

Carbon Capture, Use, and Sequestration: Proposed Regulations Enable Taxpayers to Accelerate Projects

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The Treasury Department and Internal Revenue Service (IRS) issued Proposed Regulations for carbon sequestration tax credits—under Section 45Q—addressing recapture risk and the availability of the credit when carbon is converted into products.

Importantly, while the proposed rules are not yet final, they allow a taxpayer to rely on them for taxable years beginning after February 9, 2018, so long as the taxpayer relies on the rules in their entirety and in a consistent manner.

This alert helps tax investors and sponsors determine how to meaningfully move carbon capture, use and sequestration (CCUS) projects forward. We also cover certain lender focused issues, such as items that could materially affect a CCUS project's cash flows, thereby enabling more precise risk analysis for underwriting purposes.

In this document, a party operating a carbon capture facility is the “emitter” and the party taking the carbon for disposal, utilization or use as a tertiary injectant is the “offtaker.”

Key Takeaways and Associated Commercial Implications

- Carbon Capture and Offtake Contract Requirements Are Flexible. An emitter is free to contract with multiple offtakers, with each contract bearing terms tailored to that arrangement, subject to certain key terms.
 - **Commercial Takeaway:** the Proposed Regulations enable emitters to negotiate carbon offtake agreements based on their commercial needs; tax-specific terms are minimal.
- Credit Recapture Isolated to Five-Year Periods. During the 12-year credit eligibility phase, the credits vest in the fifth taxable year after the year in which the credits were earned. Proportional recapture among multiple emitters on a last-in-first-out basis is established to equitably apportion recapture risk among multiple emitters.

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- **Commercial Takeaway:** Restricting recapture to five-year periods within the credit cycle allows parties to circumscribe the financial risks associated with recapture.
- Parties May Use EPA and ISO Based Approaches to Substantiate Secure Geological Storage. The Proposed Regulations, consistent with the statutory language, require emitters and offtakers to verify they are securely storing carbon. The parties can use existing Environmental Protection Agency (EPA) and International Organization for Standardization (ISO) approaches to satisfy their monitoring and reporting requirements.
 - **Commercial Takeaway:** the ability to use existing standards allows emitters and offtakers to deploy compliance protocols at scale among numerous projects, resulting in consistency, certainty and cost savings.
- Utilization Eligibility Relies on Existing Life Cycle Analysis Protocols. Carbon utilization, loosely described as the use of qualified carbon oxide to manufacture other products, raises complicated issues, such as understanding the amount of carbon permanently removed from the atmosphere. The Proposed Regulations require a taxpayer to both directly measure their carbon-oxide-based product's greenhouse emissions and conduct a life cycle analysis of the product. The taxpayer must submit the analysis to the IRS and Department of Energy (DOE), which, along with the EPA, must review and approve the analysis.
 - **Commercial Takeaway:** requiring the approval of three government agencies prior to claiming a credit will stymie investment in utilization technologies, similar to the manufacturing tax credit under Section 48C, which was rarely used.
 - **Commercial Takeaway:** developing the life cycle analysis gives rise to costs, and the approval process can add considerable delays and uncertainty.
 - **Commercial Takeaway:** the life cycle analysis will allow taxpayers who do pursue carbon oxide utilization to determine the value of their utilization credits with relative accuracy.
- Carbon Capture Equipment and Qualified Carbon Sources Defined Using Functional and Policy-Goal Driven Considerations. In evaluating whether carbon capture equipment has begun construction, the Proposed Regulations focus on those components associated with the separation and capture phase, stopping at the point of transport.
 - **Commercial Takeaway:** the broad definition provides more certainty for taxpayers in beginning construction on a qualified facility.
- Election to Pass Through Credit Administrable. The Proposed Regulations provide simple procedures for passing the credit to an offtaker, allowing for annual determinations and partial transfers.
 - **Commercial Takeaway:** considerable flexibility in passing through the credit enables owners to maximize the value of each credit a project generates. Such flexibility will have to be tailored consistent with relevant tax rules governing service contracts.
 - **Commercial Takeaway:** offtakers that want the credit passed through should negotiate up front to require the emitter to annually pass the credit to them for a predetermined number of years.

Detailed Analysis

The Proposed Regulations provide guidance on key issues in CCUS, including recapture, credit sharing, utilization requirements, reporting/monitoring requirements and restrictions on eligible carbon oxides. Together with prior IRS guidance, these rules will allow parties to get these projects moving immediately.

There are still some open questions, and those can be addressed later to expand the pool of viable projects. For example, it is unclear whether a taxpayer can aggregate separate projects in order to satisfy the minimum carbon capture thresholds. Many of the proposed rules are sensible, and are commercially focused, suggesting there is little incentive for severe criticism. If so, final regulations will likely retain most of what is in the Proposed Regulations and expand on areas that commenters identify as requiring additional guidance. For many taxpayers, relying on the current Proposed Regulations entirely and consistently may be a sensible approach to bring projects to market.

This detailed alert analyzes areas of Proposed Guidance in the same order as the life cycle of a CCUS project, namely geographical attributes, constructing a qualifying project, capturing carbon, transporting pursuant to an offtake arrangement, secure storage, injection or utilization, compliance requirements, credit sharing and recapture.

Qualifying Carbon Capture Equipment

The 45Q credit is premised on beginning construction of, and placing in service, qualified carbon capture equipment as part of having a qualified facility. The Proposed Regulations define “carbon capture equipment” (CCE) based on the equipment’s intended functionality for purposes of Section 45Q, namely the separation and capture of carbon oxides that would otherwise be emitted into the atmosphere, stopping at the point where carbon can be transported. For additional support, the Proposed Regulations provide a non-exclusive list of components that qualify as part of carbon capture equipment.

Significantly, the CCE list is adapted from Notice 2020-12, 2020-11 I.R.B. 495, which provides ways that a taxpayer can begin CCE construction for purposes of Section 45Q.

The qualified CCE definition is relevant principally for ensuring construction has started on a qualified facility and also to provide for verification that a facility qualifies for the post-2018 credit instead of the pre-2018 credit. In contrast to the investment tax credit, the definition of CCE does not dictate the amount of the credit.

The Proposed Regulations also adopt the familiar 80/20 retrofit rule that enables a taxpayer with a used facility to incur properly capitalizable expenses with respect to existing CCE and treat the entire modified facility as being new property for purposes of the credit. In this manner, if a taxpayer increases the value of existing property by fivefold, the CCE can give rise to a credit using the post-2018 rules and credit amounts. As a practical matter, taxpayers looking to retrofit existing facilities will likely want to have their existing facilities appraised by an independent third party.

Qualifying Carbon Oxides

The Proposed Regulations generally confirm that the statutory definition of “carbon oxide” is sufficient and well understood within the industry. Carbon oxide eligible for

the credit excludes carbon captured, injected in Enhance Oil Recovery (EOR) and later recycled (i.e., the same carbon cannot qualify for a credit more than once). In addition, the Proposed Regulations do not allow a taxpayer to capture carbon from a “natural carbon dioxide” bearing formation, which appears intended to preclude processes that extract carbon from the ground for no reason other than to generate a credit. The Proposed Regulations provide that a well consisting of less than 10 percent carbon dioxide as a qualifying well, while noting that if the well consists of a mixture of liquids with more than 10 percent carbon oxide, it may or may not be a well with qualifying carbon oxides.

Offtake Arrangements

Under Section 45Q, the owner of CCE is entitled to the credit if it “contractually ensures” disposal via secure geological storage, injection in enhanced oil recovery activities or utilization. The Proposed Regulations provide guidance as to what terms should be in a contract for this purpose. Specifically, the Proposed Regulations require that the contracts “ensure the disposal, injection, or utilization of qualified carbon oxide in a binding written contract that includes commercially reasonable terms that provide for enforcement.”

The Proposed Regulations do not define “binding written contract” and, unlike the wind and solar credit guidance, do not require a minimum level of contractual damages for the contract to be considered “binding.” However, the lack of threshold damages makes sense in the carbon capture context because the offtake agreement is required in order to generate the credit. From an offtaker’s perspective, they will pay only when carbon is made available, so a provision that allows an offtaker to assert damages for failure to deliver carbon is not necessary to give rise to the credit. Similarly, an emitter incurs significant damages simply by not receiving the credit, obviating the need for a separate, legal damages threshold.

The Proposed Regulations provide reporting requirements for contracts, which taxpayers must satisfy by filing Form 8933. Specifically, the existence of each offtake arrangement must be disclosed to the IRS in addition to the names of the parties involved. Additional requirements apply to offtake arrangements under which carbon will be used in EOR activities. In those instances, the Form 8933 must also include identifying information (name of operator, field, unit and reservoir), the location (county and state) and the identification number assigned to the facility by the EPA’s electronic Greenhouse Gas Reporting Tool (e-GGRT ID number).

Compliance Requirements for Storage, Injection and Utilization

The Proposed Regulations provide significant guidance to assist taxpayers with identifying and evaluating whether they have stored carbon in secure geological storage. From an emitter’s perspective, the offtake arrangement for storage and injection must be with a party that is in compliance with the below protocols. Utilization raises other issues requiring different reporting.

Storage and Injection

With respect to secure geologic storage, the Proposed Regulations, consistent with the statutory language under Section 45Q, coordinate acceptable storage sites using EPA definitions and constructs.

Specifically, injection of carbon oxide into any qualifying storage reservoir requires the operator to comply with Underground Injection Control (UIC) program regulations and to obtain the appropriate UIC well permits. Under this program, Class VI permits issued by the EPA as relates to storage reservoirs is available. In addition, and as an alternative to EPA based rules, the Proposed Regulations allow for protocols issued by ISO and endorsed by the American National Standards Institute (ANSI), CSA/ANSI ISO 27916:19, "Carbon Dioxide Capture, Transportation and Geological Storage – Carbon Dioxide Storage Using Enhanced Oil Recovery (CO₂-EOR)."

Utilization

Utilization of qualified carbon oxides presents unique challenges because of the difficulties associated with forecasting how the end product will ensure carbon is not released into the atmosphere. The Proposed Regulations, consistent with the statute, require each taxpayer to point an independent third party to conduct an analysis of the lifecycle greenhouse gas emissions associated with the proposed utilization (a lifecycle assessment (LCA)). Each LCA must contain certain ISO-based reporting standards after which it will be submitted to the IRS and DOE. The IRS will then consult with the DOE and EPA to evaluate whether to approve the LCA.

Credit Sharing

The Proposed Regulations clarify that taxpayers are allowed to pass through their credits to one or more offtakers, assuming each offtaker separately satisfies the requirements under Section 45Q. The election is made on an annual basis meaning a taxpayer that passes, in part or in whole, the credit in one year can decide to pass the credit differently in a subsequent year, or to not pass it through at all. One issue that would benefit from guidance would be a framework addressing the extent, if any, to which pricing offtake arrangements taking into account credit values would have negative tax impacts.

This considerable annual flexibility enables taxpayers to maximize credit value as part of their commercial arrangements, in many instances, among multiple parties.

Recapture

In contrast to the more familiar wind production tax credit, which has no recapture provisions, the CCUS production tax credit necessarily requires a recapture provision due to the risk that carbon might leak from the geological formation into which it has been stored. An issue with this construct is the risk that recapture can occur seemingly any time after storage, which impacts both debt and equity financing considerations. From an equity holder's perspective, if there is recapture, and the equity holder was allocated credits, the recapture reduces the value of the credit. From a lender's perspective, if there is recapture, indemnity provisions tied to recapture may be triggered, thereby reducing cash flows to the operating entity; if the indemnity relates to a long period of tax credits, the indemnity provisions could wipe out cash flows entirely.

The Proposed Regulations address these commercial issues by implementing a sensible five-year recapture window that operates in two ways. First, there is a "lookback period" which looks back five years from the date of recapture at any given point during the 12-year credit period. Second, there is a post-credit claiming period that exists for five years after the end of the 12-year credit period.

Within the lookback period, the Proposed Regulations provide that during the credit period, there is a five-year window during which recapture can occur. In other words, each credit fully vests five years after the taxpayer earns that credit. If there is recapture in any given year, such recapture operates on a last-in first-out (LIFO) basis. In short, LIFO means that the last unit of carbon injected is deemed to be the first one recaptured. If recapture occurs in the same year as injection, the recapture for the current year is the amount by which the recaptured carbon exceeds the injected, securely stored or utilized carbon. If a well, storage cavern or utilization offtaker has multiple sources of carbon, recapture is apportioned pro rata among all emitters that sold carbon and that owned equipment enabling the emitter to qualify for a credit.

The post-credit claiming period ends at the earlier of (i) five years after the last tax year in which the taxpayer claimed a credit or (ii) the date monitoring ends under the requirements for demonstrating secure storage. Under this construct, if a taxpayer ceases capture activities midway through the 12-year credit period, the recapture period ends five years after ceasing the activities rather than five years after the end of the 12-year period.

The Proposed Regulations do not provide a recapture safe harbor, and provide a limited exception to recapture arising from actions unrelated to the selection, operation or maintenance of the storage facility, such as volcanic activity or a terrorist attack.

The Proposed Regulations also provide that taxpayers may obtain third-party recapture insurance to protect against recapture.

Conclusion

While a few outstanding issues remain, the Proposed Regulations significantly reduce legal uncertainty for emitters and offtakers, and generally provide a commercial path forward. Taxpayers who rely on the current Proposed Regulations entirely and consistently should be able to bring projects to market quickly. As in other industries, first movers will have a considerable advantage, especially as solar and wind credits phase down in the next several years and those investors look for more lucrative transactions with longer horizons.

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