December 3, 2022

Submitted Electronically to Regulations.gov

Internal Revenue Service
Office of the Associate Chief Counsel
Passthroughs and Industries
CC:PA:LPD:PR (Notice 2022-58)
Room 5203, PO Box 7604
Ben Franklin Station
Washington, DC 20044

RE: Notice 2022-58, Request for Comments on Credits for Clean Hydrogen and Clean Fuel Production

Dear Madam/Sir:

We appreciate the opportunity to comment on Notice 2022-58 (the "Notice") regarding the Section 45V Credit for Production of Clean Hydrogen ("45V") and 45Z Clean Fuel Production Credit recently enacted under Public Law 117-169, commonly known as the Inflation Reduction Act.

Yosemite Clean Energy, LLC ("Yosemite") uses a proven gasification technology that has been applied on an industrial scale in Europe for the past 18 years. The Yosemite biofuels plants will be the first to use gasification in combination with other commercially proven technologies to produce both green hydrogen and renewable natural gas.

We respond here to specific requests for comments in the Notice.

Section 3.01(1)(a) Section 45V defines "lifecycle greenhouse gas emissions" to "only include emissions through the point of production (well-to-gate)." Which specific steps and emissions should be included within the well-to-gate system boundary for clean hydrogen production from various resources?

Yosemite Comment: Well to gate boundaries should include emissions from: procurement and transportation of feedstock (and production of feedstock when not a waste product), production of hydrogen, electricity generation for electricity used in production process, and through the truck-rack loading or

pipeline injection to transport hydrogen away from the production facility.

Section 3.01(1)(b)(i) How should lifecycle greenhouse gas emissions be allocated to co-products from the clean hydrogen production process? For example, a clean hydrogen producer may valorize steam, electricity, elemental carbon, or oxygen produced alongside clean hydrogen.
Yosemite Comment: Producers should be able to monitor any external heat sales for use by other entities, which could impact the ghg emissions by displacing other heat production from non-renewable sources. Energy content of heat sales can be measured in MMbtu's and emissions reduction calculated based off of the amount of emissions produced if heat were to be generated from a stand-alone process.

Section 3.01(1)(d) If a facility is producing qualified clean hydrogen during part of the taxable year, and also produces hydrogen that is not qualified clean hydrogen during other parts of the taxable year (for example, due to an emissions rate of greater than 4 kilograms of CO_2-e per kilogram of hydrogen), should the facility be eligible to claim the § 45V credit only for the qualified clean hydrogen it produces, or should it be restricted from claiming the § 45V credit entirely for that taxable year?
Yosemite Comment: Yes, the facility should be eligible to claim the 45V credit for clean hydrogen it produces even if it is not able to meet the GHG requirements for the entire year. There may be times during the year when renewable electricity or CO_2 sequestration is temporarily unavailable to the production facility. In these instances, it would be extremely costly and inefficient for the plant to shut down, but it would have to shut down if the alternative option were to lose all 45V credits for the whole year. There is no prohibition in the law against receiving 45V for clean hydrogen even if the facility does not produce clean hydrogen 100% of the time.

Section 3.01(1)(e) How should qualified clean hydrogen production processes be required to verify the delivery of energy inputs that would be required to meet the estimated lifecycle greenhouse gas emissions rate as determined using the GREET model or other tools if used to supplement GREET?
Yosemite Comment: Many verification processes are capable of assessing and documenting GHG emissions under § 45V based on experience with existing fuel programs including the California and Oregon LCFS. Guidance from the California LCFS is suitable. Similar standards of data quality are employed for fuel verifications including requirements for record keeping, chain of custody for feedstock transfers, and data quality assurance. Tax payers should be required to record and maintain the same information as required by the state LCFS programs.

Section 3.01(1)(e)(i) How might clean hydrogen production facilities verify the production of qualified clean hydrogen using other specific energy sources?
Yosemite Comment: Chain of custody transactions for energy sources used as inputs must be documented, verified, auditable, and include a carbon intensity or other lifecycle GHG measurement.

Section 3.01(1)(e)(ii) What granularity of time matching (that is, annual, hourly, or other) of energy inputs used in the qualified clean hydrogen production process should be required?

Yosemite Comment: It is important to require time matching at an interval that reasonably ensures prevention of fraud and minimizes loss when renewable electricity is temporarily unavailable. To do so, one idea is to time match monthly, as well as any time that type of energy used is changed from expected energy supply and associated carbon intensity. This way companies that use a constant energy supply are not having to constantly report their energy input, while companies whose energy inputs are changing are documenting and reporting all changes. All electricity usage should be auditable.

Section 3.01(2)Alignment with the Clean Hydrogen Production Standard. On September 22, 2022, the Department of Energy (DOE) released draft guidance for a Clean Hydrogen Production Standard (CHPS) developed to meet the requirements of § 40315 of the Infrastructure Investment and Jobs Act (IIJA), Public Law 117-58, 135 Stat. 429 (November 15, 2021).[4] The CHPS draft guidance establishes a target lifecycle greenhouse gas emissions rate for clean hydrogen of no greater than 4.0 kilograms CO_2-e per kilogram of hydrogen, which is the same lifecycle greenhouse gas emissions limit required by the § 45V credit. For purposes of the § 45V credit, what should be the definition or specific boundaries of the well-to-gate analysis?

Yosemite Comment: Well to gate boundaries should include emissions from: procurement and transportation of feedstock (and production of feedstock when not a waste product), production of hydrogen, electricity generation for electricity used in production process, and through the truck-rack loading or pipeline injection to transport hydrogen away from the production facility.

Section 3.01(4)(b) What technologies or methodologies should be required for monitoring the lifecycle greenhouse gas emissions rate resulting from the clean hydrogen production process?

Yosemite Comment: Many verification processes are capable of assessing and documenting GHG emissions under § 45V based on experience with existing fuel programs including the California and Oregon LCFS. Guidance from the California LCFS is suitable. Similar standards of data quality are employed for fuel verifications including requirements for record keeping, chain of custody for feedstock transfers, and data quality assurance. Tax payers should be required to record and maintain the same information as required by the state LCFS programs.

Section 3.01(4)(c) What technologies or accounting systems should be required for taxpayers to demonstrate sources of electricity supply?

Yosemite Comment: Industry standard smart meters that monitor real time electricity input, as well as chain of custody documentation should be used to document electricity supply. This should not be complicated using industry standard technology.

Section 3.01(4)(e) If a taxpayer serves as both the clean hydrogen producer and the clean hydrogen user, rather than selling to an intermediary third party, what verification

process should be put in place (for example, amount of clean hydrogen utilized and guarantee of emissions or use of clean electricity) to demonstrate that the production of clean hydrogen meets the requirements for the § 45V credit?
Yosemite Comment: YCE plans to use a portion of its H2 produced both to fuel its own truck fleet and potentially to substitute a portion of its own electricity generation. YCE proposes an auditable measurement of fuel production at the production process gate. This would be the point at which amount of H2 produced and eligible to receive 45V credits would be documented.

Section 3.01(4)(f) Should indirect book accounting factors that reduce a taxpayer's effective greenhouse gas emissions (also known as a book and claim system), including, but not limited to, renewable energy credits, power purchase agreements, renewable thermal credits, or biogas credits be considered when calculating the § 45V credit?

Yosemite Comment: Yes. For many companies, including Yosemite, the CI of electricity and other energy input is a key factor in reducing the lifecycle GHG emissions of the hydrogen, and electricity generation may not be taking place on property. Producers should not be penalized for using renewable energy inputs through a book and claim or power purchase agreement (PPA). Book-and-claim and PPA are well understood and verifiable, and should be allowed under 45V.

Section 3.01(4)(g) If indirect book accounting factors that reduce a taxpayer's effective greenhouse gas emissions, such as zero-emission credits or power purchase agreements for clean energy, are considered in calculating the § 45V credit, what considerations (such as time, location, and vintage) should be included in determining the greenhouse gas emissions rate of these book accounting factors?
Yosemite Comment: as long as the energy has a verified Carbon Intensity, or other lifecycle verification under state or federal oversight, such as California's LCFS, the energy should qualify.
It is important to require time matching at an interval that reasonably ensures prevention of fraud and minimizes loss when renewable electricity is temporarily unavailable. To do so, one idea is to time match monthly, as well as any time that type of energy used is changed from expected energy supply and associated carbon intensity. This way companies that use a constant energy supply are not having to constantly report their energy input, while companies whose energy inputs are changing are documenting and reporting all changes. All electricity usage should be auditable.

Section 3.01(5)(a) What certifications, professional licenses, or other qualifications, if any, should be required for an unrelated party to verify the production and sale or use of clean hydrogen for the § 45V credit, § 45 credit, and § 48 credit?
Section 3.01(5)(b) What criteria or procedures, if any, should the Treasury Department and the IRS establish to avoid conflicts of interest and ensure the independence and rigor of verification by unrelated parties?
Section 3.01(5)(c) What existing industry standards, if any, should the Treasury Department and the IRS consider for the verification of production and sale or use of clean hydrogen for the § 45V credit, § 45 credit, and § 48 credit?

Yosemite Comment: Many verification bodies are capable of assessing GHG emissions under § 45V based on experience with existing fuel programs including the California and Oregon LCFS and the EU Renewable Energy Directive. Verifiers who are accredited under the LCFS, ISCC, or RSB verification systems would have the capability of reviewing IRA GHG analyses. Verification bodies currently employ conflict of interest avoidance. Guidance from the California LCFS is suitable. Similar standards of data quality are employed for fuel verifications including requirements for record keeping, chain of custody for feedstock transfers, and data quality assurance.

Section 3.01(6)(c) Coordination with § 45Q. Are there any circumstances in which a single facility with multiple unrelated process trains could qualify for both the § 45V credit and the § 45Q credit notwithstanding the prohibition in § 45V(d)(2) preventing any § 45V credit with respect to any qualified clean hydrogen produced at a facility that includes carbon capture equipment for which a § 45Q credit has been allowed to any taxpayer?

Yosemite Comments:

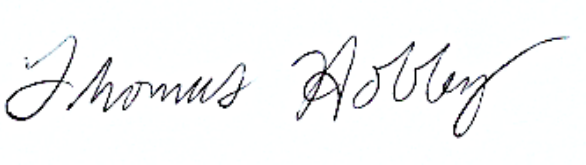
1. Regulations should clarify that if a taxpayer operates a facility that is otherwise eligible for the §45V credit, §45V(d)(2) does not apply if the taxpayer also undertakes carbon capture and sequestration of carbon produced at the facility, as long as the taxpayer does not also claim the §45Q credit during the current or prior taxable year with respect to the hydrogen production facility.

2. A taxpayer might have multiple energy generation facilities at the same geographic location. The regulations should adopt a definition of facility that permits multiple facilities to operate at the same geographic location. The taxpayer's eligibility for the §45V credit with respect to one facility should not disqualify the taxpayer's eligibility to claim the §45Q credit with respect to the other facility, even if the location of both facilities is on the same site of the taxpayer. The following example illustrates this principle:

Example. Taxpayer (T) houses a co-generation facility to generate electricity on the same site that includes an independent hydrogen production facility. The co-generation facility includes carbon capture and sequestration that is otherwise eligible for credits pursuant to §45Q. The location of the two processes on the same site does not cause the co-generation facility and the hydrogen production facility to be a single facility. Accordingly, §45V(d)(2) does not preclude T from claiming a credit pursuant to §45Q with respect to the co-generation facility and a credit pursuant to §45V with respect to the hydrogen production facility. The result would be the same if the taxpayer uses electricity from the co-generation facility in the operation of the hydrogen production facility.

Yosemite appreciates the opportunity to submit these responses to the IRS's request for comments. Thank you for your consideration. If you have any questions on these comments, please do not hesitate to contact us.

Respectfully submitted,



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