



December 3, 2022

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

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

I. INTRODUCTION

Generate Capital, a Public Benefit Corporation, is a leading sustainable infrastructure company driving the infrastructure revolution. Generate builds, owns, operates, and finances infrastructure solutions for clean energy, water, waste, and transportation. Founded in 2014, Generate partners with over 40 technology and project developers and owns and operates more than 2,000 assets globally. Generate offers leading developers and technology pioneers of the infrastructure revolution tailored funding and support needed to build projects. Our Infrastructure-as-a-Service model delivers affordable, reliable, and sustainable resources to over 2,000 customers, companies, communities, school districts and universities.

As an investor and owner in clean energy and climate solutions infrastructure, Generate's interest in the guidance and rulemaking around the Inflation Reduction Act (IRA) is to ensure the efficient deployment of capital into new and existing beneficial infrastructure projects. We do this via partnerships with leading project developers and technology providers for whom the provisions of the IRA are of critical importance.

The Department of Treasury and the Internal Revenue Service (collectively, "IRS") have indicated that they plan to issue guidance on the clean hydrogen production credit under § 45V of the Internal Revenue Code and the clean fuel production credit under § 45Z of the Internal Revenue Code, both as amended or added by the IRA. These clean fuel production credits are of particular interest to us because, in addition to renewable electricity, storage, EVs, and other clean energy and mobility related investments, we've also made a significant commitment to investing in climate solutions in the waste sector. Of critical importance to climate mitigation is the capture and destruction of methane, a powerful GHG, emitted during the decomposition of organic wastes. Once captured this methane can be used as biogas or upgraded to renewable natural gas (RNG).

RNG can be used as a feedstock for the production of clean hydrogen and is used as a transportation fuel in natural gas vehicles in the form of renewable compressed natural gas ("CNG") and renewable liquified natural gas ("LNG"). Substantial capital investments are required to produce biogas, and to upgrade biogas to RNG, and due to the long lifetime of these projects, the return on investment requires long-term stability and regulatory certainty. As such, implementation of these credits is of significant interest to us, our partners, and our investors.

Our primary requests related to Notice 2022-58 are:

- We request confirmation that the clean fuel production tax credit would not be rendered invalid based on downstream uses.
- We request clarification on how the “gas equivalent” will be calculated. And,
- We request clarification on the emission rates and how that those will be calculated.

Generate appreciates the opportunity to submit comments in response to Notice 2022-58. Below we include and endorse detailed comments regarding these three concerns, as well as others, drafted by the RNG Coalition.

II. BACKGROUND

§ 45Z Clean Fuel Production Credit

The § 45Z credit is 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 § 45Z(a)(4) during the taxable year, and (2) the emissions factor for such fuel (as determined under § 45Z(b)). The applicable amount ranges from \$0.20 to \$1.00, depending on whether the facility satisfies certain prevailing wage and apprenticeship requirements. These amounts are increased to \$0.35 and \$1.75, respectively in the case of transportation fuel that is sustainable aviation fuel. The applicable amounts will be adjusted annually for inflation. Section 45Z applies to transportation fuel produced and sold after December 31, 2024, and before January 1, 2028.

The U.S. Environmental Protection Agency (“EPA”) has found that renewable CNG and LNG are “advanced biofuels” under the Renewable Fuel Standard (“RFS”) program.¹ RNG, however, can also be used as a feedstock for liquid fuels, including sustainable aviation fuel.² Generate, therefore, urges the IRS to ensure that any guidance on § 45Z include provisions to account for RNG as both a transportation fuel and as a feedstock for liquid fuels. In both cases, downstream parties should be able to use a “book and claim” process to utilize RNG distributed via commercial pipelines as is allowed in other decarbonization regulatory and voluntary programs, such as the RFS program.

III. REQUEST FOR COMMENTS

¹ 40 C.F.R. §80.1426, Table 1. RNG transportation fuels are eligible as “cellulosic biofuels,” which is a category of advanced biofuels. RNG comprises over 95% of the cellulosic biofuels sold in the United States under the RFS program. RNG is also eligible to be used for renewable electricity, although EPA has not yet approved RIN generation for any projects under the RFS program. We anticipate an EPA upcoming rulemaking to include provisions to facilitate registration of such projects.

² RNG Coalition has urged EPA to include provisions to allow for RNG use as a “biointermediate” feedstock for the production of liquid fuels, which we anticipate EPA to include in an upcoming rulemaking.

The IRS requests comments on questions arising under § 45Z that should be addressed in guidance. We provide responses, as applicable, to these requests for comments, which are reprinted in *bold italics* below.

Clean Fuel Production Credit (§ 45Z)

(1) Sale Definition.

(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 to Request for Comment (1)(a): Section 45Z(f)(3) provides that “[p]ersons shall be treated as related to each other if such persons would be treated as a single employer under the regulations prescribed under section 52(b).” It further states that, “[i]n the case of a corporation which is a member of an affiliated group of corporations filing a consolidated return, such corporation shall be treated as selling fuel to an unrelated person if such fuel is sold to such a person by another member of such group.” Based on this language, unrelated persons should be considered to be very broad. In particular, the IRS should ensure that companies that utilize fleets and may have renewable CNG/LNG stations be eligible for purposes of the tax credit.³

(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 to Request for Comment (1)(b): To be eligible for the clean fuel production tax credit, § 45Z provides that the transportation fuel be 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.” As noted above, RNG is used as a transportation fuel in natural gas vehicles in the form of CNG/LNG. RNG is typically obtained from a commercial pipeline and then compressed or liquified by the ultimate retailer of the CNG/LNG. The IRS should make clear that the RNG is the “transportation fuel” suitable for use in a highway vehicle and compressing or liquifying the fuel for use in a vehicle does not make it ineligible for the tax credit. Natural gas compression is a mechanical process to reduce the volume of RNG. Similarly, liquification is merely condensing the gas through cooling. These are mere form changes. It should be sufficient that the fuel is designated for sale to the CNG/LNG retail station.

For distribution purposes, RNG is often distributed through commercial pipelines. It is universally allowed for CNG/LNG retail stations to obtain natural gas from the pipeline and claim environmental attributes (e.g., RINs under the RFS program) through a “book and claim” process. The IRS should allow these types of sales to be considered as fuel sold at retail for purposes of § 45Z(a)(4)(C).

(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)?

³ A fleet is grouping of vehicles that are owned and managed by a single business, non-profit, or government organization.

Response to Request for Comment (2): Section 45Z(b)(1)(B)(iii)(II) references § 211(o)(1)(H) of the Clean Air Act (42 U.S.C. 7545(o)(1)(H)), which defines “lifecycle greenhouse gas emissions.” For purposes of this provision, we support allowing the use of the GREET Model, which is publicly available and well known. GREET was used by EPA in developing its methodology for determining lifecycle GHG emissions reductions under the RFS program in 2010. Although EPA utilized other models to assess emissions largely related to indirect land use, GREET has incorporated a land use component into its GREET modeling since 2010. In addition, California uses a modified form of GREET in its assessments under its Low Carbon Fuel Standard program. In relation to the clean hydrogen production tax credit, avoided emissions should be included as part of any lifecycle GHG emissions assessment with respect to RNG.

GREET is maintained by the Argonne National Laboratory, which does periodically update its modelling. The facility can be required to verify the modelling it uses each year, including whether it is using the most updated GREET model. To the extent that GREET has not developed specific methodologies for any particular pathway, facilities should be able to propose a methodology that is consistent with GREET.

- (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.***
- (a) ***At what stage in the production process should a taxpayer be able to file a petition for a provisional emissions rate?***
- (b) ***What criteria should be considered by the Secretary to determine the provisional emissions rate?***

Response to Request for Comment (3): RNG facilities have experience seeking and obtaining carbon intensity scores from CARB under California’s Low Carbon Fuel Standard. EPA also has a petition process to obtain an approved pathway under the RFS program, if not already established. In both cases, these petitions are allowed prior to production. Information needed to conduct a lifecycle analysis can be based on facility design, third-party databases, literature, and other regulatory programs. As noted above, the lifecycle analysis is a tool for comparison purposes and, as such, default values and other standard information can be utilized to determine emissions rates.

IRS should also consider CARB and EPA petition processes that allow for standardized formatting, which are intended to facilitate and streamline the petition process.

- (4) ***Special Rules. 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 to Request for Comment (1)(e): Federal and state government agencies may require reporting of GHG emissions, which may include verification measures. IRS should allow

facilities to rely on these reporting requirements to report their direct emissions. For example, a RIN and credit generation under the RFS or Low Carbon Fuel Standard programs have substantial documentation and attest engagement requirements and have audit and verification processes that RNG facilities should be able to utilize to support any supply chain traceability requirements.

- (5) ***Coordinating Rules. 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 to Request for Comment (4): We reserve the right to provide more information to IRS on these issues, including, but not limited to, after reviewing any draft guidance that is subsequently issued.

- (6) ***Multiple Owners. 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 to Request for Comment (5): We reserve the right to provide more information to IRS on these issues, including, but not limited to, after reviewing any draft guidance that is subsequently issued.

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

We request confirmation that the clean fuel production tax credit would not be rendered invalid based on downstream uses. To be eligible for the tax credit, the fuel must be “suitable for use as a fuel in a highway vehicle or aircraft.” RNG is pipeline quality fuel that can be used in various applications, including as a transportation fuel. The statute allows the transportation fuel to be sold to an unrelated party “for use by such person in a trade or business,” but does not expressly require that the *actual* use be a transportation fuel use. This was intentional as confirmed by the following colloquy on the floor of the Senate:

Ms. HASSAN. Mr. President, I ask unanimous consent to engage in a colloquy with Senator WYDEN for clarification regarding a tax provision included in the bill currently before the Senate. Section 13704 of the bill, which concerns production credits for biofuels, defines “transportation fuel” that can qualify for the credit as a fuel that is suitable for use as a fuel in a highway vehicle or aircraft. The fuel must also be below a carbon emissions ceiling and meet a processing requirement. Senator WYDEN, as chair of the Finance Committee, is it his understanding that, although a fuel must be suitable for use as a fuel in a highway vehicle or aircraft to qualify for this biofuel production credit, it may still actually be used for any business purpose, including as transportation fuel, industrial fuel, or for residential or commercial heat?

Mr. WYDEN. I thank the Senator for her inquiry. That is correct. The credit is intended to incentivize production of biofuels of a certain quality, usable as fuel for highway vehicles or aircrafts, but not limited only to fuels which are actually used in highway vehicles or aircrafts.

Ms. HASSAN. I thank the chair for that clarification and for engaging in this colloquy.

168 Cong. Rec. S4165, S4166 (Aug. 6, 2022). This makes sense because the GHG emissions reductions are still being achieved. We request the IRS confirm this to be the case.

In addition, because of the potential interaction between the various tax credits, we ask that the IRS provide guidance on the definition of qualified facility under § 45Z. For example, RNG can be used as a fuel or as feedstock for the production of another fuel, such as hydrogen. These fuels can be used in various applications. Section 45Z(d)(4) excludes from the definition “any facility for which one of the following credits is allowed under section 38 for the taxable year”: (i) the credit for production of clean hydrogen under § 45V; (ii) the credit determined under § 46 to the extent that such credit is attributable to the energy credit determined under § 48 with respect to any specified clean hydrogen production facility for which an election is made under § 48(a)(15); and (iii) the credit for carbon oxide sequestration under § 45Q. While we do not advocate for duplicate tax credits, we support providing sufficient flexibility to the facilities in recognition of these various uses.

Finally, we ask that any guidance under § 45Z provide an example of the calculation under § 45Z(b)(1)(A) for determining the emissions factor. Section 45Z(b)(1)(A) provides:

The emissions factor of a transportation fuel shall be an amount equal to the quotient of—

(I) An amount equal to—

(aa) 50 kilograms of CO₂e per mmBTU, minus

(bb) the emissions rate for such fuel, divided by

(II) 50 kilograms of CO₂e per mmBTU.

Along with the emissions rates, it would be helpful for the IRS to provide examples of how this emissions factor is to be calculated and then applied to determine the appropriate tax credit. We would urge the IRS to consider examples that involve RNG facilities.

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

Respectfully submitted,

William K. Caesar

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