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CAN THE EXPANSION OF 45Q EFFECTIVELY SPUR INVESTMENT IN CARBON CAPTURE?

Shannon Zaret*

Carbon capture technologies play a critical role in the global effort to mitigate carbon dioxide (CO₂) emissions.¹ Even with significant advancements in energy efficiency and an increase in renewable energy generation, the international community will not be able to meet critical climate goals without a strong carbon capture portfolio.² Moreover, it is one of the few technologies capable of reducing emissions from the fossil fuel industry—which is expected to remain a significant player in the energy sector well into the middle of the century.³ Despite this, there have been few federal incentives for carbon capture, and those that exist have proven largely insufficient for supporting commercial deployment.⁴ The 115th Congress attempted to address these issues by reforming and expanding incentives for investment in carbon capture through the passage of the Bipartisan Budget Act of 2018 (Act).⁵ However, if this new framework is to have any real-world value, it must provide financial certainty to those willing to invest in carbon capture technologies. This article will argue that the success of these incentives hinges on a federal interpretation that is both in line with Congress's intent to stimulate private sector investment, and closely mirrors that of the similar, previously enacted solar tax credit.

Enacted on February 9, 2018, the Act includes a provision designed to extend and reform Section 45Q of the Internal Revenue Code, which provides tax credits for power plants and industrial facilities that utilize carbon capture technologies.⁶ The original version of Section 45Q, which was enacted as part of the Energy Improvement and Extension Act of 2008, was much narrower in scope. As originally authorized, the credit was only available for two types of capture projects: ten dollars per metric ton of CO₂ captured through enhanced oil recovery and twenty dollars per metric ton of CO₂ captured through geologic storage.⁷ Qualifying projects were required to capture a minimum of 500,000 metric tons of CO₂ before they were eligible to receive the credits and the entire program was set to expire once it met its seventy-five million metric ton cap.⁸ Critics argued that this framework was largely ineffective in spurring investment due to the financial uncertainty created by the value, minimum eligibility requirements, and program cap.⁹ Developers feared little return on their investment as the value of the credit was too low to recoup project costs and the program could potentially run out of funds long before the facility was up and running.¹⁰ The program also excluded many other viable carbon capture projects that might attract additional investment.¹¹

As amended, the new Section 45Q represents a serious attempt by Congress to broaden the credit's applicability and to make the credit more attractive for investors.¹² The new lan-

guage of the Act specifically directs the Treasury Department to increase the value of the tax credit over a ten-year period, after which it will be adjusted to increase with inflation.¹³ In addition, Congress authorizes Treasury to remove the cap on the program so that credits are not applied on a first-come first-served basis and to expand eligibility to include additional industries that capture and utilize carbon.¹⁴ While this greater financial certainty is expected to usher in billions of dollars in investment, successful implementation will be supported by Treasury's interpretation of a number of provisions that Congress left open for clarification.

For example, the Act's new language provides that facilities that begin construction prior to January 1, 2024, are eligible to claim the tax credit for up to twelve years after the carbon capture equipment is placed in service.¹⁵ This change allows investors to start earning credits as soon as construction begins. Therefore, Treasury's interpretation of what it means to "begin construction" can have significant implications for project developers and investors.¹⁶ Knowing when a project has officially begun construction with respect to the program's eligibility ultimately facilitates the development of project timelines that maximize a firm's eligible tax credit rate and helps reduce financial risk to companies who are interested in bidding on construction projects in the near future. If this tax credit cannot be utilized by commercial developers, it has no real-world value. Therefore, this provision should be interpreted through the lens of Congress's intent to improve financial certainty for investment in carbon capture technologies.

A careful examination of the history of the similar solar tax credit guaranteed through the 2016 Consolidated Appropriations Act (Bill) offers a useful precedent.¹⁷ Like the recent expansion of 45Q, Congress had elected to move the eligibility requirement away from the "placed in service" standard to "beginning construction" to increase financial certainty for investors.¹⁸ Following the passage of the Bill in December 2015, the Internal Revenue Service issued Notice 2018-59, which clarified the meaning of the term "beginning of construction" in Section 48 of the Internal Revenue Code.¹⁹ It outlined two methods by which taxpayers could evaluate whether they had begun construction with respect to tax credit eligibility: (1) engagement in significant physical work either directly or contractually (i.e., Physical Work Test) or (2) five percent of the ultimate tax basis of the project has already been paid or incurred (i.e., Five Percent Safe Harbor standard).²⁰ Both

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standards clarify what preliminary activities qualify as work of a significant nature to aid developers in creating project timelines that will increase their likelihood of qualifying for the tax credit.

With the expansion of 45Q, Congress has made clear its intent to minimize any uncertainty and undue financial risk for carbon capture. Similar to the expansion of the solar tax credit, they have done so by shifting the credit's eligibility determination to earlier in the development process so that investors can maximize their return.²¹ Thus, similar guidance that is widely understood and accepted by industry and investors should apply here, and Treasury should include specific examples that illustrate work of a significant nature in the context of carbon capture. Once guidance is in place, the Act would then provide a meaningful incentive to increase the development of carbon capture facilities.

While additional federal incentives could help complement the recent expansion of 45Q, it still remains the most significant program for encouraging private investment in carbon capture deployment to date. However, Treasury must provide clear guidance if the tax credit is to offer any meaningful benefit to the carbon capture industry. Until Treasury does so, the interpretation of Congress' intent with regards to the similar solar credit should be used as a model for continued progress with the carbon capture industry.



ENDNOTES

¹ Peter Folger, CONG. RESEARCH SERV., R44902, CARBON CAPTURE AND SEQUESTRATION (CCS) IN THE UNITED STATES 2 (2018) (referring to the process of capturing waste CO₂ from a variety of power and industrial sources and either reusing or safely storing it so that it will not enter the atmosphere).

² INT'L ENERGY AGENCY, FIVE KEYS TO UNLOCK CCS INVESTMENT 4 (2017), <https://www.iea.org/media/topics/ccs/5KeysUnlockCCS.PDF> (noting that limiting future temperature increases to two degrees Celsius will require around 760 gigatonnes of CO₂ emission reductions across the energy sector between now and 2060).

³ INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SPECIAL REPORT ON CARBON DIOXIDE CAPTURE AND STORAGE 3, 9-10, 111 (2005), https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_wholereport-1.pdf.

⁴ CARBON UTILIZATION RESEARCH COUNCIL, IRC § 45Q CARBON SEQUESTRATION TAX CREDIT REFORM (2018) <http://www.curc.net/webfiles/45Q%20Press%20Release/45Q%20Background%20-%20February%202018.pdf>.

⁵ Bipartisan Budget Act of 2018, H.R. 1892, 115th Cong. (2018). Sen. Heidi Heitkamp originally introduced the Act to the Senate on July 12, 2017 as Senate S. 1535, The Furthering carbon capture, Utilization, Technology, Underground storage, and Reduced Emissions Act (FUTURE Act). The Act was included in Senate Finance Committee Chairperson Orrin Hatch's (R-UT) larger tax extenders bill, S. 2256, before finally gaining inclusion in H.R. 1892, the Bipartisan Budget Act of 2018.

⁶ *Id.* § 41119.

⁷ Emergency Economic Stabilization Act of 2008, H.R. 1424, 110th § 115 (2008) (adding the Energy Improvement and Extension Act, which provided tax credits for carbon capture).

⁸ *Id.* § 1(c).

⁹ ENERGY FUTURES INITIATIVE, ADVANCING LARGE SCALE CARBON MGMT.: EXPANSION OF THE 45Q TAX CREDIT 8 (May 2018), https://static1.squarespace.com/static/58ec123cb3db2bd94e057628/t/5b0604f30e2e7287abb8f3c1/1527121150675/45Q_EFI_5.23.18.pdf.

¹⁰ *Id.*

¹¹ *Id.*

¹² FUTURE Act, S. 1535, 115th Cong. § 45Q (explaining that the FUTURE Act would expand the scope of the 45Q tax credit provision and was eventually incorporated into the Bipartisan Budget Act of 2018).

¹³ Bipartisan Budget Act of 2018, H.R. 1892, 115th Cong. § 2 (2018).

¹⁴ *Id.* § 2(a)-(c).

¹⁵ *Id.* § 2(d).

¹⁶ *Id.* § 2(d)(1).

¹⁷ Consolidated Appropriations Act of 2016, H. R. 2029, 114th Cong. § 303(a) (2015).

¹⁸ Letter from Senators Cantwell & Heller to The Hon. David J. Kautter, Assistant Secretary for Tax Policy, U.S. Dep't of the Treasury (June 7, 2018) (on file with Novogradac & Co.).

¹⁹ INTERNAL REVENUE SERV., NOTICE 2018-59, BEGINNING OF CONSTR. FOR THE INV. TAX CREDIT UNDER SECTION 48 (June 22, 2018), <https://www.irs.gov/pub/irs-drop/n-18-59.pdf>.

²⁰ *Id.* at 2.

²¹ Bipartisan Budget Act of 2018, H.R. 1892, 115th Cong. § 2 (2018).