

United States Senate

WASHINGTON, DC 20510

November 6, 2023

Secretary Janet Yellen
U.S. Department of the Treasury
1500 Pennsylvania Avenue NW
Washington, D.C. 20220

Secretary Jennifer Granholm
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

Mr. John Podesta
Assistant to the President and Senior Advisor to the President for Clean Energy
1600 Pennsylvania Avenue NW
Washington, DC 20220

Re: Implementation of the Section 45V Clean Hydrogen Production Tax Credit

Dear Secretary Yellen, Secretary Granholm, and Mr. Podesta:

We write to ensure that the upcoming guidance for the Internal Revenue Code Section 45V Clean Hydrogen Production Tax Credit (45V) is consistent with our intent to provide a robust and flexible incentive that will catalyze and quickly scale a domestic hydrogen economy. The historic Inflation Reduction Act (IRA) is projected by 2030 to cut Americans' energy costs by \$200 - \$1,000 annually and greenhouse gas emissions by 40 percent.^{i,ii,iii} As a key component of the IRA, we are counting on the 45V credit to catalyze production of enough domestically-produced clean hydrogen to affordably and meaningfully lower emissions in hard to decarbonize sectors.

The success of the new Regional Clean Hydrogen Hub Program in hard to decarbonize sectors will also likely be contingent on robust and flexible 45V hydrogen production tax credit guidance. The Inflation Reduction Act already includes a scalable carbon-intensity framework that requires significant emission reductions compared to most existing hydrogen production facilities. As the Internal Revenue Service (IRS) completes its work, we hope the final guidance will avoid evolving and complex eligibility criteria—such as overly stringent additionality, deliverability, and time matching requirements—that 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.^{iv,v,vi} As one example, the Washington State Department of Commerce stated in their July 14, 2023, comment letter to the IRS, “The suggested additionality restrictions are not only unnecessary in a statutory clean energy state such as Washington, they would also complicate the development of electrolytic hydrogen production in such states.”

These requirements may also significantly delay the construction and operational start for clean hydrogen projects as a result of interconnection queue delays.^{vii} In the long term, this may hamper the development of a robust clean hydrogen market, undermine volumetric production and price-parity goals, reduce the positive effects of scaling up electrolyzer investment, and prevent clean hydrogen from fulfilling vital roles in hard to decarbonize sectors in line with the Administration's broader decarbonization efforts.^{viii}

45V was intended to be technology-agnostic and clearly states that GHG lifecycle assessments (LCA) should be determined using the well-established GREET model through the point of production.^{ix} Furthermore, while 45V allows for "a successor model (as determined by the Secretary)," this additional flexibility was included as a safeguard in the unlikely event the GREET model was no longer available at some future date and should not be interpreted as a license to create a new LCA model or additional regulatory prescriptions.

We also believe that Congress was clear that 45V should allow applicants to utilize indirect book accounting factors, such as energy attribute certificates, renewable electricity and carbon-negative gas credits, and power purchase agreements when determining project eligibility for the tax credit. This was a point that our colleagues Senate Finance Committee Chairman Wyden and Senate Environment and Public Works Chairman Carper made in a Senate floor colloquy on August 6, 2022.^x While some restrictions may be warranted to limit unintended consequences, generally these established market mechanisms can serve as an important tool to limit discrimination between new and existing energy sources, maintain system integrity, and allow for robust hydrogen production from the variety of power sources available across every region of our country.

Through this ten-year tax credit and the appropriation of billions of dollars in the *Infrastructure Investment and Jobs Act*, Congress has provided an unprecedented level of support for the scaling of hydrogen production infrastructure—showing a strong commitment to growing hydrogen's share of the U.S. clean energy portfolio, and creating a meaningful opportunity to boost domestic energy production, lower emissions, and revitalize communities.^{xi} Overly prescriptive guidance could prevent the growth and certainty needed for clean hydrogen to provide meaningful alternatives for difficult to decarbonize sectors, reach competitive hydrogen market prices, and realize the more than 100,000 new jobs the Energy Department projects the clean hydrogen industry could create by 2030.^{xii}

Thank you for your leadership and thoughtful consideration of this matter. We urge you to issue timely technical guidance that will ensure the 45V Clean Hydrogen Production Tax Credit plays a pivotal role in reducing emissions, providing for our national security, and creating good-paying union jobs.

Sincerely,



Maria Cantwell
United States Senator



Sherrod Brown
United States Senator



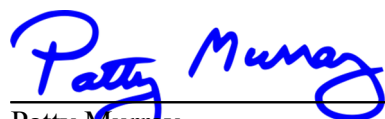
Joe Manchin III
United States Senator



Richard J. Durbin
United States Senator



Kirsten Gillibrand
United States Senator



Patty Murray
United States Senator



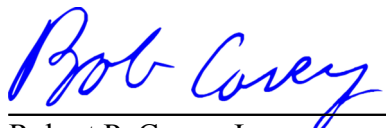
John Fetterman
United States Senator



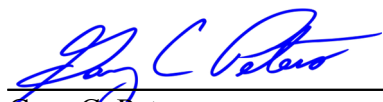
Tammy Duckworth
United States Senator



Kyrsten Sinema
United States Senator



Robert P. Casey, Jr.
United States Senator



Gary C. Peters
United States Senator

ⁱ “The Inflation Reduction Act Drives Significant Emissions Reductions and Positions America to Reach Our Climate Goals,” Department of Energy Office of Policy. https://www.energy.gov/sites/default/files/2022-08/8.18%20InflationReductionAct_Factsheet_Final.pdf.

ⁱⁱ “A Congressional Climate Breakthrough,” July 28, 2022, Rhodium Group. <https://rhg.com/research/inflation-reduction-act>.

ⁱⁱⁱ “Retail Electricity Rates under the Inflation Reduction Act of 2022,” August 3, 2022, Resources for the Future. <https://www.rff.org/publications/issue-briefs/retail-electricity-rates-under-the-inflation-reduction-act-of-2022>.

^{iv} Anna Cybulsky, Michael Giovannello, Tim Schittekatte, and Dharik S. Mallapragada. April 2023. “Producing hydrogen from electricity: how modeling additionality drives the emissions impact of time-matching requirements.” Working paper, Massachusetts Institute of Technology Energy Initiative. <https://energy.mit.edu/wp-content/uploads/2023/04/MITEI-WP-2023-02.pdf>.

^v “Green Hydrogen: What the Inflation Reduction Act Means for Production Economics and Carbon Intensity,” Wood Mackenzie, March 14, 2023, <https://www.woodmac.com/news/opinion/green-hydrogen-IRA-production-economics/#form>.

^{vi} 1. Analysis of Hourly & Annual GHG Emissions: Accounting for Hydrogen Production, April 2023, <https://acore.org/wp-content/uploads/2023/04/ACORE-and-E3-Analysis-of-Hourly-and-Annual-GHG-Emissions-Accounting-for-Hydrogen-Production.pdf>.

^{vii} “Queued up: Characteristics of Power Plants Seeking Transmission Interconnection,” Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection | Electricity Markets and Policy Group, April 6, 2023, <https://emp.lbl.gov/queues>.

^{viii} United States Department of State and the United States Executive Office of the President. (2021). The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050. <https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf>; U.S. Department of Energy. (2022). DOE National Clean Hydrogen Strategy and Roadmap. <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/us-national-clean-hydrogen-strategy-roadmap.pdf>; The first Energy Earthshot—Hydrogen Shot—seeks to reduce the cost of clean hydrogen by 80% to \$1 per 1 kilogram in 1 decade (“1 1 1”). Source: Energy.gov. (2021). Hydrogen Shot. <https://www.energy.gov/eere/fuelcells/hydrogen-shot>; U.S. Department of Energy. (2023). U.S. DOE Pathways to Commercial Liftoff: Clean Hydrogen. <https://liftoff.energy.gov/wp-content/uploads/2023/05/20230523-Pathways-to-Commercial-Liftoff-Clean-Hydrogen.pdf>; U.S. Department of Energy. (2022). U.S. DOE Industrial Decarbonization Roadmap. <https://www.energy.gov/sites/default/files/2022-09/Industrial%20Decarbonization%20Roadmap.pdf>; U.S. Department of Energy. (2023). The U.S. National Blueprint for Transportation Decarbonization. <https://www.energy.gov/sites/default/files/2023-01/the-us-national-blueprint-for-transportation-decarbonization.pdf>.

^{ix} 26 U.S.C. §45V(C)(1)(B).

^x 133 Cong. Rec. S4165-S4166 (2022) (Senators Carper and Wyden, speaking on H.R.5376).

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42 U.S.C. §16154; 42 U.S.C. §16161a; 42 U.S.C. §16161b; 42 U.S.C. §16161c; 42 U.S.C. §16161d; P.L. 117-58 Division J.

^{xii} U.S. Department of Energy. (2022). DOE National Clean Hydrogen Strategy and Roadmap. <https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/us-national-clean-hydrogen-strategy-roadmap.pdf>.