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Bakken Energy, LLC. Comments on Credits for Clean Hydrogen and Clean Fuel Production (Notice 2022-58)

To Whom It May Concern:

On behalf of Bakken Energy, I respectfully submit the following comments to the Department of Treasury (Treasury) and the Internal Revenue Service (IRS) in response to notice 2022-58 regarding the new sections 45V and 45Z, which were added to the Internal Revenue Code by sections 13204 and 13704, respectively, of Public Law 117-169, the Inflation Reduction Act.

Bakken Energy is a commercial scale hydrogen production company built with a focus on decarbonizing heavy-duty transportation in the upper Midwest and across the country. We appreciate the opportunity to respond to this request for feedback regarding these crucial credits.

We would welcome the opportunity to participate in any stakeholder engagement as Treasury and IRS further craft this important tax guidance. Thank you for your time and your consideration.

Sincerely,

C. B. Tillotson

Chris B. Tillotson
Chief Projects Officer

3.01 Credit for Production of Clean Hydrogen.

(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?

(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?

We are in agreement with the system boundary as defined in the CHPS draft guidance that includes CCS even if CCS is not at the site of production and does not include other post-hydrogen production steps such as potential liquefaction, compression, dispensing into vehicles, etc. The emissions analysis over this system boundary should however be comprehensive and include changes to baseline greenhouse gas emissions (GHG) – positive or negative – compared to the status quo. For example, if the clean hydrogen production facility sources low-carbon intensity natural gas by investing in technology and practices that reduce GHG emissions from a defined baseline by sourcing natural gas that would otherwise be flared for disposal, reduces methane leakage and lowers CO2 emissions at the wellhead through processing and transportation then these reductions should be reflected in the emissions analysis as a direct result of this facility being placed in service.

We would go further and recognize the need for a commitment to Responsibly Sourced Gas (RSG)[1] as it becomes the recognized standard for natural gas production. Combining the reduction in flaring, with the prevention of future flaring and adherence to RSG standards would ensure the maintenance of clean hydrogen best practices.

The same should be true for the qualified clean hydrogen production facility itself. For example, if a facility currently in operation is retrofitted and converted to produce qualifying clean hydrogen, the net increase or reduction in GHG emissions resulting from that conversion should be accounted for in the lifecycle emissions analysis.

More specifically, we propose using carbon accounting methods that incorporate accounting for 'avoided emissions' and the GHG emissions impact of clean hydrogen production relative to the situation (or baseline) where clean hydrogen production does not currently exist. This would apply to the use of flare gas in the production of clean hydrogen where the avoided GHG emissions in the form of methane emissions and increased CO2 emissions from the flare stack would be accounted for and applied to LCA calculations. These avoided emissions have been referred to as Scope 4 – Avoided Emissions. Avoided emissions would also apply to brownfield scenarios whereby an existing higher GHG emitting facility is redeveloped into clean hydrogen production facility with greatly reduced GHG emissions.

[1] Numerous industry participants ranging from Chevron to Project Canary have adopted and are pursuing standards for Responsibly Sourced Gas that are standardized and independently verified. The basic principles for RSG are for producers to demonstrate that production is: 1) Below an accepted threshold for emissions while using industry best practices for mitigation; 2) Minimization of environmental impacts and benefits for surrounding communities; and 3 Responsible management of water resources, waste disposal and land use

(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?

While well suited for many use cases, the GREET model needs to evolve to better support low-carbon intensity natural gas-based hydrogen production methods including ATR. As currently constituted, the model does not support the level of granularity needed to account for project specific factors, such as the utilization of low-carbon intensity cogenerated power and steam sources and avoided emissions from use of responsibly-sourced natural gas feedstock. Claimants should be required (and permitted) to submit verified data that could be entered into the GREET model at every input point in lieu of the standardized inputs GREET currently uses.

(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). 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?

The specific boundaries of the well-to-gate analysis should account for all increases and reductions in emissions compared to the current baseline as articulated more fully in response to 3.01(1)(a).

(4) Recordkeeping and Reporting.

(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?

The taxpayer should be required to install a metering device, which is owned, operated, and monitored by a third party consistent with best practices and applicable industry standards, and which measures output directly from the point of hydrogen production. Production volumes as verified by this metering device should be sufficient to substantiate the volume claimed under § 45V. In this scenario, it does not matter whether the hydrogen is sold to a third party or used by the taxpayer. The amount of hydrogen used by the taxpayer could be determined by netting out the total volume produced, and the amount sold to third parties. Finally, hydrogen used in furtherance of powering a clean hydrogen production facility should be treated as a zero emissions input since that hydrogen's emissions intensity was already accounted for during its production.

(6) Coordinating Rules.

(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?

We envision a similar, but not identical, circumstance where a facility was at one point in time used for an unrelated process train that was allowed a credit under § 45Q and has now been converted by the taxpayer to an entirely different process train which is eligible for § 45V. In this scenario, Treasury and IRS should, consistent with the statute, clarify that 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 is allowed does not apply to a facility that was allowed the § 45Q credit prior to being modified such that it became a qualified clean hydrogen production facility.

The plain text of the statue supports this interpretation. Section 45V(d)(4) explicitly states that any facility which was originally placed in service before January 1, 2023 and did not produce qualified clean hydrogen until it was modified to do so "shall be deemed to have been originally placed in service as of the date that the property" is modified to produce qualified clean hydrogen. Under this interpretation, § 45V(d)(2) would not apply seeing as how the facility at issue was not "in service" at the time the § 45Q credit was claimed.

Still, as a matter of statutory construction, § 45V(d)(4) is difficult to read and the statute is silent on how it interacts with § 45V(d)(2) specifically. Clear guidance on this issue is critical for qualified clean hydrogen production facilities like ours, as we are converting a large-scale synthetic fuels production facility into a qualified clean hydrogen production facility. The current owner of this facility plans to claim the § 45Q credit under the facility's current configuration and we plan to claim the § 45V credit after the facility is fully converted to produce qualified clean hydrogen.

Finally, we request that the term "facility" as used in § 45V(d)(2) be interpreted as identical to "clean hydrogen production facility."[2] This would clarify that different facilities with different process trains, but within the same fence line, are able to claim applicable credits without triggering a prohibition on one another. For example, if an unrelated process train at a single facility that uses clean hydrogen produced at the facility to produce low-carbon intensity ammonia. The production of low-carbon-intensity ammonia would include the capturing of carbon. The carbon captured from the ammonia production process train should still qualify for the 45Q credit.

Assuming that the single facility is using a dedicated, cogeneration source for the production of power and steam the captured carbon from the cogeneration source should also qualify for the 45Q credit.

[2] The term "qualified clean hydrogen production facility" means a facility— (A) owned by the taxpayer, (B) which produces qualified clean hydrogen, and (C) the construction of which begins before January 1, 2033.