

June 15, 2023

The Honorable Lily L. Batchelder
Assistant Secretary for Tax Policy
Department of the Treasury

Mr. Seth Hanlon
Deputy Assistant Secretary for Tax and Climate Policy
Department of the Treasury

Mr. William M. Paul
Principal Deputy Chief Counsel and Deputy Chief Counsel (Technical)
Internal Revenue Service

Mr. John Podesta
Senior Advisor to the President for Clean Energy Innovation and Implementation
White House

Mr. Ali Zaidi
Assistant to the President and National Climate Advisor
White House

The Honorable Jennifer Granholm
Secretary
U.S. Department of Energy

Dear Assistant Secretary Batchelder, Mr. Hanlon, Mr. Paul, Mr. Podesta, Mr. Zaidi, and Secretary Granholm:

The undersigned companies are united by a belief that clean hydrogen can play a critical role in decarbonizing the US economy over the coming decades. To achieve this promise, Treasury's implementing guidance for 45V should deliver near-term scaling of clean hydrogen infrastructure while ensuring the environmental integrity of the credit in the long run. The Administration's decision on how quickly to phase in hourly matched energy attribute certificates (EACs) for grid-connected electrolysis projects will determine what type of hydrogen industry develops in the U.S. A faster phase-in will direct private capital in the U.S. to develop a flexible hydrogen production industry that can interact with the variable nature of renewables on the grid to reduce emissions and relieve capacity constraints. A slower transition with grandfathering will saddle the U.S. with inflexible infrastructure that will increase emissions and exacerbate grid congestion.

There is a growing consensus that hourly and locational matching of new clean energy supply to grid-tied electrolyzer load is key to minimizing emissions, a conclusion of all studies that have analyzed the long-term impacts of grid-based hydrogen production. By contrast, both the Princeton Zero Lab¹ study and the recent study from MIT² conclude that annual matching will lead to significant long-run system-level emissions, as it would not increase system-wide clean generation beyond business as usual. Moreover, these and other studies have shown that the additional cost of hourly matching is manageable.³ These findings align with the internal analyses of many of the undersigned companies that operate in the hydrogen production value chain. An hourly matching requirement is thus essential to scaling truly clean hydrogen in the United States and ensuring that grid-based hydrogen production does not significantly increase emissions in the long run.

Hourly matching is no more complex to implement than annual matching. M-RETS has over 120 million hourly RECs in its system and PJM, the largest RTO in the country, began offering hourly RECs in March. RECs already include locational information. It will not be difficult for project proponents seeking to qualify for 45V credits to demonstrate satisfaction of hourly and locational matching criteria to third-party PTC compliance auditors.

At the same time, there could be a rational compromise that is consistent with the emissions requirements in the statute and that allows for a brief transition period before hourly matching is required. While hourly matching is readily available in most of the country, hourly EACs are not yet tracked by every tracking registry. Realistically, it should not take longer than 18-36 months to accomplish broader registry adoption. A short transition period to allow time for implementation of hourly tracking would not meaningfully increase system level emissions or grid congestion problems.

We believe there is a clear regulatory pathway that creates the right kind of hydrogen industry, meets the emissions requirements in the statute, and scales the industry in the near term. To avoid the credit driving up system-wide emissions and causing unintended transmission impacts, hourly matching must be phased in as quickly as is practical. Because the U.S. does not face the same regulatory hurdles to implementing hourly matching as the European Union, the U.S. can transition from annual to hourly much earlier, directing private investment toward flexible hydrogen production assets more quickly. We believe such a middle ground approach will preserve the environmental integrity and promise of the industry while spurring initial deployment to jumpstart the clean hydrogen industry across the country.

¹ Wilson Ricks et al, "Minimizing emissions from grid-based hydrogen production in the United States," *Environmental Research Letters*, 18 014025, 2023, www.iopscience.iop.org/article/10.1088/1748-9326/acacb5/pdf

² Anna Cybulsky et al, "Producing hydrogen from electricity: How modeling additionality drives the emissions impact of time-matching requirements," MIT Energy Initiative, 2023, www.energy.mit.edu/wp-content/uploads/2023/04/MITEI-WP-2023-02.pdf

³ Wilson Ricks et al, "The Cost of Clean Hydrogen with Robust Emissions Standards: A Comparison Across Studies," Zenodo, 2023, www.zenodo.org/record/7838874#.ZF5FWOzMITV

We stand ready to help the administration implement this compromise approach in whatever way is helpful.

Sincerely,

Acciona & Nordex Green Hydrogen

Avantus

EDP Renewables

Electric Hydrogen

Fervo Energy

Firstlight Power

First Solar

GridStor

Leeward Renewable Energy

Nucor

Synergetic