



December 3, 2022

Internal Revenue Service
CC:PA:LPD:PR (Notice 2022-57)
Room 5203
P.O. Box 7604
Ben Franklin Station
Washington, DC 20044

Submitted electronically via regulations.gov

Re: Notice 2022-57, Request for Comments on Credit for Carbon Oxide Sequestration

The Renewable Fuels Association (RFA) appreciates the opportunity to provide these comments to the Office of Associate Chief Counsel (Passthroughs & Special Industries) as well as the Department of the Treasury (Treasury Department) and the Internal Revenue Service (IRS) regarding the anticipated guidance for implementation of the credit for carbon oxide sequestration under section 45Q of Public Law 117-169, 136 Stat. 2003 (August 16, 2022), commonly known as the Inflation Reduction Act of 2022 (IRA).

RFA is the leading trade association for America's ethanol industry. Its mission is to advance the development, production, and use of low-carbon fuel ethanol and co-products by strengthening America's renewable fuels industry and raising awareness about the benefits of renewable energy. Founded in 1981, RFA serves as the premier meeting ground for industry leaders and supporters. RFA's 300-plus members are working to help America become cleaner, safer, more energy secure, and economically vibrant.

Of particular relevance to the goals of the IRA, RFA's producer members have committed to bold carbon intensity reduction targets. These include ensuring that by 2030 ethanol reduces greenhouse gas (GHG) emissions by at least 70 percent, on average, when compared directly to gasoline and that by 2050, ethanol achieves net-zero lifecycle GHG emissions.¹ Our comments will focus on the interpretation of tax measures which will empower and accelerate the carbon reduction potential which is central to the spirit of the IRA. RFA's comments are informed by input from producer members' concerns about the interpretation of tax provisions within the IRA, as well as RFA's collaboration with related industry groups and coalitions.

I. General Ethanol Industry Priorities and Principles for IRA Provisions

The IRA represents the most significant federal commitment to low-carbon biofuels since the Renewable Fuel Standard was expanded by Congress in 2007. The IRA recognizes the important role renewable fuels like ethanol can play in a lower-carbon future for this nation. Specifically, the legislation includes provisions that provide funding for clean fuel production, higher biofuel blend infrastructure, enhanced opportunities for ethanol to play a greater role in sustainable aviation fuel, and carbon capture, utilization, and storage (CCUS).

¹ RFA Net Zero Pledge President: Ethanol to Achieve Net Zero Emissions by 2050 or sooner, July 2021, <https://ethanolrfa.org/pledge>

However, the IRA's tax provisions will need to be interpreted correctly for the legislation to achieve its goals. In particular, lifecycle analysis (LCA) methods, flexibility for individual producers in the calculation of individual fuel pathways in order to encourage GHG reduction, and timely guidance on regulations for tax incentives to meet the timeframes of the IRA's programs for carbon capture, utilization, and storage (45Q) will be essential to the legislation's success.

The goal of net zero or better ethanol is within sight and CCUS will play a big part in getting there.² Given the timeframes of IRA measures, decisions impacting ethanol producers' eligibility for credits, the value of those credits, and certain definitions will have a significant impact on the IRA's impact on carbon emissions.

Finally, time is of the essence. Between the time it takes for design, planning, and permitting, 2032 will come up fast. Ethanol producers need to begin investing in improvements immediately as approvals take time and technical skill and specialized labor for these projects may be in short supply. As business decisions are being made, the ethanol industry will need to be confident that credits will be based on reliable science and that credits will retain the value Congress intended in the law. This means clear rules for pathway LCA, reasonable reporting requirements and flexibility for prevailing wage and apprenticeship requirements, and provisions that ensure transferrable credits retain their value to transferees.

II. Carbon Oxide Sequestration Credit Guiding Principles

CCUS represents one of the nation's best opportunities to radically reduce carbon emissions and ethanol production is particularly well positioned to utilize CCUS. Lawmakers recognized the potential of wider adoption of CCUS when they increased the tax credits under 45Q in the IRA. As with any tax credit aimed at driving technology adoption, 45Q credits need to be reliable to those making investments and open to as wide a group of potential applicants as possible. Because RFA believes in the potential of CCUS, we encourage IRS and Treasury to write rules that create certainty for businesses and preserve the value of the credits.

A recent GAO report spotlighted ethanol's potential as a CCUS opportunity.³ Overall, the research found that out of all the potential sources of carbon dioxide for CCUS that GAO examined—power generation, cement, iron and steel, direct air capture, and ethanol—ethanol is the most promising. At a time when decarbonization is essential for a climate-friendly future, the GAO report makes clear that policymakers should embrace ethanol as the best available near-term opportunity for transformative and sustainable CCUS. The reports findings include: ethanol biorefineries have the highest CO₂ concentration and purity; ethanol offers the lowest cost of capture; the ethanol industry has a high number of potential capture sources; ethanol CCUS has the highest technology readiness score. Ethanol production will be central to the success of the 45Q credits and rules must empower the ethanol industry's participation.

² For more information on net-zero ethanol, see *Pathways to Net-Zero Ethanol: Scenarios for Ethanol Producers to Achieve Carbon Neutrality by 2050*, Isaac Emery, Ph.D., of Informed Sustainability Consulting LLC, February 14, 2022, <https://d35t1syewk4d42.cloudfront.net/file/2146/Pathways%20to%20Net%20Zero%20Ethanol%20Feb%202022.pdf>

³ United States Government Accountability Office: *Report to Congress: Decarbonization Status, Challenges, and Policy Options for Carbon Capture, Utilization, and Storage*, September 29, 2022. <https://www.gao.gov/assets/gao-22-105274.pdf>

Additionally, RFA urges Treasury to consider the relationship between different credits available under the IRA and create rules that harmonize lifecycle emissions modeling and certification requirements. Although CCUS is one of the most promising low-carbon technology improvements an ethanol producer can make, it isn't alone. Ethanol producers may also invest in the re-powering of production facilities with biogas and/or renewable electricity, deploying precision agriculture technologies, or taking advantage of numerous process and efficiency improvements. As a result, Treasury should allow flexibility between years and recognize that based on the sequence of technology investments, ethanol producers will also be considering the value of credits under the Clean Fuel Production Credit of section 45Z in tandem with 45Q credits.

III. Answers to Questions from IRS

In separate comments, RFA discussed priorities related to direct payment and prevailing wage and apprenticeship requirements under Section 45Q. The following comments will be organized to align with questions in this Request for Information and will highlight how several provisions and questions of interpretation relate to our general priorities for 45Q implementation.

What clarifications are needed regarding the definition of a qualified facility under § 45Q(d)?

Production of ethanol, especially as low-carbon technology is adopted, often involves either overlap or distance in physical location. Flexibility in the arrangements parties may make in capturing and sequestering or utilizing carbon dioxide is important to the success of 45Q as both new and existing businesses will participate in different capacities at different sequences throughout the process. Such flexibility is also needed with regard to ownership as partnerships and different business arrangements support ongoing investment. Flexibility in the rules for what constitutes a "facility" will encourage the greatest adoption of new technology.

This is related to the similar need for reasonableness and flexibility in section 45Z's treatment of "facility." Rules for both credits should work in harmony and strive to be inclusive. IRS should draw definitions that recognize that physical boundaries or single ownership do not cover the realities of a sophisticated industry working to rapidly adopt low-carbon technology.

What factors should the Treasury Department and the IRS consider in determining how a taxpayer can demonstrate that it satisfies the original planning and design requirement under § 45Q(d)(1)(B)?

As the term "original planning and design" is currently undefined, RFA asks that Treasury adopt a definition that empowers taxpayers to make the investments intended by the IRA and recognizes the realities of construction of CCUS projects. Availability of personnel or materials, permitting at the state or federal level, and design and planning timeframes all create the possibility of delay in construction. However, ethanol plants beginning the planning process will need certainty that anticipated credits will be received. A broad definition of "original planning and design" that includes a wide array of actions a taxpayer may make in the planning of a CCUS project will provide the business certainty that will lead to more projects being completed. RFA supports a definition of "original planning and design" for § 45Q(d)(1)(B) which includes development of construction plans, engineering design, or installation of tie-in points for future carbon capture equipment as such a definition will provide the certainty necessary for investment.

Please provide comments on any other topics related to § 45Q credit that may require guidance

(1) Flexibility Among Different Tax Incentives in Different Years (45Q and 45Z)

As we have discussed, ethanol producer members will be making carbon reduction improvements to their individual processes during the years of the currently enacted tax credits under both 45Q and 45Z. However, there is no particular sequence by which a given ethanol plant will implement particular technologies. In order for these two incentives to produce the best outcomes, ethanol producers should be confident that they will be able to switch between different credits in different tax years depending on their business situation.

For example, if an ethanol plant were to begin improvements with carbon capture and sequestration, depending on their carbon score, it may well be most advantageous to claim 45Q and not 45Z for that year. However, if they are not allowed to switch to potentially higher credits under 45Z in future years, they would lose the incentive to continue installing low-carbon technology. The reverse of this could also be true, and 45Z may present a more attractive opportunity for producers in the near-term, followed by a switch to 45Q in later years (or following expiration of 45Z). In either case, such an outcome would be inconsistent with the IRA's intent to drive down carbon emissions from transportation fuels. RFA encourages Treasury and IRS to create rules that not only leave open the possibility of claiming different credits in different years but create certainty that this will be allowed in the future. This will instill confidence in ethanol producers that the business case for their investments on the path to net-zero can be relied upon.

(2) Flexibility in Definition of "Facility" to Encourage Investment

Production of ethanol, especially as low-carbon technology is adopted, often involves either overlap or distance in physical location. This could be especially true in the case of ethanol-based SAF, where ethanol could be produced by one facility and shipped to a separate facility for conversion to SAF. This is also true with ownership as partnerships and different business arrangements support ongoing investment. Flexibility in the rules for what constitutes a "facility" will encourage the greatest adoption of new technology.

This is related to the similar need for reasonableness and flexibility in section 45Z's treatment of "facility." Rules for both credits should work in harmony and strive to be inclusive. IRS should draw definitions that recognize that physical boundaries or single ownership do not cover the realities of a sophisticated industry working to rapidly adopt low-carbon technology.

(3) Importance of Lifecycle Emissions Modeling and Coordination with Other Credits

The Treasury Department and IRS should use the Department of Energy (DOE) Argonne National Laboratory's Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) model as the standard for credits under the IRA. Rules for CCUS measurement and certification should harmonize with Argonne GREET in order to bring consistency and predictability for producers who might elect to receive credit under 45Q or 45Z.

Argonne GREET is widely considered the most complete and sophisticated transportation fuel LCA modeling tool in the world, and it is particularly well suited to this application for several reasons. First, Argonne GREET does in fact include a robust, peer-reviewed methodology for

estimating both direct and indirect land use change (LUC/ILUC) emissions potentially associated with certain low-carbon fuels. Next, Argonne GREET updates its data regularly (at least annually), keeping track of the impact of changes in production practices and technology. Finally, Argonne GREET offers the detail and transparency needed for pathways to be “scored” (i.e., assigned a carbon intensity value) quickly and thoroughly. This allows for individual pathway scoring instead of overbroad categories consisting of default values, which may not accurately represent the wide range of technologies and practices used in the industry.

(4) Create Reasonable Rules to Accommodate for Anticipated Causes of Delay in Construction

The foregoing comments have highlighted a number of justifications for flexibility in the rules that will empower ethanol producers to make the most of the 45Q CCUS credits moving forward. However, regulatory realities, as well as market realities, already provide meaningful insight into the relationship between tax regulation and clean fuel innovation. A prime example of this is the Class VI well application process with EPA.

Class VI well permits are required for geological carbon sequestration practices which could play a big role in improving the carbon intensity scores for many ethanol producers. However, at this point, EPA has only granted two such permits and the timing of the approval process remains unclear. With a limited window before sunset for 45Q, and recognizing that construction of major projects can take several years, inclusivity and promptness in approvals will be needed from the IRS. Class VI well permits is just one example. Other causes for delay may include design hurdles, labor availability, or other permitting requirements. In general, RFA hopes that Treasury/IRS will adopt efficient practices that do not add to these potential delays or keep producers from fully participating in 45Q credits.

RFA looks forward to working with IRS, Treasury, and other agencies on the implementation of the IRA. We thank you again for the opportunity to provide comments. If you have any questions, or need any additional information, please feel free to contact Jared Mullendore at jmullendore@ethanolrfa.org or Edward Hubbard, Jr., Esq., at ehubbard@ethanolrfa.org or (202) 289-3835.

Sincerely,
RENEWABLE FUELS ASSOCIATION



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