.¹⁰ While seven of the nine systems were assumed to be able to perform hourly tracking by 2028, there is no legally binding guarantee that all nine will be able to achieve this in the

⁵ 88 Fed. Reg. at 89,228.

⁶ *Id.*

⁷ 88 Fed. Reg. at 89,233 (“Hourly tracking systems for EACs are not yet broadly available across the country and will take some time to develop. In a recent survey of nine existing tracking systems, two of the tracking systems indicated that they are already tracking on an hourly basis, although software functionality in these two systems remains limited. Fully developing the functionality of these systems will take time, as will creating and developing the functionality of hourly tracking infrastructure in other regions of the country. Of the other tracking systems, assuming that challenges are overcome, four gave a timeline of less than one year to two years, and one gave a timeline of three to five years; in the latter case, the respondent noted that the timeline could be closer to three years if there is full state agency buy-in, clear instructions are received from federal or state agencies, and funding for stakeholder participation is made available.”).

⁸ Center For Resources Solutions, *Readiness For Hourly: U.S. Renewable Energy Tracking Systems* (June 15, 2023), <https://resource-solutions.org/wp-content/uploads/2023/06/Readiness-for-Hourly-U.S.-Renewable-Energy-Tracking-Systems.pdf>

⁹ Center For Resources Solutions, *supra* note 8, at 42.

¹⁰ 88 Fed. Reg. at 89,233 (“Two tracking systems declined to give a timeline to develop this functionality.”).

timeframe proposed by the IRS. Should any tracking system not be able to function on an hourly basis by 2028, hydrogen projects in those regions could be unfairly impacted, by no fault of their sponsors.

The third and final pillar, incrementality would require hydrogen producers to be located near a qualified new renewable energy source that becomes operational no more than 36 months prior to the hydrogen facility going online,¹¹ or else the producer would need to build its own solar or wind farms to directly power its electrolyzers. In questions submitted for the record for the EPW Committee’s November 15, 2023 hearing titled “*Opportunities in Industrial Decarbonization*,” the Clean Hydrogen Future Coalition’s (CHFC) President, Shannon Angielski, was asked about the impact that the requirement of new renewable energy sources would have on the hydrogen industry. In her response, Ms. Angielski said that the CHFC opposes the requirement because it will dramatically delay and drive up the costs of hydrogen investments, due to the additional prolonged permitting process and additional investment required to construct a new electric generation facility.¹² Existing renewable energy projects already face challenges from supply chain pressures, siting and transmission access challenges, and permitting issues. Requiring their construction to support already announced hydrogen projects for purposes of 45V compliance will delay hydrogen deployment at best and more likely make nearly many if not all hydrogen projects financially unviable.

In states like West Virginia, the new renewable energy source requirement would preclude “blue” hydrogen produced from natural gas and paired with carbon capture, utilization and storage (CCUS). If finalized in its current form, the guidance will directly undermine implementation of the hydrogen hubs program established in the bipartisan Infrastructure Investment and Jobs Act (IIJA). On October 13, 2023,¹³ the Department of Energy (DOE) followed congressional intent in the IIJA’s H2Hub program by selecting seven hubs across the country, including one predominantly “blue” hub, the Appalachian Regional Clean Hydrogen Hub (ARCH2) in West Virginia, Ohio, and Pennsylvania.

As stated in DOE’s announcement, ARCH2 “will leverage the region’s ample access to low-cost natural gas to produce low-cost clean hydrogen,” providing more than 21,000 jobs to workers in

¹¹ *Id.* at 89,229.

¹² *Hearing on “Opportunities in Industrial Decarbonization: Delivering Benefits for the Economy and the Climate”*: Hearing Before the S. Comm. on Env’t & Pub. Works, 118th Cong. (Nov. 15, 2023) (responses to questions for the record by Shannon Angielski) (“Additionality would significantly delay investments in clean hydrogen projects by forcing them to wait until new clean energy projects come into service. It takes on average seven years for a new renewable project to come online once an interconnection agreement is filed. That means a renewable project that is entering into the interconnection queue in April 2023 would not become operational until April 2030 at the earliest, which is nearly at the end of the 45V tax credit program. Project development delays would not only undermine the ability of projects to use this tax credit but delay our nation’s ability to decarbonize.”).

¹³ U.S. Department of Energy, *Biden-Harris Administration Announces \$7 Billion For America’s First Clean Hydrogen Hubs, Driving Clean Manufacturing and Delivering New Economic Opportunities Nationwide* Agency, <https://www.energy.gov/articles/biden-harris-administration-announces-7-billion-americas-first-clean-hydrogen-hubs-driving> (last visited Feb. 12, 2024).

communities that have been devastated by the downturn in the coal industry.¹⁴ The development of ARCH2 could be transformative for Appalachian communities. However, even with the federal funds from the hubs program, participants are still required to collectively invest billions of dollars in private capital to ensure that this program is successful, and a severe curtailment of eligibility for the 45V tax credit, particularly due to incrementality, will dampen investment and potentially threaten these projects from ever moving forward.

There is bipartisan opposition to the IRS’s proposed three pillars. On November 6, 2023, eleven Senate Democrats sent a letter to you urging against any additional non-statutory requirements to the 45V credit, stating that it “could raise costs, suppress hydrogen production, feedstock and production pathway innovation, and private-sector investment, while discriminating against some regions based on their existing clean energy mixes.”¹⁵ Other Democratic colleagues have publicly questioned the guidance. In a statement on December 22, 2023 responding to the proposed guidance, my counterpart and Environment and Public Works Committee Chairman Tom Carper said, that this proposal “may well miss the mark” and the legislative intent of 45V was for it to be “flexible and technology-neutral.”¹⁶ In addition, Senate Committee on Energy and Natural Resources Chairman Joe Manchin, who played a significant role in the IRA’s drafting and passage,¹⁷ said on December 22, 2023, that, “For an Administration that wants to reduce emissions and fight climate change, it makes no sense to kneecap the hydrogen market before it can even begin.”¹⁸ Despite a lack of consensus on the provisions of the partisan IRA, there is clearly bipartisan agreement in Congress among supporters of hydrogen as a climate solution that these requirements are detrimental to achieving that shared goal.

The domestic hydrogen industry can play a key role in reducing greenhouse gas emissions, particularly across hard-to-abate sectors. The final 45V tax credit guidance and its implementation must allow for this nascent industry to develop and will be crucial to the success of the H2Hub program, in which both Congress and the Biden Administration have heavily invested. In drafting the final rule, I urge the IRS to remove the proposed “three pillars” in response to industry stakeholder comments. The final guidance must be technology-neutral to allow for the rapid buildout of this industry. Failure to do so will undermine the viability of the hydrogen industry – regardless of an individual project’s production method – could cost communities across the country tens of thousands of existing and potential jobs, and orphan billions in taxpayer dollars already dedicated to regional hydrogen hubs.

¹⁴ *Id.*

¹⁵ Letter from Senator Cantwell *et al.* to Secretary Yellen, Secretary Granholm, and John Podesta (Nov. 6, 2023), <https://www.scribd.com/document/694082982/Senate-Letter-to-Admin-on-45V-Hydrogen-PTC> (last visited Feb. 22, 2024).

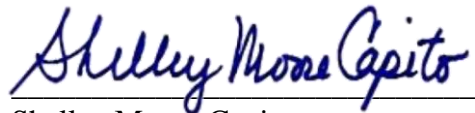
¹⁶ U.S. Senate Committee on Environment and Public Works, *Carper Statement on Treasury’s Proposed Guidance for Clean Hydrogen Tax Credit*, <https://www.epw.senate.gov/public/index.cfm/2023/12/carper-statement-on-treasury-s-proposed-guidance-for-clean-hydrogen-tax-credit> (last visited Feb. 13, 2024).

¹⁷ U.S. Senator Joe Manchin, *MANCHIN’S INFLATION REDUCTION ACT SIGNED INTO LAW*, <https://www.manchin.senate.gov/newsroom/press-releases/manchins-inflation-reduction-act-signed-into-law> (last visited Feb. 13, 2024).

¹⁸ U.S. Senator Joe Manchin, *MANCHIN: ADMINISTRATION KNEECAPPING HYDROGEN PROJECTS*, <https://www.manchin.senate.gov/newsroom/press-releases/manchin-administration-kneecapping-hydrogen-projects> (last visited Feb. 13, 2024).

There is bipartisan consensus that hydrogen can and should play a significant role in reducing emissions and powering our nation's economy. Expanding the use of hydrogen will only take place if the private sector can have confidence that hydrogen will be available in abundance – which is only possible if multiple production sources are allowed to develop. This development will only take place if practical, technology neutral policies like those in the IJA are implemented by the administration. By contrast, your agency's guidance that substitutes wishful thinking for a balanced approach that will grow multiple types of hydrogen production will choke off nascent technologies and ensure that a hydrogen based economy does not happen. I encourage you to reverse course and work in a bipartisan way to support the development of a hydrogen economy in the United States.

Sincerely,

A handwritten signature in blue ink that reads "Shelley Moore Capito". The signature is written in a cursive style and is positioned above a horizontal line.

Shelley Moore Capito
Ranking Member
Environment & Public Works Committee