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GrowthEnergy.org

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December 2, 2022

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

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

Dear Commissioner O'Donnell:

Thank you for the opportunity to comment on the Internal Revenue Service's (IRS) plan to issue guidance regarding important provisions of the Inflation Reduction Act (IRA) that will drive reductions in greenhouse gas (GHG) emissions and grow American jobs. Growth Energy is the nation's largest association of biofuel producers, representing 90 U.S. plants that each year produce more than 8 billion gallons of low-carbon, renewable fuel; 106 businesses associated with the production process; and tens of thousands of biofuel supporters around the country.

The Section 45Q expansion in the IRA is a critical tool for incentivizing GHG reductions in the United States through commercial-scale deployment of carbon capture, utilization, and sequestration (CCUS). The combination of ethanol production and CCUS is one of the most important potential applications of CCUS technology in the United States. Approximately 25% of the ethanol industry already captures carbon dioxide and a growing number of facilities plan to install the technology in the near future. An average-sized ethanol plant currently can capture 99,000 to 153,000 tons of CO<sub>2</sub> per year, and there is strong potential to expand on these carbon emission reductions. Unlike combustion processes, the anaerobic fermentation process that produces ethanol from corn starch generates a high concentration carbon dioxide stream that is particularly suitable for cost-effective deployment of CCUS.<sup>1</sup> As a result, ethanol production facilities are among the leading sources of captured carbon dioxide for economically viable carbon sequestration operations. Indeed, the first EPA-

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<sup>1</sup> International Energy Agency (IEA), *Bioenergy with Carbon Capture and Storage, Tracking Report* (Sep. 2022), <https://www.iea.org/reports/bioenergy-with-carbon-capture-and-storage>.

approved permit for commercial scale geologic sequestration of carbon dioxide was obtained by an ethanol producer. Together, ethanol facilities can support even larger sequestration projects which will include new deployment of carbon capture technology at dozens of ethanol production facilities for geologic sequestration.

Below we offer suggestions on how the IRS may robustly implement the Section 45Q expansion in the IRA in an effective and efficient manner, consistent with congressional intent.

**We urge the IRS to work with DOE to expedite approvals of lifecycle assessment reports for CCU.**

Carbon capture and utilization (CCU) is also very important to the ethanol industry. Carbon dioxide captured from ethanol facilities is used in a wide and growing variety of applications, spanning the food and beverage industry, building materials, municipal water treatment, dry ice for vaccine storage, and even additional types of transportation fuels.<sup>2</sup> Using carbon dioxide generated by ethanol production as an ingredient or feedstock in a product or industrial process may result in permanent sequestration of the carbon—just as if the carbon were stored underground—and potentially displaces extraction of carbon dioxide for such uses, thus advancing climate change mitigation.<sup>3</sup> As such, Congress chose to enhance the Section 45Q credit for CCU applications in the IRA. 26 U.S.C. § 45Q(b)(1)(A)(i)(II). However, CCU projects remain subject to a more onerous DOE approval process than competing uses of carbon dioxide, such as enhanced oil recovery (EOR), due to the requirement that taxpayers obtain DOE approval of a lifecycle assessment (LCA) report for CCU applications. Accurate LCA reports are important to effective implementation of Section 45Q's incentives. In practice, however, slow approval of LCA reports has stymied the benefits of Section 45Q for the CCU industry. To alleviate current delays in this process, we encourage the IRS to:

1. Advocate for DOE's devotion of increased resources to the LCA report approval process for CCU applications or establishment of alternative process that does not require DOE to approve each report individually so long as certain standard LCA procedures are followed (*e.g.*, based on ISO standards or otherwise);
2. Allow taxpayers to rely on the LCA value in their proposed LCA report with the requirement that the taxpayer file an amended return if the final DOE-approved LCA differs from the amended LCA.

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<sup>2</sup> Growth Energy, *Putting Carbon to Work: Biorefineries' Critical Contributions to Net-Zero* (June 2022) <https://growthenergy.org/wp-content/uploads/2022/06/GROW-22019-Issue-Brief-Carbon-Capture-2022-06-22-R8.pdf>

<sup>3</sup> See, *e.g.* Thielges, et. al. *Committed to implementing CCU? A comparison of the policy mix in the US and the EU*, *Front. Clim.* (Oct. 20, 2022) (recommending “a public commitment to CCU...in the US [to] incentivize related R[esearch] & D[evelopment] investments at the firm-level.”)

**We also encourage the IRS to clarify that taxpayers who claim the Section 45Z Clean Fuel Producer Tax Credit in a separate taxable year do not sacrifice Section 45Q eligibility in a different taxable year.**

The clean energy tax credits in the IRA work together to promote reductions in GHG emissions. We therefore encourage the IRS to clarify that a taxpayer may elect the Section 45Q carbon oxide sequestration credit and the 45Z clean fuel production credit in each separate taxable year. For example, a clean fuels producer who places carbon capture equipment into service in 2024 should be able to elect the Section 45Q credit in 2024, then elect the Section 45Z credit for the 2025 to 2027 taxable years, before again electing Section 45Q credit from 2028 until the conclusion of its 12-year period of Section 45Q eligibility. Section 45Q is available for “any taxable year” within the “12-year period beginning on the date the equipment was originally placed in service” and so should remain available to taxpayers regardless of whether the taxpayer elected to receive 45Q credit in a prior eligible year. 26 U.S.C § 45Q(a).

**The IRS should clarify tests for determining when construction of carbon capture equipment begins to address practical challenges facing the CCS industry.**

To be eligible for Section 45Q credit, a “qualified facility” must begin “construction of carbon capture equipment” prior to January 1, 2033.<sup>4</sup> 26 U.S.C. § 45Q(d)(1). In previously-issued Section 45Q guidance, the IRS proposed two alternative tests for determining when construction of carbon capture equipment begins: the “physical work test” and the “five percent safe harbor.” IRS Notice 2020-12 at 7. Once either test is met, the guidance requires the taxpayer to “make continuous progress towards completion” (the Continuity Requirement). *Id.*<sup>5</sup>

The IRS recently affirmed that it will continue applying these tests to the expanded Section 45Q credit. 87 Fed. Reg. 73,580, 73,585 (Nov. 30, 2022). We suggest below a clarification to better adapt these tests to the practical challenges of CCUS development, while fulfilling Congress’s intent to incentivize GHG emissions reductions through CCUS.

Specifically, as the IRS is likely aware, many companies with carbon dioxide emissions are partnering with geologic sequestration companies on CCUS projects, and one of those entities (but not both) would claim 45Q credit. In light of these commercial arrangements, the IRS should consider clarifying that if either partner undertakes

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<sup>4</sup> This date does not, however, initiate the 12-year period of eligibility. *Id.* § 45Q(a)(3-4)(initiating the 12-year period “on the date the equipment was originally placed in service”); *Id.* § 45Q(f)(9)(under certain circumstances initiating the 12-year period on “the first day of the first taxable year in which a credit is claimed”).

<sup>5</sup> This continuity requirement is deemed satisfied if the qualified facility or carbon capture equipment is placed in service “no more than six calendar years after the calendar year during which construction of the qualified facility or carbon capture equipment began” (the Continuity Safe Harbor). IRS Notice 2020-12 at 17-18.

“physical work” or incurs five percent of its project costs, it should satisfy the statutory requirement to begin construction prior to 2033 for whichever partner intends to claim the credit so long as there is a binding contract between the parties for carbon sequestration services.

For example, consider a situation where the carbon capturing facility intends to claim 45Q credit and its sequestration partner will contract for and conduct all activities associated with establishing the sequestration site. Under existing 45Q guidance, the physical work test includes the manufacture of components and equipment “necessary for disposal of qualified carbon oxide in secure geologic sequestration” as “off-site physical work of a significant nature.” IRS Notice 2020-12 at 9-10. However, in this situation, the entity claiming the credit would not directly contract for these activities; the sequestration partner (who would not be claiming the credit) would have binding contracts for such work. The IRS should clarify that in these types of scenarios the statutory test for beginning construction should be considered satisfied when either entity begins construction prior to 2033 as long as there is a binding contract for carbon dioxide sequestration services between the two parties.

**We ask that the IRS implement the IRA’s elective payment provision consistent with existing flexibilities for Section 45Q credits under current IRS regulations.**

Certainty and predictability in the implementation of tax credits such as Section 45Q increases investor confidence in the industry. For this reason, we ask that the IRS implement the elective payment mechanism that allows for direct pay under Section 6417 consistent with current IRS regulations, which allow the assignment of Section 45Q credit eligibility to the entity that disposes of the captured carbon dioxide. 26 U.S.C. § 45Q(f)(3)(B); 26 C.F.R. § 1.45Q-1(h)(3). Long-term commercial agreements for carbon dioxide storage services are being made in reliance on the flexibility included in the regulations. The IRS should carry through these existing regulations to the new direct pay and credit transfer provisions.

Specifically, Section 6417 elective payment is available to an “applicable entity” that “makes an election under this subparagraph with respect to any taxable year in which such taxpayer has, after December 31, 2022, placed in service carbon capture equipment at a qualified facility (as defined in section 45Q(d)).” 26 U.S.C. § 6417(d)(C). We ask that the IRS clarify that entities to which the Section 45Q credit is allowable through the Section 45Q(f)(3)(B) election are “applicable entities” for purposes of Section 6417. For example, if an emitter partners with a CCS storage operator and the storage operator claims 45Q credit under existing IRS regulations, that entity should also be able to avail itself of the direct pay option.

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Growth Energy appreciates the IRS's consideration of this input as it implements the Section 45Q credit for carbon oxide sequestration. We look forward to engaging further on this important work and would be happy to meet with your staff to present on these issues in more detail and answer any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Chris Bliley".

Chris Bliley  
Senior Vice President of Regulatory Affairs  
Growth Energy

CC:

The Honorable Janet Yellen, Secretary, U.S. Department of the Treasury  
The Honorable Tom Vilsack, Secretary, U.S. Department of Agriculture  
The Honorable Jennifer Granholm, Secretary, U.S. Department of Energy  
The Honorable Pete Buttigieg, Secretary, U.S. Department of Transportation  
The Honorable Michael Regan, Administrator, U.S. Environmental Protection Agency  
The Honorable Brenda Mallory, Chair, White House Council on Environmental Quality