

Comments on the Implementation of the 45V Clean Hydrogen Production Tax Credit

We would like to offer our comments on the Proposed Rule for the 45V Credit for Production of Clean Hydrogen, specifically addressing the feasibility of transitioning to hourly matching requirements by 2028. We fully endorse the proposed time-matching requirement and advocate for its phased implementation, starting with monthly matching and progressing towards hourly matching.

1. Introduction

The 45V tax credit represents a critical step towards incentivizing the production of clean hydrogen, a key enabler in the transition to a low-carbon economy. As proponents of sustainable energy solutions, we applaud the efforts of the US Treasury in advancing this initiative and commend the thoughtful approach taken in the proposed rules.

2. Transition to Hourly Matching

We unequivocally support the proposed time-matching requirement for the 45V tax credit and believe that a phased transition to hourly matching by 2028 is deemed both practical and feasible. This timeframe allows ample opportunity for scaling up solutions necessary for hourly matching and aligns with the trajectory of technological advancements and market developments in the clean energy sector. We recommend that the US Treasury maintain this phase-in approach, ensuring that once a registry implements hourly Energy Attribute Certificates (EACs), it can cover regions lacking such capability. This is especially important since companies such as Granular Energy are already providing platforms that enable the implementation of hourly matching as of today. Granular is actively working with over 30 energy suppliers in 10 countries to implement 24/7 green tariffs.

Until 2028, we recommend creating a temporary approach to hourly matching that utilizes annual or monthly Energy Attribute Certificates (EACs) when hourly EACs are unavailable. The advantage of that approach is that certificate tracking systems such as M-RETS already track monthly EACs. This method would serve as a practical transition to hourly matching compliance. In the event that hourly EACs are not fully implemented by 2028, this provisional pathway offers a viable alternative to maintain adherence to hourly matching requirements.

3. Nuanced Perspective on Additionality

While we acknowledge the importance of additionality in the three pillars, we propose temporarily relaxing this criterion for a few years if it can help catalyze the hydrogen economy and support market players in the transition to hourly matching. We recognize the importance of promoting new clean energy generation but advocate for flexibility in defining additionality to accommodate current zero-carbon generators, such as nuclear and hydropower, meeting specific criteria. This includes plants undergoing repowering for substantial upgrades to their full generator capacity or those enhancing efficiency through waste heat utilization. Additionally, plants facing retirement threats or situated in

regions with low locational marginal prices could qualify for exemption from the 36-month requirement.

4. Standardization and Verification

We endorse the utilization of Energy Attribute Certificates (EACs) as the primary tool for achieving hourly matching. To bolster transparency and prevent fraud, we propose the establishment of a standard for EAC registries, ensuring uniformity, auditability, and interoperability. Although not all US registries currently offer hourly EACs, recent advancements indicate a swift transition is viable. Additionally, in cases where hourly EACs are unavailable, alternative verification methods utilizing annual or monthly EACs coupled with hourly meter data are feasible interim solutions.

5. Contracting Structures

Contracting mechanisms play a pivotal role in facilitating compliance with hourly matching requirements. Various agreements, such as Granular Attribute Purchase Agreements, Granular Power Purchase Agreements, and Granular Energy Supply Agreements, offer pathways for electrolyzers to procure hourly-matched clean energy. Notably, several companies have already embraced such contracts, signifying market readiness for hourly matching arrangements.

6. Technological Solutions

Achieving hourly matching necessitates a diversified portfolio of clean energy resources. Combining variable renewables, energy storage, and dispatchable clean energy technologies can ensure continuous clean electricity supply. Research indicates that oversizing renewable capacity relative to electrolyzer capacity, coupled with demand flexibility, can enable high levels of hourly matching at competitive costs.

7. Conclusion

The transition to hourly matching for the 45V Clean Hydrogen Credit is both realistic and advantageous. Companies such as Granular Energy are already working with energy suppliers to implement 24/7 green tariffs worldwide. By embracing standardized verification methods, implementing appropriate contracting structures, and leveraging diverse clean energy technologies, the industry can meet hourly matching requirements by 2028. This phased approach ensures compliance while fostering innovation and sustainability within the clean hydrogen sector.