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Internal Revenue Service
CC:PA:LPD:PR (Notice 2022-58)
Room 5203
P.O. Box 7604, Ben Franklin Station
Washington, DC 20044

Re: Comments Responding to the U.S. Department of the Treasury Request for Comments on Credits for Clean Hydrogen and Clean Fuel Production – Fidelis New Energy, LLC

Dear Sirs and Madams:

Fidelis New Energy, LLC ("Fidelis") respectfully submits these comments in response to a request from the Department of the Treasury ("Treasury Department") and the Internal Revenue Service ("IRS") in Notice 2022-58, which solicited comments on certain energy tax provisions in Public Law 117-169, commonly known as the Inflation Reduction Act of 2022 ("IRA").

Fidelis is an energy transition company driving decarbonization through investments in renewable fuels, low-carbon intensity products, and carbon capture and storage. Using proprietary technology, Fidelis aims to develop, invest, and deliver climate positive and carbon negative infrastructure to reach carbon reduction and climate positive targets. Specifically, Fidelis develops carbon negative sustainable aviation fuel, renewable diesel, renewable naphtha, and clean hydrogen infrastructure. Fidelis also develops and operates CO2 capture, pipelines, sequestration sinks, and related infrastructure.

As discussed below, Fidelis provides these comments on certain questions posed regarding the Section 45V Credit for Production of Clean Hydrogen and the Section 45Z Clean Fuels Production Credit. We appreciate the opportunity to comment on these issues through this comment letter.

SECTION 3. Request for Comments

Question:

Section 3.01 Credit for Production of Clean Hydrogen (§45V)

Section 3.01(1) – Clean Hydrogen. Section 45V provides a definition of the term "qualified clean hydrogen." What, if any, guidance is needed to clarify the definition of qualified clean hydrogen?

Response:

IRA §45V(c)(2) clearly defines "qualified clean hydrogen" as hydrogen produced with lifecycle greenhouse gas emissions through the point of production not greater than 4 kgCO2e/kgH2 in the US or US possession. This definition is technology neutral. Guidance is primarily needed on defining the steps and emissions that form the "system boundary" for the well-to-gate calculation of lifecycle greenhouse gas emissions as well as the duration for which

these emissions rates are calculated over: hourly, monthly, quarterly, or annually. As iterated in our response to 3.01(d), we recommend a quarterly basis.

Question:

Section 3.01(1)(a) – Section 45V defines "lifecycle greenhouse gas emissions" to "only include emissions through the point of production (well-to-gate)."[3] Which specific steps and emissions should be included within the well-to-gate system boundary for clean hydrogen production from various resources?

Response:

The system boundary for the well-to-gate lifecycle greenhouse gas emissions for §45V should align with system boundary laid out in the Draft Guidance of the Clean Hydrogen Production Standard (CHPS). This system boundary developed by the Department of Energy is also aligned with international best practices seen by the alignment with the International Partnership for Hydrogen in the Economy's (IPHE's) Hydrogen Production Analysis Task Force's (H2PA TF) draft working paper (https://www.iphe.net/iphe-working-paper-methodology-doc-oct-2021) recommended system boundary referenced in the Clean Hydrogen Production Standard Draft Guidance.

In general, the system boundary to produce hydrogen should include all upstream feedstock extraction, processing, and transportation emissions; onsite production emissions from fuel combustion, fugitive emissions; as well as emissions related to the transportation and sequestration of carbon dioxide if applicable to the production pathway. One difference from the purposed Clean Hydrogen Production Standard, is that the functional unit for the lifecycle greenhouse gas emissions for §45V should not be limited to 99% mole purity hydrogen. While this purity hydrogen is achievable through many production pathways, it is often inefficient to purify hydrogen to 99% when the hydrogen is used as a feedstock to another chemical process such as in many ammonia production pathways or for hydrogen produced to be blended into fuel gas or natural gas systems. Significant process inefficiencies would be added to the production of ammonia from reforming natural gas were 45V credit generation dependent on the production 99% mole purity hydrogen. This is of particular relevance since the US produced approximately 17 million tonnes of Ammonia in 2020. With each ton of ammonia corresponding to 2.1 tonnes of CO2 emissions, this production corresponds to approximately 35.7 million metric tons of CO2 released to the atmosphere[1]. Section 45V does not limit what the produced hydrogen can be sold or used for, as such we recommend consideration of 95% mole purity hydrogen as the purity requirement for produced hydrogen to qualify for §45V consideration. Enabling intermediate hydrogen to qualify for 45V will incentivize significant reductions in CO2 emissions incurred through the production of ammonia and other products.

The 3 MPA battery limit suggested by the CHPS and H2PA TF working paper is a reasonable product pressure for standardization of lifecycle emissions for hydrogen production systems. This pressure limit cannot be viewed as a requirement for qualification under §45V but

[1] U.S. Energy Information Administration (2022). "Natural Gas Weekly Update for Week ending March 31, 2022: In the New: US ammonia production is growing and becoming less carbon intensive". https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2021/04_01/#jm-trends

as the basis for determining emissions rates for the produced hydrogen. Facilities that produce hydrogen at a higher pressure should get credit for the energy that would've otherwise been required to compress the hydrogen from 3 MPA to the actual production Pressure. Likewise, hydrogen that is produced at a lower pressure should be penalized the energy that would have been required to compress the product hydrogen to the 3 MPA reference pressure from the actual production pressure. This energy penalty and emission penalty should be based on electric drive compression assuming the average carbon intensity of power consumed on site, with the grid electricity emission factor as determined by GREET.

As expanded upon in our response to 3.01(1)(d), Fidelis recommends that these emission points should be quantified quarterly to determine the emission rate or carbon intensity (CI) of the hydrogen.

Question:

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.

Response:

Fidelis recommends that GHG emissions should be allocated on a process system level basis between co-products. Examples of this are feedstock extraction emissions should be allocated between the various co-products generated in the extraction process; likewise, emissions from the hydrogen production including the embodied upstream emissions should be allocated to the co-products of the hydrogen production step. This is consistent with established methodologies in GREET and is seen in the IPHE HPTF Working paper.

Additionally, we recommend that the allocation methodology differentiates between primary or co-products of a production process and the by-products, wastes and residues the process. Differentiating between primary and co-products and byproducts, wastes and residues is important as the limited values by-products, wastes and residues of the production process should not take away emissions from the primary product and co-products. We recommend adoption of the International Civil Aviation Organization's ("ICAO") Carbon Offsetting and Reduction Scheme for International Aviation ("CORSIA") definitions of products and co-products, by-products, wastes and residues and methodology that excludes allocating emissions to these low value streams. This is consistent with the treatment of these by-products, wastes and residues in GREET and under California's Low Carbon Fuel Standard ("LCFS").

We recommend consideration of an energy-based allocation approach on a lower heating value ("LHV") basis for process emissions at the hydrogen production system level. This allocation method is the easily verifiable due to its simplicity and is appropriate for allocation of between the produced hydrogen and steam or electricity co-products. Allocating emissions between co-products on a LHV basis is a recognized methodology for many low carbon fuels pathways under California's LCFS program and the only method allowed under ICAO's CORSIA scheme.

For systems produce, non-energetic co-products nitrogen, oxygen, carbon, system expansion could be an appropriate method of allocating GHG emissions to co-products in the hydrogen production step. As described in the IPHE HPTF Working Paper, system expansion allows the subtraction of environmental burdens associated with substitute products from the hydrogen production system under study. This allows for the valorization of energy and non-energy products (oxygen, elemental carbon) alike. Under the system expansion framework, comparison to substitute production pathways must be done at equivalent conditions. For example, oxygen produced as by product of electrolysis should be compared to oxygen production processes that produce oxygen at equivalent conditions with the minimum energy required: purity, temperature, pressure. The system expansion methodology does introduce complexity over a energy based allocation as the substitute pathway for the production of the co-product like nitrogen, oxygen, or carbon, must be quantified. This could introduce discrepancies where taxpayers with similar production pathways claim different substitute pathway emission for the same co-product.

Mass based co-product allocation is an inappropriate allocation method for the allocation of emissions at the hydrogen production process level due to the low molecular weight of Hydrogen, which results in disproportionate allocation of emissions to the co-product. For example, a mass-based approach for electrolysis-based Hydrogen production would result in approximately 89% of the lifecycle emissions being allocated to the co-produced oxygen. Mass based co-product allocation can be appropriate for allocation method of process level co-products upstream of the hydrogen production step in. For example, the emissions related to production of oxygen for gasification or autothermal reforming should be allowed to be allocated on a mass basis to the co-product nitrogen and or argon so long as those co-products are sold or used and not vented to atmosphere. Another example the allocation of upstream emissions for biogenic feedstocks used in a hydrogen production pathway, co-products of the biogenic feedstock can be allocated on a mass balance.

Question:

Section 3.01(1)(b)(ii) – How should emissions be allocated to the co-products (for example, system expansion, energy-based approach, mass-based approach)?

Response:

As elaborated on in the response above, 3.01(1)(b)(i), system expansion should be the default for allocating emissions between co-products in general as it allows the most flexibility in allocating emissions between both energy containing (steam, electricity) and non-energy containing (oxygen) co-products. Under the system expansion framework, comparison to substitute production pathways must be done at equivalent conditions. For example, oxygen produced as by product of electrolysis should be compared to oxygen production processes that produce oxygen at equivalent conditions: purity, temperature, pressure. Energy based approaches should also be allowed for hydrogen production processes that valorize steam and energy. As stated above, a mass-based approach is inappropriate for hydrogen production processes level due to the low molecular weight of hydrogen.

Question:

Section 3.01(1)(b)(iii) – What considerations support the recommended approaches to these issues?

Response:

These considerations are supported by industry best practices as seen by the recommendations in the IPHE H2PA TF working paper referenced above as well are system is expansion is often the default allocation method with in GREET for hydrogen production with co-produced steam or electricity.

Question:

Section 3.01(1)(c)(i) – How should lifecycle greenhouse gas emissions be allocated to clean hydrogen that is a by-product of industrial processes, such as in chlor-alkali production or petrochemical cracking?

Response:

Substitution method as outlined in the IPHE H2PA TF working paper is an appropriate method as most of this produced Hydrogen is used for power and heating today and this heat will have to be produced using other energy sources.

Question:

Section 3.01(1)(c)(ii) – How is byproduct hydrogen from these processes typically handled (for example, venting, flaring, burning onsite for heat and power)?

Response:

Hydrogen rich off gas streams generated in refineries or other industrial processes are typically used for onsite power and heat generation or recovered for use in processes such as hydrogenation.

Question:

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 CO2-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?

Response:

If a facility produces clean hydrogen for part of the taxable year, it should still be allowed to claim the 45V based on the quantity of clean hydrogen that was produced with the proper applicable percentage at which it was produced. We recommend that the emission rate be quantified on a quarterly basis with annually reporting and auditing to the Department of Treasury, such that the treasury department and IRS can do true up based on monthly data. This will enable the Department of Treasury and IRS to grant the proper applicable percentage for

hydrogen produced at a quarterly specific emission rate. Quarterly treatment or similar pro-rata mechanisms are needed because it is also possible for a facility which would typically qualify for 25% credit to with an emissions rate less than 2.5 kilograms (kg) of CO2e per kg of hydrogen but not less than 1.5 kg of CO2e to temporally exceed 2.5 kg CO2e per kg of hydrogen, but still qualify for the 20% applicable percentage.

Hydrogen producers will be held liable for continuous hydrogen supply to their customers, and as such there are several scenarios where facility may temporally exceed its nominal lifecycle emissions rate in order to fulfill those continuous supply requirements. A few scenarios in which a facility would temporarily exceed a typical emission threshold, is during an interruption to CO2 sequestration operation due to well work overs, during a start up or shut down event, or during an interruption in the typical upstream energy and material inputs supplied to the facility such as interruption to onsite renewable electricity generation resulting in increased emissions. These process upsets may temporarily result in the produced hydrogen exceeding the typical emission rate determined in by the secretary or by petition. A quarterly basis enables many of these upsets to be averaged into the total quarterly hydrogen production resulting in a more accurate basis for which to determine the emission rate of the facility. Even in the event of a longer duration upset, a facility should not be excluded from claiming the §45V credit for an entire year because of a circumstance outside the facility's control. A facility should be able to claim credit under §45V for hydrogen produced within a quarter based the average quarterly lifecycle emission rate for the quarter, regardless of what the quarterly emission rate was for previous or subsequent operating quarters.

A quarterly basis is supported as be relevant existing programs like the EPA's Renewable Fuel Standard ("RFS") which reports on a quarterly basis and California's LCFS program that generates credits on a quarter basis with annual reporting.

Question:

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?

Response:

Fidelis encourages the Treasury Department and the IRS to adopt processes for verification like the verification processes established under California's Low Carbon Fuel Standard ("LCFS"), which regulates the carbon intensity of transportation fuel used in California. This program is responsible for reducing the carbon intensity of transportation fuels by 9.4% in California since its establishment and has a robust, well established verification processes for determining and verify the carbon intensity of a variety of transportation fuels such ethanol, renewable diesel, biomethane, and electricity. As such the California LCFS program's verification processes serves as a template to base the verification requirements of clean hydrogen production.

The process for verifying energy inputs within California's LCFS program is outlined under the LCFS program Sections 95500 "Requirements for Validation of Fuel Pathway Applications; and Verification of Annual Fuel Pathway Reports and Section 95501 "Requirement for Validation and Verification Services." In addition, Section 95491.1.(a)(2) "Record Retention for Fuel Pathway Holders and Applicants" outlines the documentation requirements required to allow for verification of CI calculations.

Question:

Section 3.01(1)(e)(i) – How might clean hydrogen production facilities verify the production of qualified clean hydrogen using other specific energy sources?

Response:

Clean hydrogen producers should be required to have direct or "behind the meter" connection to renewable electricity energy sources. As elaborated in our response to 3.01(4)(f), intermittent wind and solar electricity generation places a significant burden on grid infrastructure when used with indirect book accounting mechanisms. As such, verification of specific energy sources should be enforced by metered direct connection with the claimed specific energy sources and should prevent the claiming of specific electricity sources when such electricity is carried on common grid infrastructure.

For specific non-electricity, energy sources such as renewable natural gas (RNG) strict verification that the renewable natural gas claimed is connected to the same natural gas system and could feasibly be consumed at the clean hydrogen production site. RNG does not incur the many draw backs of indirect accounting as intermittent electricity does, due to the small volumes and constant production rates.

Question:

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?

Response:

In general, time matching of energy inputs used in the qualified clean hydrogen production process should be tracked on an hourly basis. This basis should then be used to determine monthly emissions rates for the produced hydrogen. This level of specificity enables precise and accurate emission rate accounting by verifying the consumption of electricity and natural gas, as well as the production of hydrogen and CO2 sequestration. As described in our response to question 3.01(d), this hourly data should be used to calculate quarterly emission rates to account for temporary operational upsets.

As iterated throughout our response, indirect book accounting of intermittent renewable electricity sources should not be allowed even if time matching of such generation is followed. Time matching of renewable generation is not sufficient to ensure that renewable electricity is used to produce clean hydrogen. Time matching does not alleviate the issue that production and consumption of renewables is often geographically separated on different grid nodes with

congested transmission lines unable to handle overgeneration of renewables in one grid node and demand in another creating a need for dispatchable fossil generation.

Question:

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 CO2-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?

Response:

Adoption of the system boundary and definition of well-to-gate as outlined is the Clean Hydrogen Production Standard (CHPS) is recommended. It is likely that qualified clean hydrogen production units under §45V, will also pursue involvement and development and project funding through the DOE hydrogen hub programs as well as other programs that rely upon the CHPS. Alignment between system boundary for §45V and the Clean Hydrogen Production Standard will minimize the burden of industry to accommodate the two federal programs.

Question:

Section 3.01 (3) Provisional Emissions Rate. For hydrogen production processes for which a lifecycle greenhouse gas emissions rate has not been determined for purposes of § 45V, a taxpayer may file a petition with the Secretary for determination of the lifecycle greenhouse gas emissions rate of the hydrogen the taxpayer produces.

Section 3.01 (3)(a) – At what stage in the production process should a taxpayer be able to file such a petition for a provisional emissions rate?

Response:

The Treasury Department and the IRS should allow taxpayers to submit a life cycle analysis report that demonstrates compliance with the definition of "qualified clean hydrogen" using the most recent Greenhouse gases, Regulated Emissions and Energy use in Transportation model (GREET) developed by the Argonne National Laboratory. The life cycle analysis report should be in line with industry standards such as ISO frameworks 14067, 14040, 14044, 14064 and can be prepared by the taxpayer or a third party on behalf of the taxpayer. This petition should be allowed for once a perspective project has site control, an approved air permit, and engineering level sufficient for a life cycle analysis report. After a review process with life cycle analysis report and supporting design documentation, the facility should be able to receive a provisional emissions rate. Allowing petition for provisional emissions rates, will encourage investment in new facilities and help these facilities obtain financing required for construction

based on the provisional emission rate. The provisional emissions rate can then be verified after 3 months of operating data is available for third party verification and auditing.

Additionally at any point after the start of production, a taxpayer should always be allowed to petition the Secretary for determination of the lifecycle greenhouse emissions rate if the facility produces a hydrogen with a lower emissions rate than has been previously determined by the Secretary for similar production process. By doing so, industry is incentivized to pursue process efficiency improvements such as improvements in carbon capture rates, reduction in feedstock emissions, and overall energy efficiency that result in lowering the carbon intensity of the hydrogen product. This is consistent with the industry practice of allowing determination of lower lifecycle emission rates within the California's Low Carbon Fuel standard versus the and the International Civil Aviation Organization's Carbon Offsetting and Reduction Scheme for International Aviation ("CORSIA") which is already an approved framework for life cycle analysis under the Inflation reduction act for the 45Z credit.

Question:

Section 3.01 (3)(b) – What criteria should be considered by the Secretary in making a determination regarding the provisional emissions rate?

Response:

As iterated above, the provisional emissions rate should be based on a life cycle analysis report prepared by a taxpayer or on behalf of taxpayer in alignment with industry standards. Section 45V is clearly states the criteria to be considered in making a determination of regarding a provisional emissions rate in the stated definition of "qualified clean hydrogen", which is defined as hydrogen produced through "…a process that results in a lifecycle greenhouse gas emissions rate of not greater than 4 kilograms of CO2e per kilogram" and that is produced with in the United States or possession of the United States, in the ordinary course of a trade or business of the tax payer, and for sale or use, and the production and sale or use of such hydrogen is verified by an unrelated party."

This definition clearly defines a technology neutral approach of determining provisional emissions rate that is based on compliance with a lifecycle emissions rate of not greater than 4 kgCO2e/kgH2 through the point of production as determined in the most recent GREET model, which could result neutral or negative emissions rates.

Question:

Section 3.01(4) <u>Recordkeeping and Reporting</u>.

Section 3.01(4)(a) – What documentation or substantiation do taxpayers maintain or could they create to demonstrate the lifecycle greenhouse gas emissions rate resulting from a clean hydrogen production process?

Response:

Fidelis recommends that the Treasury department and the IRS draw from well-established programs like the California Low Carbon Fuel Standard ("LCFS") program and EPA's Mandatory Greenhouse Gas Reporting under EPA Part 98 Subpart P requirements. Under

the California LCFS program, fuel producers must verify the carbon intensity of the fuels sold in California, the associated documentation required for the LCFS program are under Section 95491.1(a)(2) "Record Retention for Fuel Pathway Holders and Applications". Additional record keeping requirements for monitoring fall under Section 95491.1.(c) "Monitoring plan for entities Required to Validate or Verify". The California LCFS verification program is also based on international best practices ISO 14064-3 and 14065.

Under EPA Part 98 Subpart P – "Hydrogen Production" outlines the records that must be retained, and the data reporting requirements required under the Mandatory Greenhouse Gas Reporting Section 98.166-7, which will apply to many clean hydrogen producers that produce hydrogen by reforming, gasification, oxidation, reaction, or other transformation of feedstocks.

Adopting documentation and recordkeeping requirements from well-established programs like California's LCFS program and EPA Part 98 provide industry with clear guidance and minimize additional regulatory reporting burden for reporting to different regulators.

Question:

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?

Response:

In addition to documentation requirements, the California LCFS program and the EPA's Mandatory Greenhous Gas Reporting establish many of the methodologies required for monitoring lifecycle greenhouse gas emission rates and can serve as the template for the monitoring requirements under the Clean Hydrogen Production Standard.

Monitoring the feedstock and energy consumption data required for the GREET model are well established practice in the California LCFS program and the requirements of this monitoring and documentation are described in the previously mentioned Sections 95491.1.(a)(2) "Record Retention for Fuel Pathway Holders and Applicants" and 95491.1.(c) "Monitoring Plan for Entities Required to Validate or Verify".

Under EPA Part 98 fuel consumption and combustion emission monitoring methodology and requirements are described in Mandatory Reporting Section 98.34 and 98.37 as well as Subpart P – "Hydrogen Production" Sections 98.163 Calculating GHG Emissions and 98.164 Monitoring and QA/QC requirements.

Adopting methodologies from well established programs like California's LCFS program and EPA Part 98 provide industry with clear guidance and minimize additional regulatory reporting burden for reporting to different regulators.

Question:

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

Response:

The source of electricity supply should be based on the electrical mix of the of the metered grid electricity region. In the case of onsite generation or metered direct connection, the electrical supply is then verified by the direct connection. As stated in below in our response to 3.01(4)(f), §45V should not allow for indirect book accounting of renewable electricity that is supplied through grid infrastructure.

Question:

Section 3.01(4)(d) – What procedures or standards should be required to verify the production (including lifecycle greenhouse gas emissions), sale and/or use of clean hydrogen for the § 45V credit, § 45 credit, and § 48 credit?

Response:

As with documentation and monitoring requirements, procedures required to verify production, sale and/or use of clean fuel are established practice in industry today under both the EPA's Renewable Fuel Standard (RFS) and California's LCFS program. The standards for verify production and carbon intensity California's LCFS program are described in Section 95500 "Requirements for Validation of Fuel Pathway Applications; and Verification of Annual Fuel Pathway Reports". Under the federal RFS, section 80.1469 outlines the requirements for Quality Assurance Plans, which outlines the quarterly reporting and monitoring.

Fidelis recommends that the procedures required to verify the production, sale and/or use of clean hydrogen be adopted from well established verification practices under the RFS, and California LCFS programs referenced above.

Question:

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?

Response:

Similarly, to 3.01(4)(d), the RFS and California LCFS programs have verification processes with sufficient rigor to verify the amount of clean hydrogen produced and utilized by a single taxpayer. The referenced sections 80.1469 of the RFS and 95500 of the California LCFS can serve as templates for verification of the process to demonstrate both quantity of produced and utilized hydrogen and that this hydrogen meets the requirements of the section 45V credit through robust metering and documentation.

We recommend adoption of similar regulation for the verification process of the product and used of clean hydrogen which is readily achievable under the verification requirements of the either the RFS and/or California LCFS.

Question:

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?

Response:

Hydrogen production in the United States is primed to grow significantly given both the Clean Hydrogen Production Standard and §45V. Increased power consumption due to production of electrolytic hydrogen could significantly exacerbate grid instability if "book and claim" market mechanisms for determination of the electricity emissions for Hydrogen Production encourage the use of remote renewable or low carbon generation for electrolytic hydrogen plants. Indirect book accounting factors that reduce a taxpayer's effective greenhouse gas emissions for renewable electricity through renewable energy credits, power purchase agreements should not be considered when calculating the lifecycle emissions rates under §45V.

"Book and claim" market structures would allow electrolytic hydrogen producers consuming grid power at constant rates geographically segregated from the renewable generation units to claim non-local grid emission factors. The geographic distance between renewable generation and hydrogen production unit as well as the constant power demand of the clean hydrogen production unit enabled by "book and claim" ignores the reality that solar and wind generation is intermittent and transmission of the produced electricity is typically locationally constrained due to congested transmission lines. This results in decreased grid stability and reliability. Thus, to meet the increased demand of these additional electrolytic hydrogen producers and maintain stability, grid operators are required to add additional fossil fuel generation, grid battery storage, and transmission lines to move renewable and/or low carbon power from the generation source to the "book and claim" hydrogen producer. However, the cost of these system enhancements and maintenance are transferred to the other users of the transmission grid without providing any mechanism for compensation, causing market distortions not paid for by those that create the issues.

These effects are magnified as intermittent wind and solar generation have become major power sources in many areas. For example, April 2022, the Energy Reliability Council of Texas ("ERCOT") grid hit a record wind penetration of 69.5% and California hit 100% renewable penetration[2,3].

These drawbacks of "book and claim" generation are evidenced by California's famed "Duck Curve" and by Locational Marginal Pricing which causes electricity rates to go negative at peak renewable generation to discourage over generation in certain grid nodes while electricity rates are very high in high usage areas. Allowing "book and claim" for clean H2 production would only increase these pricing discrepancies without addressing the real infrastructure gaps.

[2] ERCOT, (November 2022). https://www.ercot.com/files/docs/2022/02/08/ERCOT_Fact_Sheet.pdf

[3] Lewis, M. (May 2, 2022). https://electrek.co/2022/05/02/california-runs-on-100-clean-energy-for-the-first-time-with-solar-dominating/

Allowing for "Book and Claim" renewable electricity in characterizing the intensity of electricity emissions for hydrolytic hydrogen production ignores the negative impacts on the transmission grid stability and reliability; the significant investments required for new transmission lines, utility energy storage facilities, and dispatchable fossil-based generation units; and the Locational Marginal Pricing impacts of, in effect subsidizing electrolytic hydrogen production via grid power. While subsidizing electrolysis hydrogen, the "book and claim" also exacerbates overgeneration from too much wind and solar power requiring curtailments in areas that have "too much" renewable generation resulting in worse economics for wind and solar producers due to the lower pricing and curtailments.

Hence, "book and claim" for electrolysis-based hydrogen production will cause huge market distortions as it will not replace the need for transmitting power from the production site to the hydrogen production site and instead will transfer such costs to other users of the transmission grid without providing any mechanisms for compensation.

Electrical power "book and claim" mechanism results in higher usage of fossil fuels for power generation, higher costs for other customers, lack of funding for battery storage facilities for load balancing, lack of funding for new transmission lines moving renewable generation from remote locations to industrial areas producing and using renewable generation through "book and claim" virtual transmission ignoring the reality of moving large amounts of intermittent power, negatively impacts on transmission grid stability and reliability, and causing higher overall grid carbon intensity. For these reasons, indirect book and claim accounting should not be considered for determining the lifecycle emissions rate for hydrogen production under §45V.

It should be noted that indirect book accounting factors are not equivalent to including the biogenic uptake of CO2 by biogenic feedstocks or the avoided emissions of biogenic/biodegradable materials that are directly processed, but only refers to the indirect use of renewable electricity or biogenic materials.

Question:

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?

Response:

Indirect book accounting factors for electricity production specifically from intermittent solar and wind should not be considered in determining the lifecycle emissions rate of the hydrogen production pathway for the reasons stated above in our response to Section 3.01(4)(f).

Question:

Section 3.01 (5) Unrelated Parties.

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?

Response:

The California LCFS offers a roadmap for the certification and accreditation of unrelated party to certify clean hydrogen. Section 95502 outlines the accreditation and competency requirements for unrelated party verifiers for low carbon fuels producers under California's LCFS program. We recommend that the Treasury Department and the IRS adopt similar accreditation scheme to the California LCFS program.

Question:

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?

Response:

We recommend that the Treasury Department and the IRS adopt conflict of interest and independence requirements similar to those under the California LCFS programs and/or California Air Resources Board Mandatory Reporting of Greenhouse Gas Emissions (MRR) program. These well-established programs have stringent conflict of interest requirements outlined under Section 95503 for the California LCFS and Section 95133 for the California MRR. Adopting similar regulation will allow for companies that currently verify under California's LCFS and MRR to easily adopt to verifying the production of clean hydrogen under section 45V.

Question:

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?

Response:

The industry standards developed to support the production of low carbon fuels under the California LCFS and EPA RFS programs are well fitted to also verify the production and sale or use of clean hydrogen. Utilization of on a reporting portal like the LCFS Credit Banking and Transfer System (LRT-CBTS) or the EPA Moderated Transaction System (EMTS) can be used to verify the production and sale or use of hydrogen.

Question:

Section 3.01(6) Coordinating Rules.

(a) Application of certain § 45 rules.

Section 3.01(6)(a)(i) – Section 45V(d)(3) includes a reduction for the § 45V credit when tax-exempt bonds are used in the financing of the facility using rules similar to the rule under § 45(b)(3)). What, if any, additional guidance would be helpful in determining how to calculate this reduction?

Response:

No response at this time.

Question:

Section 3.01(6)(a)(ii) – Section 45V(d)(1) states that the rules for facilities owned by more than one taxpayer are similar to the rules of § 45(e)(3). How should production from a qualified facility with more than one person holding an ownership interest be allocated?

Response:

I.R.C. § 45(e)(3) states the following:

> I.R.C. § 45(e)(3)
> Production Attributable To The Taxpayer – In the case of a facility in which more than 1 person has an ownership interest, except to the extent provided in regulations prescribed by the Secretary, production from the facility shall be allocated among such persons in proportion to their respective ownership interests in the gross sales from such facility.

In August 2022, the United States Court of Appeals, District of Columbia Circuit opined that I.R.C. § 45(e)(3) "[…]specifies how the credit must be divided when a refining facility has multiple owners." *Cross Refined Coal, LLC v. Comm'r of Internal Revenue*, 45 F.4th 150, 158 (D.C. Cir. 2022).

Absent a governing contract negotiated by the persons with an ownership interest in a given facility that specifically addresses I.R.C. § 45V(d)(1), Fidelis requests the Treasury and the IRS generally administer I.R.C. § 45V(d)(1) in the same manner they administer I.R.C. § 45(e)(3). That said, Fidelis requests that the Treasury and the IRS implement regulations regarding I.R.C. § 45V(d)(1) which would allow relevant persons with ownership interests in a facility to contract to receive an allocation that is not in proportion to their respective ownership interests in the gross sales from such facility. A proposed rule implementing I.R.C. § 45V(d)(1) might read as follows:

1. Production Attributable To The Taxpayer – In the case of a facility in which more than 1 person has an ownership interest, except to the extent provided in regulations prescribed by the Secretary, production from the facility shall be allocated among such persons in proportion to their respective ownership interests in the gross sales from such facility.

1.a. In the case of a facility in which more than 1 person has an ownership interest, those persons may, by contract, negotiate production from the facility to be allocated among such persons as stipulated by contract

Question:

(b) Coordination with § 48.

Section 3.01(6)(b)(i) – What factors should the Treasury Department and the IRS consider when providing guidance on the key definitions and procedures that will be used to administer the election to treat clean hydrogen production facilities as energy property for purposes of the § 48 credit?

Response:

No response at this time.

Question:

Section 3.01(6)(b)(ii) – What factors should the Treasury Department and the IRS consider when providing guidance on whether a facility is "designed and reasonably expected to produce qualified clean hydrogen?"

Response:

As iterated above, the criteria for determining what constitutes "qualified clean hydrogen" is clearly stated in the definition of "qualified clean hydrogen". For a facility meeting the requirements of location and producing hydrogen for use or sale, the sole remaining criteria is that the produced hydrogen has a life cycle emissions rate not greater than 4 kg CO2e pe kg H2. The Treasury Department and IRS should consider this technology neutral criterion when providing guidance that a facility is "designed and reasonably expected to produce qualified clean hydrogen". This criterion should also be agnostic to whether the qualified clean hydrogen is produced with in a larger industrial complex that produces other primary products such as sustainable aviation fuel or renewable diesel, so long as the requirements that the produced hydrogen is used or sold, and this sale or use is verified by a third party.

Question:

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?

Response:

Yes, there are circumstances where a single industrial facility with multiple process unit and trains could qualify for both §45V and §45Q. An example of this would be post combustion capture on fired heaters that supply process heat to process other than the hydrogen production process unit. As there are substantial requirements in both capital investment and energy to capture and sequester CO2 from unrelated process units, a facility should not be excluded from claiming §45Q on the CO2 that is captured unrelated to the reforming process unit producing qualified clean hydrogen. This should also apply to carbon capture on boilers, power units, or combined heat and power units that serve the facility.

The prohibition on claiming 45Q when credit is claimed under §45V, should only apply to captured CO2 which is generated from the reforming or gasification of hydrocarbons reactions to produce the hydrogen (partial oxidation, steam methane reforming, and water gas shift reactions) and CO2 generated via combustion to provide process heat to the reforming hydrogen unit. This prohibition should not apply to any CO2 generated and captured from equipment or process units outside the battery limits of the hydrogen production unit.

Assurance that §45Q is only claimed on captured on the CO2 which was generated in other process units can be achieved through mass balances with sufficient metering to ensure that the CO2 can allocated back CO2 to the individual process unit that it was generated in.

Question:

Section 3.01(7) – Please provide comments on any other topics related to § 45V credit that may require guidance.

Response:

Fidelis believes that §45V has the potential to drastically promote production of low carbon and even carbon negative, hydrogen in the US. We applaud the carbon intensity-based regulation that rewards hydrogen producers to improve process efficiencies, energy reduction, and utilize low carbon intensity feedstocks resulting in further emission rate reductions.

Question:

Section 3.02 Clean Fuel Production Credit (§45Z)

Section 3.02(1) Sale Definition

Section 3.02(1) (a) What factors should the Treasury Department and the IRS consider in determining whether an unrelated person purchases transportation fuel for use in a trade or business for purposes of § 45Z(a)(4)(B)?

Response:

I. Unrelated Person –

The Treasury and the IRS should adopt a broad and flexible standard when defining what constitutes an unrelated person under I.R.C. § 45Z. I.R.C. § 45Z(f)(3) provides a perfunctory framework to define Related Persons, but insufficient clarity. To the extent the Treasury and the IRS provides greater clarity on what constitutes a Related Person (and conversely addresses what constitutes an unrelated person), the Treasury and the IRS should consider looking to the rules in I.R.C. Section 267(b)(2) that define relationships.

Fidelis encourages the Treasury and the IRS to look to rules in I.R.C. § 267(b)(2) for determining when a shareholder and a corporation are related. Similar rules under I.R.C. § 707(b)(1) should apply in the case of a partnership. Fidelis encourages a rule that references I.R.C. § 267(b)(2) and (3) and provides that an individual shareholder is related only if it owns more than 50% of the value of the outstanding stock of that company or a corporate shareholder if it is in the same controlled group as the company. While line drawing is necessary, Fidelis encourages the Treasury and the IRS to utilize I.R.C. § 267 to clarify the definition of related and unrelated persons.

II. Trade or Business –

For purposes of I.R.C. § 45Z(a)(4)(B), the Treasury and the IRS should consider utilizing the existing definition promulgated by the IRS for trade or business as it relates to Charities and Nonprofits. The IRS defines trade or business as follows,

> The term *trade or business* generally includes any activity carried on for the production of income from selling goods or performing services. It is not limited to integrated aggregates of assets, activities, and goodwill that comprise businesses for purposes of certain other provisions of the Internal Revenue Code. Activities of producing or distributing goods or performing services from which gross income is derived do not lose their identity as trades or businesses merely because they are carried on within a larger framework of other activities that may, or may not, be related to the organization's exempt purposes.

See IRS, *"Trade of Business" Defined*, at https://www.irs.gov/charities-non-profits/trade-or-business-defined (last visited November 22, 2022).

Question:

Section 3.02(1)(b) – What factors should the Treasury Department and the IRS consider in determining whether fuel is sold at retail for purposes of § 45Z(a)(4)(C)?

Response:

The Treasury and the IRS should adopt a broad and flexible standard when determining what constitutes an unrelated person under I.R.C. § 45Z. Fidelis suggests that the Treasury and the IRS consider I.R.C. § 414 control group rules for the purposes of determining who would qualify as an unrelated person under I.R.C. § 45Z(a)(4). I.R.C. § 414 control group rules would beneficial as it relates to the administration of I.R.C. § 45Z(a)(4)(C), especially in instances concerning parent-subsidiary controlled groups, brother-sister controlled groups, and combined groups.

I.R.C. § 45Z(a)(4) and I.R.C. § 45Z(a)(4)(C) state together, in relevant part, that "Sale – For purposes of paragraph (1), the transportation fuel is sold in a manner described in this paragraph if such fuel is sold by the taxpayer to an unrelated person – who sells such fuel at retail to another person and places such fuel in the fuel tank of such other person."

Determining if specific transportation fuel sold to an unrelated person is then (1) sold "at retail to another person" and (2) that unrelated person "places such fuel in the fuel tank of such other person" is impracticable and would require an unworkable and administratively nightmarish process from a compliance standpoint. As such, and for the purposes of determining compliance with I.R.C. § 45Z(a)(4)(C), the Treasury and the IRS should allow the unrelated person to whom the transportation fuel is sold to affirm, through affidavit, that the unrelated person (1) is in the business selling fuel at retail to another person and placing such fuel in the fuel tank of such other person, and (2) the unrelated person purchased the transportation fuel for this purpose.

Question:

Section 3.02(1) (b) What factors should the Treasury Department and the IRS consider in determining whether fuel is sold at retail for purposes of § 45Z(a)(4)(C)?

Response:

The Treasury and the IRS should adopt a broad and flexible standard when determining what constitutes an unrelated person under I.R.C. § 45Z. Fidelis suggests that the Treasury and the IRS consider I.R.C. § 414 control group rules for the purposes of determining who would qualify as an unrelated person under I.R.C. § 45Z(a)(4). I.R.C. § 414 control group rules would beneficial as it relates to the administration of I.R.C. § 45Z(a)(4)(C), especially in instances concerning parent-subsidiary controlled groups, brother-sister controlled groups, and combined groups.

I.R.C. § 45Z(a)(4) and I.R.C. § 45Z(a)(4)(C) state together, in relevant part, that "Sale – For purposes of paragraph (1), the transportation fuel is sold in a manner described in this paragraph if such fuel is sold by the taxpayer to an unrelated person – who sells such fuel at retail to another person and places such fuel in the fuel tank of such other person."

Determining if specific transportation fuel sold to an unrelated person is then (1) sold "at retail to another person" and (2) that unrelated person "places such fuel in the fuel tank of such other person" is impracticable and would require an unworkable and administratively nightmarish process from a compliance standpoint. As such, and for the purposes of determining compliance with I.R.C. § 45Z(a)(4)(C), the Treasury and the IRS should allow the unrelated person to whom the transportation fuel is sold to affirm, through affidavit, that the unrelated person (1) is in the business selling fuel at retail to another person and placing such fuel in the fuel tank of such other person, and (2) the unrelated person purchased the transportation fuel for this purpose.

Question:

Section 3.02 (2) – Establishment of Emissions Rate for Sustainable Aviation Fuel. Section 45Z(b)(1)(B)(iii) provides that the lifecycle greenhouse gas emissions of sustainable aviation fuel shall be determined in accordance with the Carbon Offsetting and Reduction Scheme for International Aviation or "any similar methodology which satisfies the criteria under § 211(o)(1)(H) of the Clean Air Act (42 U.S.C. 7545(o)(1)(H)), as in effect on the date of enactment of this section." What methodologies should the Treasury Department and IRS consider for the lifecycle greenhouse gas emissions of sustainable aviation fuel for the purposes of § 45Z(b)(1)(B)(iii)(II)?

Response:

Consistent with how emissions rates are established for other transportation fuels are calculated under section 45Z and how hydrogen emissions rates are determined under section 45V, the Treasury Department and IRS should also consider the Argonne National Laboratory's (ANL) Greenhouse gases Regulated Emissions and Energy use in Technologies model. The GREET model is consistent with the methodology outlined by the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) to such an extent that the existing default emissions rates determined by CORSIA were developed using the GREET model. The primary differences between the GREET model and CORSIA's methodology are the basis for allocation of emissions to co-products and induced land use change (ILUC) values. GREET allows for allocation of emissions to co-products on mass, energy, market or displacement (system expansion) basis; whereas CORSIA requires that co-product emissions be allocated on

an energy basis. The second difference between the GREET model and CORSIA is the two have significant differences in the ILUC values assigned to fuel production from the same biogenic feedstocks.

Allowing consistent methodology between sustainable aviation fuel (SAF) and other transportation fuels is critical as many of the facilities that produce SAF will also produce other transportation fuels like renewable diesel (RD) and or renewable naphtha (RN), which would qualify under section 45Z. Requiring one facility producing RD and SAF to use GREET to quantify the emission rate of the RD and CORSIA to determine the emission rate of SAF adds additional complexity to both industry and verification. The inconsistent ILUC values between GREET and CORSIA would mean that soy oil-based RD would be receive an ILUC value from GREET of using the GTAP 2011 of approximately 7.9 gCO2e/MJ and the SAF co-product would receive a default CORSIA ILUC value of 24.5 gCO2e/MJ even though the RD and SAF were co-products of the same feedstock. This inconsistency should be addressed and a consistent basis of determining ILUC should be adopted so that fuels produced from the same feedstock at the same facility do not receive widely divergent ILUC.

Question:

Section 3.02(3) – Provisional Emissions Rates. Section 45Z(b)(1)(D) allows the taxpayer to file a petition with the Secretary for determination of the emissions rate for a transportation fuel which has not been established.

Section 3.02(3) (a) – At what stage in the production process should a taxpayer be able to file a petition for a provisional emissions rate?

Response:

The Treasury Department and the IRS should allow taxpayers to submit a life cycle analysis report that demonstrates compliance with the definition of a transportation fuel produced by a tax payer at a "qualified facility" using the most recent Greenhouse gases, Regulated Emissions and Energy use in Transportation model (GREET) developed by the Argonne National Laboratory. The life cycle analysis report should be in line with industry standards such as ISO frameworks 14067, 14040, 14044, 14064 and can be prepared by the taxpayer or a third party on behalf of the taxpayer. This petition should be allowed for once a perspective project has site control, an approved air permit, and engineering level sufficient for a life cycle analysis report. After a review process with life cycle analysis report and supporting design documentation, the facility should be able to receive preliminary emissions rate. Allowing petition for provisional emissions rates, will encourage investment in new facilities and help these facilities obtain financing required for construction based on the provisional emission rate. This provisional emissions rate can then be verified after 3 months of operating data is available for third party verification.

A taxpayer should always be allowed to petition the Secretary for determination of the lifecycle greenhouse emissions rate if the facility produces a transportation fuel with a lower emissions rate than has been previously determined by the Secretary for similar production process. By doing so, industry is incentivized to pursue process efficiency improvements such as

improvements carbon capture rates, reduction in feedstock emissions, and overall energy efficiency that result in lowering the carbon intensity of the hydrogen product. This is consistent with the industry practice of allowing determination of lower lifecycle emission rates within the California's Low Carbon Fuel standard and the International Civil Aviation Organization's (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

Question:

Section 3.02(3)(b) – What criteria should be considered by the Secretary to determine the provisional emissions rate?

Response:

As iterated above, the provisional emissions rate should be based on a life cycle analysis report prepared by a taxpayer or on behalf of taxpayer in alignment with industry standards. This report should form the basis for which the Secretary determines the provisional emissions rate. Section 45Z is clear that the criteria for emissions rate is the life cycle greenhouse gas emissions as modeled such that it "… satisfies the criteria under section 211(o)(1)(H) of the Clean Air Act (42 U.S.C 7545(o)(1)(H))" as stated in section 45Z.

Question:

Section 3.02 (4) – <u>Special Rules</u>. Section 45Z(f)(1) provides several requirements for a taxpayer to claim the § 45Z credit, including for sustainable aviation fuel a certification from an unrelated party demonstrating compliance with the general requirements of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) or in the case of any similar methodology, as defined in § 45Z(b)(1)(B)(iii)(II), requirements that are similar to CORSIA's requirements. With respect to this certification requirement for sustainable aviation fuel, what certification options and parties should be considered to support supply chain traceability and information transmission requirements?

Response:

Under CORSIA's requirements there are currently only two approved Sustainability Certification Schemes ("SCS"), the International Sustainability and Carbon Certification ("ISCC") and Roundtable on Sustainable Biomaterials ("RSB"). While certification from either ISCC or RSB should be considered sufficient for qualification under §45Z, Sustainable Aviation Fuel ("SAF") producers should not be limited to just these two approved schemes for qualification under §45Z. Requiring certification for solely these two organizations which would shift the requirements for certification away from the International Civil Aviation's CORSIA program to these two organizations. Instead, SAF producers should meet the requirements of §45Z(f)(1) so long as they can demonstrate compliance with the general requirements with respect to supply chain traceability and information transmission requirements laid out in "CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes"

Question:

Section 3.02 (5) – <u>Coordinating Rules</u>. Section 45Z(f)(4) states that under regulations prescribed by the Secretary, rules similar to the rules of § 52(d) apply in the case of estates and trusts. Section 45Z(f)(5) states that rules similar to § 45Y(g)(6) apply to patrons of agricultural

cooperatives. Section 45Z(f)(6)(A) states that rules similar to the rules of § 45(b)(7) apply for the prevailing wage requirement. Section 45Z(f)(7) states that rules similar to the rules of § 45(b)(8) apply for the apprenticeship requirement. Is the application of the cross-referenced rules for purposes of the § 45Z credit adequately clear? What aspects of the cross-referenced rules should apply to the § 45Z credit without modification and what aspects should be modified?

Response:

Fidelis requests that the I.R.C. § 45Z(f)(6)(B) Prevailing Wage safe harbor remain unchanged and unaffected regardless of how I.R.C. § 45Z(f)(6)(A) is implemented subject to "rules similar to the rules of section 45(b)(7)."

Fidelis requests that the Treasury and the IRS clarify the cross-referenced rules by mandating that rules similar to the rules of I.R.C. § 45(b)(6), I.R.C. § 45(b)(7), and I.R.C. § 45(b)(8) apply to the I.R.C. § 45Z tax credit.

As noted above, I.R.C. § 45Z(f)(6)(B) provides a safe harbor related to Prevailing Wage Requirements. For purposes of regulatory clarity and to mitigate compliance burdens for the Treasury and the IRS, Fidelis requests that I.R.C. § 45Z apply rules similar to I.R.C. § 45(b)(6) and I.R.C. § 45(b)(8) which establish Apprenticeship Requirements as well as an apprenticeship safe harbor.

Question:

Section 3.02 (6) – <u>Multiple Owners</u>. How should production from a qualifying facility with more than one person having an ownership interest in such facility be allocated to such persons for purposes of § 45Z(f)(2)? Should rules similar to the rules under § 45(e)(3) apply for this purpose? If so, which aspects of § 45(e)(3) should apply without modification for this purpose and which aspects should be modified?

Response:

I.R.C. § 45Z(f)(2) and I.R.C. § 45(e)(3) are identically written. I.R.C. § 45Z(f)(2) and I.R.C. § 45(e)(3) both state the following:

> Production Attributable To The Taxpayer – In the case of a facility in which more than 1 person has an ownership interest, except to the extent provided in regulations prescribed by the Secretary, production from the facility shall be allocated among such persons in proportion to their respective ownership interests in the gross sales from such facility.

In August 2022, the United States Court of Appeals, District of Columbia Circuit opined that I.R.C. § 45(e)(3) "[…]specifies how the credit must be divided when a refining facility has multiple owners." *Cross Refined Coal, LLC v. Comm'r of Internal Revenue*, 45 F.4th 150, 158 (D.C. Cir. 2022).

Fidelis requests that absent a governing contract negotiated by the persons with an ownership interest in a given facility that specifically addresses I.R.C. § 45Z(f)(2), the Treasury and the IRS should generally administer I.R.C. § 45Z(f)(2) in the same manner they administer I.R.C. § 45(e)(3). That said, Fidelis requests that the Treasury and the IRS implement regulations

regarding I.R.C. § 45Z(f)(2) which would allow relevant persons with ownership interests in a facility to contract to receive an allocation that is not in proportion to their respective ownership interests in the gross sales from such facility. A proposed rule implementing I.R.C. § 45Z(f)(2) might read as follows:

1. Production Attributable To The Taxpayer – In the case of a facility in which more than 1 person has an ownership interest, except to the extent provided in regulations prescribed by the Secretary, production from the facility shall be allocated among such persons in proportion to their respective ownership interests in the gross sales from such facility.

    1.a. In the case of a facility in which more than 1 person has an ownership interest, those persons may, by contract, negotiate production from the facility to be allocated among such persons as stipulated by contract.

Question:

Section 3.02 (7) – Please provide comments on any other topics related to § 45Z credit that may require guidance.

Response:

Fidelis believes that Section 45Z has the potential to drastically promote supply of low carbon and even carbon negative, clean transportation fuels in the US. We applaud the carbon intensity-based regulation that rewards fuel producers to improve process efficiencies, energy reduction, and utilize low carbon intensity feedstocks resulting in further emission rate reductions and cleaner fuels.

Additional clarification under section 45Z is needed to address how indirect book accounting of "emission reductions" through renewable energy credits or virtual power purchase agreements in determining lifecycle emissions rates as is being addressed under section 45V above 3.01(4)(f). The same reasons iterated in our response to 3.01(4)(f) that outline why indirect book accounting is inappropriate to produce clean hydrogen due to additional grid instability and grid operating costs, apply to clean fuel production facilities. For these reasons and more, we recommend that the Treasury Department and IRS issue guidance that does not allow for indirect book accounting of intermittent electricity generation from wind and solar assets.

* * * *

Thank you for the opportunity to submit these comments. We welcome the opportunity to meet with the Treasury Department and the IRS to discuss these issues in greater detail and to answer any questions that you may have.

Respectfully submitted,
Fidelis New Energy, LLC