



Drilling Down

Examining the Section 45Q Tax Credit

In this edition of KPMG Global Energy Institute's *Drilling Down*, we asked Katherine Breaks, Robert Swiech, and Megan Whitlock about the key provisions of the revised section 45Q tax credit for the oil and gas industry.

The Bipartisan Budget Act of 2018 (BBA 2018), enacted on February 9, 2018, substantially modified the existing credit for carbon oxide sequestration under section 45Q by expanding its application, making its benefits available to more taxpayers. In this edition of *Drilling Down*, we will examine the key provisions of the revised credit and the impact to the oil and gas industry.

What is the section 45Q credit for carbon oxide sequestration?

Background

The tax credit under section 45Q was originally enacted by the Energy Improvement and Extension Act of 2008¹ to incentivize the reduction of carbon dioxide emissions and support redeployment of carbon dioxide energy through efforts such as enhanced oil recovery.

The original version of section 45Q provides a credit of \$20 per metric ton of carbon dioxide that is permanently stored, and \$10 per metric ton of carbon dioxide that is permanently stored and used as a tertiary injectant. The credit rate is adjusted annually for inflation and was \$23.40 and \$11.70, respectively, in 2019.

The credit is limited to the first 75 million tons by all projects. While the credit cap has not yet been reached, it is expected to be exceeded in the next few years.

Further, the original credit is not available to facilities that captured less than 500,000 metric tons of carbon dioxide during the taxable year. This threshold precluded smaller start-up facilities and industries that did not meet the metric ton requirement from benefiting under the original section 45Q rules.

Expanded credit overview

The BBA 2018 expanded the original section 45Q credit to include qualified carbon oxide (CO), instead of limiting the credit to only carbon dioxide, and applies to qualified facilities placed in service after the date of enactment.

The enhanced credit is now available for each metric ton of carbon oxide that is captured and secured for a 12-year period beginning with the date that the carbon capture equipment is placed in service. The credit rate increases over time and is set based on how the taxpayer disposes of the CO.

If the taxpayer physically or contractually ensures disposal by using the CO as a tertiary injectant in connection with an enhanced oil or natural gas recovery (EOR) project, then

the credit rate was \$12.23 metric tons in 2017 and increases linearly to \$35 per metric tons in 2026. The credit rate is adjusted for inflation thereafter.

For CO that is secured but is not used as a tertiary injectant, the credit was \$22.66 per metric ton in 2017 with linear increases to \$50 per metric ton in 2026. Similarly, the credit rate is adjusted for inflation thereafter.

If the CO is used as a tertiary injectant or sequestered in secure geological storage, an electric generating facility must capture at least 500,000 metric tons per year; other industrial facilities must generally capture at least 100,000 metric tons per year.

For other types of facilities, depending on how the CO is disposed, the thresholds are either 100,000 metric tons or 25,000 metric tons per year.

Another feature of the expanded section 45Q credit is that a taxpayer may elect to allocate the credit to a party that disposes of the CO.

In addition, facilities that did not claim the prior credit—i.e., they did not exceed the production thresholds or follow required EPA standards for secure geological storage—may make an election to claim the new credit for a 12-year period beginning with the date of enactment of BBA 2018.

Credit eligibility requirements

In order for section 45Q to apply, CO must be captured from an industrial source by carbon capture equipment or be captured directly from the ambient air.

The CO also must be measured at the source of capture and verified at the point of disposal, injection, or utilization. For facilities that are using ambient air, the production threshold is 100,000 metric tons per year.

A new provision allows the credit to eligible taxpayers if the captured CO is:

- Fixated through photosynthesis or chemosynthesis, such as through growing algae or bacteria
- Chemically converted to a material or chemical compound in which such CO is securely stored
- Used for any other purpose for which a commercial market exists, as determined by future guidance.

¹ PL. 110-343, October 3, 2008.

For these types of disposal, the production threshold to qualify is 25,000 metric tons per year. The amount of metric tons that are included in the credit calculation is based on a determination of the total amount of CO secured over the entire lifecycle of the relevant product or process. Therefore, if a product later releases some of the CO that has been secured, such as when fertilizer is applied to soil, the credit amount is reduced to the extent of that re-release. Future guidance is expected to assist taxpayers in how to measure this.

Qualified facilities for purposes of section 45Q include any industrial or direct air capture facility with planning and design for installation of carbon capture equipment, under construction before January 1, 2024. The IRS has issued guidance explaining how to satisfy this requirement.

Operators using CO in an EOR project must submit a certification to the IRS from a petroleum engineer that the project meets the requirements of a qualified EOR project.

The credit under section 45Q is only available for qualified carbon oxide that is captured and disposed, used, or utilized within the United States.² Entities may have to recapture the credit for any CO that does not remain permanently sequestered or utilized in a qualifying manner.

Credit computations

Under the rules of section 45Q, the credit is attributable only to the taxpayer that owns the carbon capture equipment and physically or contractually ensures the capture and disposal, utilization, or use as a tertiary injectant of such CO. In order to claim the credit, the taxpayer must use Form 8933 to report all the relevant elements of the computation.

In the case of a partnership, IRS guidance clarifies that the credit is allocated based either on how gross income from CO sales are allocated or, if there are no sales, based on how the losses or deductions associated with the cost of capture and disposal are shared.

What steps should companies take in light of the expanded section 45Q credit?

It is critical for clients and operators of carbon oxide capture projects to determine if their projects meet the criteria of the revised section 45Q credit and to support their position to take the credit with documentation. This may include but is not limited to:

- The placed-in-service dates of carbon capture equipment
- Construction plans for facilities that are not yet complete, to demonstrate the planning and design of carbon capture equipment
- Compliance with EPA regulations for secure geological storage for taxpayers that are disposing of the CO in secure geological storage and/or are using it as a tertiary injectant in connection with an EOR project (Under current law, EOR projects are not subject to these regulations—they have their own requirements—so taking advantage of the credit may involve additional regulatory requirements.)³
- Measurement standards and records to support the amount of captured carbon oxide or carbon dioxide
- Elections, if any, for transfer of the credit benefit to another party.

The IRS has issued some guidance on the tax credit requirements. However, additional guidance is expected with respect to tax credit recapture and storage requirements.

² As defined within the meaning of section 638(1) or United States' possessions defined within the meaning of section 638(2).

³ Federal Requirements under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO₂) Geologic Sequestration (GS) Wells, 75 Fed. Reg. 77230 (December 10, 2010). EPA's regulations at 40 C.F.R. Part 98, Subpart RR, establish Greenhouse Gas (GHG) reporting requirements for the geologic sequestration of CO₂.

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