POET

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December 3, 2022

Via Electronic Submission (www.regulations.gov)

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

Re: Comments in Response to Notice 2022-58

To Whom It May Concern:

We respectfully submit this request for guidance in response to Notice 2022-58 on matters regarding the Clean Fuels Production Credit ("CFPC") under section 45Z, as enacted by the Inflation Reduction Act of 2022 ("IRA"), that are of critical interest to POET, LLC ("POET") and of other U.S. producers of clean fuels. As the largest producer of ethanol in the world, the requested guidance is critical to POET's determination of how to further reduce the greenhouse gas ("GHG") emissions of our fuel and pursue of our goal of ethanol with zero carbon intensity ("CI") or below.

I. Background

A. About POET

POET is the world's largest producer of ethanol and has 33 production facilities across eight states within the U.S. Ethanol is a clean-burning, renewable alternative to fossil fuel that reduces GHG emissions and dependence on foreign oil. When blended with gasoline, ethanol increases octane ratings, reduces costs of fuel for consumers, and facilitates compliance with emissions and fuel efficiency standards. With the help of the incentives provided by the IRA, POET seeks to prioritize and make significant capital investments in new technologies that will reduce the CI of ethanol toward—and below—zero as quickly as possible.

Ethanol is the most widely-produced renewable fuel in the U.S. and is contained in 98% of the gasoline sold in the United States. The feedstock for the ethanol production process is surplus grain produced in the U.S. Through the incentives provided by the IRA, POET will be able to expand its work with farmers to reduce their farming operation GHG emissions by encouraging the greater implementation of CI reduction practices. Examples of these practices

include the use of cover crops, emissions-friendly fertilizer and fertilizer optimization, and no-till and low-till practices. POET will also make significant capital investments in new technologies at its production facilities that will reduce the production process GHG emissions. Examples of these technologies include renewable electricity via wind and solar, carbon capture and sequestration, biomass combustion for process energy, combined heat and power, and many other potential new technologies.

POET's ability to commit to the expanded work and investments requires a clear understanding of how the IRA will be implemented as soon as possible. And because many will not be economically viable without the assistance that the IRA provides, it is critical that the implementation properly incentivizes these investments. For this reason, we respectfully request guidance with respect to the matters outlined below.

B. Section 45Z, Generally

Applicable to transportation fuel produced and sold after December 31, 2024, and before January 1, 2028, section 45Z provides a credit equal to the product of (1) the applicable amount per gallon (or gallon equivalent) with respect to any transportation fuel that is (a) produced by the taxpayer at a qualified facility, and (b) sold by the taxpayer in a manner described in section 45Z(a)(4) during the taxable year, and (2) the emissions factor for such fuel (as determined under section 45Z(b)).

The "applicable amount" for any transportation fuel produced at a qualified facility is defined by section 45Z(a)(2) as (A) $0.20 in the case of a qualified facility which does not satisfy certain prevailing wage and apprenticeship requirements, or (B) $1.00 in the case of a qualified facility that satisfies such requirements. In the case of a transportation fuel that is sustainable aviation fuel ("SAF"), the amounts provided in section 45Z(a)(2) are increased to $0.35 and $1.75, respectively.

II. Requests for Guidance

POET respectfully provides the comments below with respect to section 45Z and related requests for guidance, each of which are consistent with the intent of the IRA to incentivize the production of clean transportation fuels.

Comment 1: Incorporation of CI Reduction Practices in Emissions Rates

Section 45Z(b)(1)(B)(i) provides that the Secretary shall annually publish a table which sets forth the emissions rate for similar types and categories of transportation fuels based on the amount of lifecycle GHG emissions for such fuels, expressed as kilograms of CO_2e per mmBTU, which a taxpayer shall use for purposes of section 45Z. In the case of any non-SAF transportation fuel, section 45Z(b)(1)(B)(ii) provides the lifecycle GHG emissions of such fuel shall be based on the most recent determinations under the Greenhouse gases, Regulated Emissions, and Energy use in Transportation ("GREET") model developed by Argonne National Laboratory, or a successor model (as determined by the Secretary).

The intent of section 45Z is to incentivize fuel producers to make capital expenditures and adopt practices that will reduce the lifecycle GHG emissions of their fuels. To further this intent, the table setting forth the emissions rates for similar types and categories of transportation fuels must allow fuel producers to identify, and accordingly receive enhanced tax credits for, the various CI reduction practices that they use. Such an approach will recognize that fuels that use similar CI reduction practices in their production are similar, and that fuels that use different CI reduction practices in their production are not similar.

The need for this granular approach to the emissions table can be demonstrated using ethanol as an example. Depending on the production methods used for ethanol, ethanol could have a GREET CI score of 55 or of -30.8. This example shows just a few of the CI reduction practices that fuel producers could use:

Ethanol CI Example	
	GREET CI Score
Base CI Score	55.0
CI Reduction Practices	
Utilization of Carbon Capture and Sequestration	-33.0
Use of Renewable Electricity in Fuel Production	-8.0
Use of Biomass/RNG for Thermal Energy	-20.0
Use of Climate-Smart Corn Farming Practices	-4.8
Use of Cover Crops and Soil Organic Carbon Enhancements	-20.0
Total CI Score (if all above practices used)	**-30.8**

Accordingly, POET requests guidance that provides that the table of emission rates must take into account CI reduction practices employed by the taxpayer throughout the lifecycle of the clean fuel, including practices implemented from feedstock production to fuel combustion.

POET recognizes that the granularity needed in determining emissions rates must be balanced with the need for administrability. To this end, POET requests that the Secretary establish an emissions table that allows for taxpayers claiming the section 45Z credit to calculate GREET-modeled (or successor-modeled) emissions rates for the lifecycle of the particular fuel produced. Such a table would allow for granularity in the calculation of emissions rates while avoiding the need for the IRS to make individual evaluations on CI emissions rates. There are a number of approaches to the emissions table that would strike the appropriate balance between granularity and administrability while reflecting the intent of Congress to incentivize the capital expenditures necessary for CI fuel production. For example:

- The most accurate approach would be to allow fuel producers to calculate their own CI scores for each fuel-producing facility using the GREET model and consider all GREET-modeled outcomes to be part of an emissions table established by the Secretary. Fuel producers could then use the GREET-modeled CI scores as the emissions rates for purposes of calculating their 45Z tax credits. Many fuel producers are familiar with this approach, because it is similar to the programs that they already use to determine credits under Low Carbon Fuel Standard ("LCFS") programs in California and Oregon. Unlike an LCFS program, however, the IRS need not preapprove the GREET-modeled CI scores and can instead rely on the Service's audit authority to ensure that producers can substantiate their CI scores. Under this approach, Treasury should also provide a table with base default CI values for each category of fuel (e.g., ethanol) that is available for companies to use in lieu of undertaking the above-noted calculation.

- Another approach would be a table for each category of fuel (e.g., ethanol) that identifies different CI scores based on specific CI reduction practices that could be used throughout the lifecycle of that fuel. Or, similarly, a base CI score could be provided for that category of fuel, with identified CI reductions to that base CI score for the use of various CI reduction practices (similar to the reductions provided in the example for ethanol above). This approach would have a downside, in that it would not identify all CI criteria that are included in the GREET model and would require additional refinement each year to add additional CI reduction practices. Nonetheless, it would incentivize CI reduction practices and therefore would be a substantial improvement over a simplistic table that fails to reward CI reductions.

The approaches described here would encourage the adoption of CI reduction practices, which is in line with Congress' intent of decreasing GHG emissions. In addition, these approaches would be accompanied by a host of other benefits, including: (1) providing fuel producers the clarity needed to make investment decisions on the variety of emission reduction technologies that are commercially viable today; (2) allowing fuel producers to account for production process variability associated with lower emission technologies and practices; (3) allowing emerging technologies to be added to the table; and (4) allowing for the inclusion of emissions factors that are implemented and operated on a partial-year basis.

These approaches are in stark contrast to a simplistic approach that fails to distinguish between types and categories of fuels that differ based on their production methods and, accordingly, fails to incentivize emissions reductions. If Treasury were to publish a table that provides a single emissions rate for all ethanol, section 45Z would provide no incentive for fuel producers to reduce the CI score of ethanol within the wide band of possible CI scores. Indeed, if applied to all fuels, this simplistic approach would similarly fail to incentivize CI reductions in the production of any fuels and would even create a perverse incentive for fuel producers to use higher-CI—but lower cost—production methods because they would receive the same tax incentive regardless of actual CI reduction practices. Such an approach would be entirely contrary to the intent of Congress in creating 45Z.

Comment 2: Applicable GREET Model or Successor Model.

Section 45Z(b)(1)(B)(ii) provides that in the case of any transportation fuel which is not SAF, the lifecycle GHG emissions of such fuel shall be based on the most recent determinations under the GREET model developed by Argonne National Laboratory, or a successor model.

A. Most recent GREET model as of begun construction date applies

POET requests guidance clarifying that the GREET model (or its successor model) in effect as of the date the qualified facility has begun construction is to be used to set the baseline for determining the fuel emissions rate of the transportation fuel. POET requests guidance providing that a taxpayer may elect to use a later GREET or successor model, but that such election is not mandatory.

When a taxpayer makes a capital investment in a clean fuel facility, and is seeking financing for such a facility, it is important to have certainty not only regarding the availability of the CFPC, but as to the amount. This requested guidance would provide that certainty, thereby allowing a taxpayer to calculate the amount of the expected tax credits to make an investment decision and to obtain financing, without an unexpected reduction that may occur due to a change in the GREET model.

B. Publication of emissions rates should occur more frequently than annually

Section 45Z(b)(1)(B)(i) provides that Treasury must annually publish a table which sets forth the emissions rate for similar types and categories of transportation fuels. POET requests that Treasury establish a procedure for release of the updated table publicizing transportation fuel emissions rates that have been determined under section 45Z(b) in the interim period between annual publications of the emissions rate table. Providing access to the most up to date emissions rates will provide certainty and ensure that taxpayers producing the same fuel types are equally incentivized. Further, it will allow taxpayers to have information regarding newly published emissions rates at an earlier time, thereby reducing taxpayer and government resources that would be required to seek a provisional emissions rate when Treasury has already provided an emissions rate for that same fuel to another taxpayer.

Comment 3: Provisional Emissions Rate

Section 45Z(b)(1)(D) allows a taxpayer producing a transportation fuel for which an emissions rate has not been established to file a petition with the Secretary for determination of the emissions rate with respect to such fuel.

A. Need for streamlined petition procedures

POET requests that guidance outline streamlined procedures for taxpayers to petition the Secretary for determination of an emissions rate. In particular, POET requests that the procedures provide for the ability to request an emissions rate (1) for a fuel type without an established emissions rate or (2) for a fuel type with an established emissions rate but on a more

granular level to account for CI reduction practices not already reflected in a table published by Treasury.

Under guidance recently released by the IRS regarding the Superfund tax (Revenue Procedure 2022-26) taxpayers are able to petition for substances to be added or removed from the list of taxable substances under section 4672. Under those rules, Treasury has a 180-day period for review of any such request. POET requests that Treasury similarly provide a provisional emissions rate within that same 180-day timeframe. Further, POET requests that guidance provide if a taxpayer has requested a provisional emissions rate and has not yet received approval from Treasury, that the taxpayer may use a reasonably determined emissions rate on any tax return and will not be subject to penalties if Treasury determines a different emissions rate than the emissions rate used by the taxpayer on its tax return. Absent such a rule, taxpayers may be in a position where they are required to file a tax return but may be unable to properly claim the CFPC.

B. Timing of ability to file petition for provisional emissions rate

POET also requests that a taxpayer should be able to file a petition for a provisional emissions rate early in the technology and process development of the fuel. Specifically, a taxpayer should be able to file a petition for a provisional emissions rate when it is reasonably certain that it will (1) produce the fuel of a specified type, and (2) implement the CI reduction practices that may cause an adjustment to the emissions rate. To account for administrability, the burden should be on the taxpayer to provide evidence that the provisional emissions rate used in the calculation of section 45Z accurately reflects the actual emissions rate of the fuel produced.

The adoption of an emissions table that allows taxpayers to calculate the emissions rate for a particular fuel on a more granular level may help reduce the need for a provisional emissions rate for a particular fuel, while reducing the administrative burden. However, for taxpayers that wish to petition for a provisional emissions rate, the availability of streamlined procedures is crucial to obtaining the certainty needed to secure financing and investment for clean fuel production.

Comment 4: Gallon Equivalent Definition

Section 45Z(a)(1) provides the amount of the credit equals the product of the emissions factor and the applicable amount per gallon (or gallon equivalent) with respect to any transportation fuel. For purposes of determining the fuels excise tax credit under section 6426, the gallon equivalent of a fuel is treated as a reference to the energy equivalent of a gallon of gasoline or diesel, depending on the fuel type.

The energy value of the transportation fuel under section 45Z is factored into the GREET model calculation of the emissions rate because that rate is expressed as kilograms of CO_2e per mmBTU. Therefore, POET requests guidance clarifying that the amount of gallons of fuel provided for purposes of determining the amount of the credit under section 45Z(a)(1) should not be reduced based on a comparison to gasoline. A reduction based on a comparison to gasoline, such as is provided for in section 6426(j), would double count for any energy value adjustment

for the fuel as compared to gasoline, and is not appropriate for determining the "gallon equivalent" for purposes of a transportation fuel.

Comment 5: Negative Emissions Rate

Section 45Z(a) provides a tax credit equal to the product of $1.00 per gallon ($1.75 per gallon for sustainable aviation fuel) and the emissions factor. Section 45Z(b)(1)(A) provides the emissions factor is equal to 50 kilograms of CO_2e per mmBTU minus the emissions rate for such fuel, divided by 50 kilograms of CO_2e per mmBTU. The emissions rate is to be published annually by the Secretary of Treasury in a table that sets forth the emissions rates for similar types and categories of transportation fuels based on the amount of lifecycle GHG emissions for such fuels, expressed as kilograms of CO_2e per mmBTU.

A. The credit amount is not limited to $1.00 per gallon for transportation fuel

POET requests guidance under section 45Z that clarifies that the credit amount is not limited to $1.00 (or $1.75 for SAF) per gallon (assuming prevailing wage and apprenticeship requirements are satisfied) for fuels with negative emissions rates. For example, assume the emissions rate of a particular fuel is -3.5 kilograms of CO_2e per mmBTU. Applying the emissions factor calculation under section 45Z(b)(1)(A), using the rounding guidelines, the emissions factor equals 1.05. Under section 45Z(a), the credit amount for that particular fuel (assuming the prevailing wage and apprenticeship requirements are met) equals $1.05 per gallon.

As detailed in the example, the plain language of section 45Z allows for a credit amount greater than $1.00 per gallon ($1.75 per gallon for sustainable aviation fuel) where the emissions rate is negative. Additionally, the rounding rule in section 45Z(b)(1)(C)(ii) supports this result, as it provides that "[i]n the case of an emissions rate that is between 2.5 kilograms of CO_2e per mmBTU and -2.5 kilograms of CO_2e per mmBTU, the Secretary may round such rate to zero." Therefore, in enacting section 45Z Congress recognized the ability of the emissions rate to be a negative amount. And the rounding rule goes one step further by implicitly providing that any emissions rate lower than -2.5 kilograms of CO_2e per mmBTU cannot be rounded up to zero. By contrast, a similar formula in section 40B includes a cap on the available credits; here, Congress chose not to implement a cap. *See* section 40B(b) (last sentence).

Further, allowing for a negative emissions factor, thereby producing a greater credit amount, encourages taxpayers and their supply chains to implement further GHG reduction practices. It will also incentivize more rapid and efficient deployment of emission reduction technologies because negative-carbon technologies can be deployed at the most efficient production facilities instead of choosing facilities that produce fuel with a CI score above zero. This result is aligned with the policy goals of Congress in enacting the IRA and section 45Z.

Comment 6: Transportation Fuel Definition

Section 45Z(d)(5) defines "transportation fuel" as a fuel which is "suitable for use as a fuel in a highway vehicle or aircraft," has an emissions rate which is not greater than 50 kilograms of CO_2e per mmBTU, and is not derived from coprocessing an applicable material (or materials derived from an applicable material) with a feedstock which is not biomass.

A. Transportation fuel includes fuel sold for blending

POET requests guidance clarifying that a transportation is considered "suitable for use as a fuel in a highway vehicle or aircraft" if it can be consumed in the production of energy to power an automobile or aircraft, without regard to whether additional fuels may be added to the clean fuel produced by the taxpayer (including additives required by federal or local law). Such guidance would be consistent with guidance provided by the IRS with respect to the alternative fuels mixture credits under section 6426 which provides with respect to alternative fuel mixtures that they are "used as a fuel when it is consumed in the production of energy. Thus, for example, a mixture is used as a fuel when it is consumed in an internal combustion engine to power a vehicle or in a furnace to produce heat."

Further, as a practical matter, a clean fuel producer may not know where the fuel will be used, or whether other fuels may need to be added to the clean fuel produced by the taxpayer, such that it would be impractical to disallow the CFPC if additives ultimately were needed to make the fuel suitable for use. Additionally, such guidance is supported by section 45Z(a)(4) which provides that the fuel must be sold by the taxpayer to an unrelated person (i) for use by such person in the production of a fuel mixture, (ii) for use by such person in a trade or business, or (iii) sold at retail to another person who places such fuel in the fuel tank of such other person. Therefore, Congress anticipated that the transportation fuel would potentially be blended for use in an alternative fuel mixture.

B. Denaturant used in blend not considered transportation fuel

POET also requests clarification that any denaturant blended into a fuel should not be considered transportation fuel and should not be included in the emissions rate calculation. As section 45Z is only intended to incentivize the production of clean fuels, the use of a pre-produced denaturant for purposes of blending the fuel to ensure the fuel is "suitable for use as a fuel in a highway vehicle or aircraft" should not be considered part of the "transportation fuel" for purposes of calculating the amount of the credit under section 45Z. Similarly, the denaturant should not be considered in calculating the emissions rate of the fuel. This request is similar to the approach in section 40 with respect to the neat alcohol fuel credit which disregards denaturants that are mixed with alcohol fuels. *See* section 40(b)(2)(A).

Comment 7: Sale to an Unrelated Person

Section 45Z(a)(4) provides the transportation fuel must be sold "to an unrelated person." POET requests guidance similar to guidance provided under section 45 in Notice 2008-60, which states: "The requirement of a sale to an unrelated person will be treated as satisfied [for sales of electricity or refined coal] if the producer sells the electricity or coal to a related person for resale by the related person to a person that is not related to the producer." As the IRS recognized for sales of electricity and refined coal for which a section 45 production tax credit is available, there is no policy reason (or other reason) to disallow the section 45Z production tax credit where there is an intervening related party sale prior to a sale to an unrelated person.

Comment 8: Definition of Fuel Mixture

Section 45Z(a)(4) requires that the transportation fuel must be sold by the taxpayer to an unrelated person for, among other options, use by such person in the production of a "fuel mixture." Section 45Z does not define the term "fuel mixture." POET therefore requests guidance defining "fuel mixture" for purposes of section 45Z.

For purposes of the current fuel mixture credits available for alcohol fuel mixtures, biodiesel mixtures, and alternative fuel mixtures, section 6426 identifies what fuels must be mixed for entitlement to the applicable mixture credit. Further, for biodiesel and alcohol mixtures, the IRS has provided guidance stating that the mixture must contain at least 0.1% by volume of the applicable taxable fuel. *See* Notice 2005-62; 73 FR 43890. POET requests guidance clarifying what fuel must be mixed with the clean fuel, and whether there is a minimum amount of such other fuel that must be mixed (e.g., 0.1% by volume as provided in Notice 2005-62), to produce a "fuel mixture" for purposes of section 45Z. A clear definition of "fuel mixture" will provide taxpayers with certainty and provide a bright-line rule for the IRS in determining eligibility of claims made under section 45Z.

Comment 9: Annual Election for Section 45Q and Section 45Z

For purposes of section 45Z, a qualified facility does not include any facility for which the section 45Q credit is allowed under section 38 for the taxable year. Unlike section 45V, which explicitly prohibits taxpayers from taking the tax credit for a facility where another credit (i.e., section 45Q) has been taken previously, section 45Z has no such prohibition.

POET requests guidance confirming that the election to take a credit under section 45Z or under section 45Q is made on a per taxable year basis. POET requests guidance providing an example clarifying that where a taxpayer claimed a credit under section 45Q in taxable year 2024, assuming the taxpayer meets eligibility requirements, the taxpayer is not precluded from claiming a credit under section 45Z in taxable year 2025.

Comment 10: Date on Which Fuel is Sold

Under section 45Z(g), the CFPC does "not apply to transportation fuel sold after December 31, 2027." Section 45Z does not define when a fuel is treated as "sold." For purposes of this provision, we request guidance providing that the date of the sale is the date on which a binding written contract is entered into for the sale of the clean fuel. Absent such a rule, producers of clean fuels will not be able to produce clean fuels through the end of 2027 without a substantial risk that the credit will be unavailable for such clean fuels. That is the case because if the date that a clean fuel is treated as "sold" is the date on which the fuel is actually delivered, such date may be uncertain (and may ultimately not be until 2028) due to a variety of factors, some of which may be out of the control of the producer or purchaser of the clean fuel. Guidance that confirms that the sale date is the date on which a binding written contract is entered into would allow clean fuel producers to produce clean fuels through the end of 2027 with certainty that the CFPC will be available for such production, as long as there is a binding written contract for the sale of such fuel that is entered into before the end of 2027. Guidance

specifying that the contract must provide for sale of the fuel within a reasonable time (e.g., 105 days or before the tax return due date (without extensions)), would preclude fuel producers from contracting for sale many years into the future to effectively extend the life of the credit far beyond its intended expiration.

This requested guidance is consistent with IRS' guidance for the requirement under section 30D for the clean vehicle credit (as amended by the IRA) which provides, in section 30D(k)(2), that the final assembly requirement applies "to vehicles sold after date of enactment of this Act." With respect to that credit, the IRS issued guidance stating, "If you entered into a written binding contract to purchase a new qualifying electric vehicle before August 16, 2022, but do not take possession of the vehicle until on or after August 16, 2022 (for example, because the vehicle has not been delivered), you may claim the EV credit based on the rules that were in effect before August 16, 2022."[1] In other words, for section 30D purposes, a vehicle is treated as sold before the relevant date (there, August 16, 2022) if a binding written contract for the vehicle is entered into before that date. POET is requesting the same guidance for purposes of section 45Z. Such guidance should also make reference to the binding written contract rule under Notice 2013-29 and Treas. Reg. § 1.168(k)-1(b)(4)(ii)(A)-(D) for purposes of determining whether a binding written contract exists.

This requested guidance will encourage production of clean fuel through the end of 2027.

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Thank you for considering our request for guidance on issues critical to POET. We would be pleased to meet with Treasury and IRS to discuss our recommendations. If you have any questions or require additional information, please feel free to contact me at (202) 756-5604 or matt.haynie@poet.com.

Sincerely,

Matthew Haynie
Senior Regulatory Counsel
POET, LLC

[1] https://www.irs.gov/businesses/plug-in-electric-vehicle-credit-irc-30-and-irc-30d (last visited December 3, 2022).