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Deloitte Tax LLP | March 3, 2021

# Final regulations released for carbon oxide sequestration credit under section 45Q

Tax Alert

## Overview

On January 15, 2021, Treasury and the IRS published final regulations (T.D. 9944) (the "Final Regulations") on the Internal Revenue Code (IRC) section 45Q carbon oxide sequestration credit ("45Q Credit" or "Carbon Capture Credit"). The Final Regulations provide guidelines on various open items on which taxpayers have sought clarity since section 45Q was overhauled as part of the Bipartisan Budget Act of 2018 ("BBA"). These regulations consider dozens of comment letters received from taxpayers, industry participants, environmental groups, and other stakeholders in response to the notice of proposed rulemaking (REG-112339-19) ("Proposed Regulations") released on May 28, 2020. The Final Regulations set forth guidance that will allow many taxpayers to move ahead with claiming this federal income tax credit or entering into a tax credit equity transaction to help finance a carbon capture project. Although the Final Regulations addressed several issues, open questions remain that will require clarification in future guidance.

### Issue

**Final Regulations under section 45Q**

The Final Regulations provide important guidance related to calculating the amount of the 45Q Credit, and determining and maintaining eligibility for the credit. Specifically, the Final Regulations detail rules, applications and examples related to the topics addressed below, some of which differ from, or build upon, the guidance previously provided in the Proposed Regulations.

Notably, the Final Regulations:

- Clarify requirements for electing to **transfer the 45Q Credit** between eligible taxpayers including details of the required contracting arrangements
- Provide the limited ability to **aggregate carbon capture facilities** to meet minimum capture threshold requirements for eligibility
- **Redefine "carbon capture equipment"** based on functionality
- Broadly **define a "commercial market"** for utilization purposes
- Detail requirements of **performing and submitting the life cycle assessment ("LCA")** for utilization

- **Shorten the recapture period** for sequestration activities from 5 years to 3 years
- **Allow taxpayers to rely on the Final Regulations** retroactively for tax years beginning on or after January 1, 2018
- Signal **forthcoming additional sub-regulatory guidance** to address some open questions remaining about utilization, LCAs, begun construction, and partnerships issues

**45Q Credit background**

IRC section 45Q(a)(3) allows taxpayers to claim a federal income tax credit over a twelve-year credit period based on the metric tons of qualified carbon oxide (“$CO/CO_2$”) captured by the taxpayer using carbon capture equipment which is originally placed in service at a qualified facility on or after February 9, 2018 (the enactment date of the BBA). In order to qualify for the 45Q Credit, a taxpayer must begin construction of carbon capture equipment or a carbon capture facility before January 1, 2026, as extended by two years in the Consolidated Appropriations Act, 2021.

The taxpayer must physically or contractually ensure that the captured $CO/CO_2$ is:

- Disposed of by the taxpayer in secure geological storage; and neither used by the taxpayer as a tertiary injectant in a qualified enhanced oil or natural gas recovery project nor utilized in a manner described in section 45Q(f)(5) (“**disposal**”);
- Used by the taxpayer as a tertiary injectant in a qualified enhanced oil or natural gas recovery project and disposed of by the taxpayer in secure geological storage (“**injection**”); or
- Utilized by the taxpayer in a manner described in section 45Q(f)(5), which includes for any purpose for which a commercial market exists (“**utilization**”).

The table below provides the credit amounts per metric ton of qualified $CO/CO_2$ by taxable year based on how the $CO/CO_2$ is stored or used.

| Tax Year | Applicable Dollar Amount | |
|---|---|---|
| | Disposal | Injection or Utilization |
| 2017 | $22.66 | $12.83 |
| 2018 | $25.70 | $15.29 |
| 2019 | $28.74 | $17.76 |
| 2020 | $31.77 | $20.22 |
| 2021 | $34.81 | $22.68 |
| 2022 | $37.85 | $25.15 |
| 2023 | $40.89 | $27.61 |
| 2024 | $43.92 | $30.07 |
| 2025 | $46.96 | $32.54 |
| 2026 | $50.00 | $35.00 |

For tax years after 2026, the credit amount will be the product of $50 or $35 and an inflation adjustment factor for such calendar year as measured by the Gross National Product: Implicit Price Deflator (“GDPDEF”).

If a taxpayer placed carbon capture equipment in service before the BBA, the taxpayer is eligible to claim the 45Q Credit from the date the carbon capture

equipment was placed in service until the end of the calendar year that the Treasury and the Environmental Protection Agency ("EPA") certify that an aggregate total of 75,000,000 metric tons of qualified $CO/CO_2$ have been claimed by taxpayers. Furthermore, taxpayers are eligible for the following credit amounts (subject to inflation), subject to certain exceptions as discussed further below:

- $20 multiplied by the inflation adjustment factor for such calendar year for disposal; or
- $10 multiplied by the inflation adjustment factor for such calendar year for injection or utilization.

Alternatively, if a taxpayer placed carbon capture equipment in service before the BBA but has not previously claimed the 45Q Credit on such facility and the facility captures no less than 500,000 metric tons of qualified $CO/CO_2$ per taxable year, then the taxpayer may elect to qualify the facility as an "applicable facility." An applicable facility, and any carbon capture equipment placed in service at such facility, is deemed placed in service on the date the BBA was enacted (February 9, 2018).

A taxpayer that placed carbon capture equipment in service after the BBA may elect to have the pre-BBA credit amounts apply in lieu of the applicable dollar amounts under sections 45Q(a)(3) or 45Q(a)(4). The election applies to all metric tons of qualified $CO/CO_2$ captured by the taxpayer at the qualified facility throughout the twelve-year credit period.

**Credit eligibility and defined terms**

*Carbon capture equipment* – The Final Regulations refine the definition of carbon capture equipment to be based on functionality. Generally, carbon capture equipment includes all components of property that are used to capture or process carbon oxide until the carbon oxide is transported for disposal, injection, or utilization. Components of property related to transporting carbon oxides for disposal, injection, or utilization are not included in the general definition.

The Final Regulations remove the list of qualifying carbon capture components and the excluded components in favor of a broad definition that provides flexibility for the development of future technologies and components.

- The Final Regulations do, however, provide that carbon capture equipment includes a system of gathering and distribution lines that collect carbon oxide captured from a qualified facility or multiple qualified facilities that constitute a single project (as described in section 8.01 of IRS Notice 2020-12).
- The Final Regulations do not adopt a primary purpose test (to distinguish between equipment for which the primary function is the separation of qualified carbon oxide and equipment that incidentally separates qualified carbon oxide but for which the primary function is the manufacture of other products), and do not allow taxpayers to elect to exclude "dual purpose" property from the definition of carbon capture equipment.

> ***Observation:*** The lack of a specific list of qualifying components of carbon capture equipment provides flexibility to taxpayers and accounts for future technological developments, but potentially comes at the expense of taxpayer certainty on component eligibility. Taxpayers must look to the functionality of the component (used to capture or process the carbon oxides until the carbon oxide is transported for disposal, injection, or utilization) to determine if it is carbon capture equipment and there may be some level of uncertainty under fact patterns regarding where to "draw the box" around the carbon capture equipment, including where multiple taxpayers own separate components involved in a multi-step process of carbon capture.

- The Final Regulations state that all components that make up an independently functioning process train capable of capturing, processing, and preparing carbon oxide for transport should be treated as one unit of carbon capture equipment. This clarification is consistent with the single project rule for renewable energy projects provided in Revenue Ruling 94-31.
- For each single process train of carbon capture equipment, only one taxpayer will be permitted to claim the 45Q Credit, and it will be the taxpayer who either: physically ensures the capture and disposal, injection, or utilization of qualified carbon oxide, or contracts with others to dispose of, inject, or utilize the captured carbon oxide.
- The Final Regulations do not contain specific rules regarding how to allocate 45Q Credits generated by carbon capture equipment that captures qualified carbon oxide among multiple taxpayers that own different components within a carbon capture system or an undivided interest in the same carbon capture equipment, as it would generate a significant administrative burden for the IRS. However, multiple owners of carbon capture equipment may form a partnership to allocate 45Q Credits among themselves pursuant to Revenue Procedure 2020-12.

*Industrial facility* – For purposes of the 45Q Credit, a "qualified facility" means any industrial facility, electricity generating facility, or direct air capture facility (which also meets the requisite capture/emissions volume thresholds and beginning of construction deadline).

- The Final Regulations provide that an *industrial facility* is a facility, including an electricity generating facility, that produces a carbon oxide stream from a fuel combustion source or fuel cell, a manufacturing process, or a fugitive carbon oxide emission source that, absent capture and disposal, injection, or utilization, would otherwise be released into the atmosphere as industrial emission of greenhouse gas or lead to such release.
- The Final Regulations provide that a *manufacturing process* is a process involving the manufacture of one or more products, other than carbon oxide, that are intended to be sold at a profit, or are used for a commercial purpose (other than producing carbon oxide). All facts and circumstances with respect to the process and products are to be taken into account.
- Commenters requested for the definition of industrial facility to be modified to include facilities that produce a carbon dioxide stream from a biogas flare, biogas-to-electricity facility, flare stack gas, LFG-to-electricity, biogas processing facility, and municipal solid waste facility. The Final Regulations do not adopt these comments citing that a rule that explicitly characterizes certain facilities as industrial facilities would risk being imprecise or giving rise to the perception that those facilities not listed will not qualify, making a facts and circumstances approach preferable.

> ***Observation:*** Treasury and the IRS may consider issuing future guidance regarding fact patterns, potentially including a listing of qualified industrial facilities for purposes of the 45Q Credit as taxpayers claim credits related to certain types of industrial facilities. This could benefit taxpayers that are looking for additional guidance to determine if a particular facility qualifies as an industrial facility. Importantly, for utilization projects, an "approved" LCA study (discussed below in detail) does not provide a determination of overall credit eligibility. The technical review is instead expected to focus on the measurement of the qualified CO/CO2.

- For wells at natural carbon dioxide-bearing formations or naturally occurring subsurface springs, there is a special provision for wells that contain a product other than carbon dioxide. Specifically, wells with gas streams that contain 90 percent or greater carbon dioxide by volume (referred to as the "90 percent test") are by default <u>not</u> industrial facilities.

However, there is an exception for certain wells that meet the 90 percent test to be considered an industrial facility, if: (i) the deposit contains product other than carbon oxide that is commercially viable to extract and sell without taking into account the availability of a commercial market for the carbon oxides that for 45Q purposes; (ii) the taxpayer provides an attestation from an independent registered engineer with experience in feasibility studies for extraction of gases from the subsurface; (iii) a direct air capture facility is not used to capture carbon oxides from the gas stream; and (iv) any carbon oxide extracted from the deposit is used as a tertiary injectant in an enhanced oil or recovery project or as feedstock of a utilization project. The Final Regulations provide two examples regarding natural underground reservoirs and whether such would be considered a manufacturing process.

***Observation:*** The "90 percent test" provision in the Final Regulations is more favorable than the "10 percent safe harbor" provision within the Proposed Regulations. For taxpayers that operate carbon dioxide production wells at a natural carbon dioxide-bearing formation or naturally occurring subsurface spring, if the well gas stream or deposit contains less than 90% carbon dioxide, the well may be treated as an industrial facility. In addition, there is an exception for wells with gas streams that contain more than 90% carbon dioxide, provided that the four specific conditions are met, which further promotes the policy of capturing CO/CO2 that would have otherwise been released into the atmosphere.

*Aggregation* – A new limited concept of aggregation is included in the Final Regulations where taxpayers are allowed to apply the "single project rule" under section 8.01 of IRS Notice 2020-12 (related to establishing beginning of construction) to treat multiple facilities as a single facility for purposes of whether a facility satisfies the requisite annual CO/$CO_2$ capture thresholds described in section 45Q(d)(2), to be treated as a qualified facility.

- In Notice 2020-12, the single project determination allows for multiple facilities or units of carbon capture equipment that are operated as a single project to be treated as a single qualified facility or unit of carbon capture equipment for purposes of determining when construction began based on relevant facts and circumstances. Factors indicating that multiple qualified facilities or units of carbon capture equipment are operated as part of a single project include, but are not limited to: (a) the qualified facilities or units of carbon capture equipment are owned by a single legal entity; (b) the qualified facilities or units of carbon capture equipment are constructed in the same general geographic location or on adjacent or contiguous pieces of land; (c) a single system of gathering lines or a single off-take operation is used to collect and deliver carbon oxide to a transportation pipeline; (d) carbon oxide captured from the qualified facilities is disposed of, utilized, or used as a tertiary injectant pursuant to a shared contract; (e) the qualified facilities or units of carbon capture equipment are described in one or more common environmental or other regulatory permits or are required to collectively report their activities; (f) the qualified facilities or units of carbon capture equipment were constructed pursuant to a single contract providing FEED or similar services covering the full scope of the single project; (g) the qualified facilities or units of carbon capture equipment were constructed pursuant to a single master construction contract; and (h) the construction of the qualified facilities or units of carbon capture equipment was financed pursuant to the same loan agreement.

***Observation:*** In comments to the Proposed Regulations, taxpayers requested an aggregation rule for purposes of satisfying the minimum threshold amounts for capture and suggested similar but different factors to those provided in Notice 2020-12 for beginning of construction purposes. The Final Regulations include the ability to aggregate carbon capture facilities but used the factors for the beginning of construction, instead of

those suggested by commenters, in order to promote "uniformity of application for both the beginning of construction requirement and the minimum capture requirements." While the Final Regulations suggest that each of the 8 factors may or may not be relevant and leaves such determination of relevancy to the taxpayer, it remains unclear whether a taxpayer may aggregate carbon capture facilities not in the same "general geographic location" and the distance that a "general geographic location" extends. As a result, without further clarification, the aggregation provision may only be applicable to a relatively narrow set of fact patterns.

*Ownership of the Equipment* – The Final Regulations expressly clarify that carbon capture equipment that is originally placed in service at a qualified facility on or after February 9, 2018 may be owned by a taxpayer other than the taxpayer that owns the industrial facility. This provision **does not** extend to qualified facilities under section 45Q(a)(1) and (2), which require carbon capture equipment that is originally placed in service at a qualified facility before February 9, 2018.

***Observation:*** This provision clarifies that owners of carbon capture equipment located at another taxpayer's industrial facility can claim or transfer the 45Q Credit (post-BBA). For the pre-BBA 45Q Credit, ownership of the industrial facility that emits the CO/CO2 is still required to claim the 45Q Credit. For the post-BBA 45Q Credit, only ownership of the carbon capture equipment (and not the industrial facility) is required. This may result in carbon capture equipment owners seeking out emitters of CO/CO2 in order to install the carbon capture equipment at industrial facilities or sites with high levels of emissions, and makes the determination of where to draw the box around the carbon capture equipment more important.

*80/20 Rule for upgrades to used property* – The Final Regulations adopt the 80/20 Rule which provides that a qualified facility or carbon capture equipment may qualify as originally placed in service even though it contains some used components of property, provided the fair market value of the used components of property is not more than 20 percent of the qualified facility or carbon capture equipment's total value (the cost of the new components of property plus the value of the used components of property).

- For purposes of the 80/20 Rule, the cost of a new qualified facility or carbon capture equipment includes all properly capitalized costs of the new qualified facility or carbon capture equipment.
- The Final Regulations reaffirm that the 80/20 Rule is applied at the time the property is placed in service in line with the section 45 and section 48 credits and clarify that Revenue Ruling 94-31 shall be used to determine the value of the property.
- The Final Regulations clarify that an independently functioning process train is the appropriate unit of carbon capture equipment for purposes of the 80/20 Rule, and clarify the meaning of "the cost of new equipment for a pipeline owned and used exclusively by that taxpayer."
- Solely for purposes of the 80/20 Rule, properly capitalized costs of a new qualified facility or carbon capture equipment may, at the option of the taxpayer, include the cost of new equipment for a pipeline owned and used exclusively by that taxpayer to transport carbon oxides captured from that taxpayer's qualified facility that would otherwise be emitted into the atmosphere.
- The Final Regulations do not eliminate the exclusivity requirement for pipelines because the purpose of the 80/20 Rule is to calculate the fair market value ratio of new to used property within a project. If the taxpayer and the IRS are unable to determine how much of a pipeline the taxpayer actually owns or is part of the project, because it is a common carrier pipeline, the 80/20 Rule cannot be used to determine whether the project has met the test.

> ***Observation:*** This provision allows taxpayers that refurbish or upgrade existing carbon capture equipment or facilities to be considered as placing in service new carbon capture equipment or equipment for 45Q Credit purposes. A new placed-in-service date can result in the application of the more beneficial post-BBA 45Q Credit amounts and timelines (*i.e.,* twelve-year credit period if construction begins before January 1, 2026). The 80/20 Rule is well known in the renewable energy tax credit space and its application has developed since the 1960s in the context of the investment tax credit. Although IRS guidance on the 80/20 Rule exists from other prior applications, taxpayers will need to be aware of nuances when utilizing this rule for 45Q purposes, such as the determining of the proper components to include as part of drawing the box around the carbon capture equipment and how to properly value the old retained property.

**Reporting requirements for captured carbon oxide**

*Injection of qualified carbon oxides* – The Final Regulations explain that Treasury, the IRS, the EPA, the Department of Energy ("DOE"), and the Department of the Interior ("DOI") agree to allow the CSA/ANSI ISO 27916:2019 standard as an alternative to subpart RR for UIC Class II wells to quantify and document the total carbon oxide stored in association with enhanced oil recovery ("EOR"), but do not allow standards set by states as an alternative to subpart RR or CSA/ANSI ISO 27916:2019. Furthermore, the Final Regulations do not provide for an alternative to subpart RR reporting for UIC Class VI wells because all UIC Class VI wells are already subject to subpart RR reporting requirements.

- Both subpart RR and CSA/ANSI ISO 27916:2019 require an assessment and monitoring of potential leakage pathways; quantification of inputs, losses and storage through a mass balance approach; and documentation of steps and approaches.
- Under subpart RR an EPA-approved site-specific Monitoring, Reporting, and Verification Plan ("MRV Plan") is required. Taxpayers must receive an EPA-approved MRV plan in order to claim the 45Q Credit. Interim allowance of the credit is not permitted.
- The Final Regulations clarify that the principles of CSA/ANSI ISO 27916:2019 apply to both EOR projects and enhanced natural gas recovery projects.
- The Final Regulations clarify that taxpayers must provide all documentation required by CSA/ANSI ISO 27916:2019 to the verifying party. Once the documentation is verified, the verifying party is not also required to submit that documentation to the IRS.

> ***Observation:*** For injection projects, if taxpayers are sensitive to public disclosure, they may choose to opt to comply with the ISO standard rather than subpart RR. The MRV plans and associated annual reports are publicly available under the EPA subpart RR requirement. Conversely, the ISO plan and annual reports are only to be reviewed by the verifying party and are not made available to the public. The Treasury and IRS noted that they do not have the authority to disclose taxpayer information or to require taxpayers to self-disclose taxpayer information as a condition of using the ISO standard provided in the Final Regulations. However, some taxpayers may already comply with subpart RR related to a facility which would reduce the administrative burden.

*Utilization of qualified carbon oxides and commercial market* – The Final Regulations define "commercial market" in the context of utilization (*i.e.*, "the use of such qualified carbon oxide for any other purpose for which a *commercial market* exists") as **"a market in which a product, process, or service that utilizes carbon oxide is sold or transacted on commercial terms.**"

- As with the definition of carbon capture equipment, the Final Regulations do not restrict the definition of "commercial market" by limiting it to certain

products or markets, and also include services. Further, the Final Regulations do not list particular products or markets that qualify or do not qualify as a commercial market as markets are likely to develop and change rapidly with the emergence of new technologies.

- Under section 45Q(f)(5)(A)(iii), the Secretary must determine whether a commercial market exists. In order to make this determination, the Final Regulations require a taxpayer to submit a statement attached to its Form 8933, *Carbon Oxide Sequestration Credit*, substantiating that a commercial market exists for its particular product, process, or service. The instructions to the Form 8933 or other guidance are to provide more details regarding the specific information to be provided.

***Observation:*** The inclusion of a definition for "commercial market" is one of the most significant changes from the Proposed Regulations in the Final Regulations. Many taxpayers may be encouraged by such a broad definition of the term "commercial market" and will look to all practical uses of CO/CO2 outlined by the DOE or EPA in published materials in other contexts. However, some taxpayers may still have questions as to whether certain uses of CO/CO2 qualify without specific guidance or examples. The possibility exists that the IRS could provide examples of "approved" commercial markets as Forms 8933 are filed and 45Q credits are claimed. The instructions to the 2020 Form 8933, released after the Final Regulations, do not provide additional insight on the statement to substantiate that a commercial market exists.

*Life cycle assessment* – Section 45Q(f)(5)(B) provides that in measuring the amount of qualified CO/$CO_2$ upon which a taxpayer may claim the 45Q Credit, in general, the amount of qualified carbon oxides utilized "shall be equal to the metric tons which the taxpayer demonstrates, **based upon an analysis of lifecycle greenhouse gas emissions** were (i) **captured and permanently isolated** from the atmosphere, or (ii) **displaced from being emitted** into the atmosphere. The Final Regulations provide that a taxpayer must demonstrate, based on an LCA, that a utilization process leads to a reduction in carbon dioxide equivalents ("CO2-e").

- The Final Regulations provide that a taxpayer measures the amount of CO/$CO_2$ captured and utilized through a combination of direct measurement and performance of the LCA. The measurement and written LCA report must be performed by or verified by a professionally licensed independent third party that uses generally accepted standard practices of quantifying the greenhouse gas emissions of a product or process and comparing that impact to a baseline. The LCA report requires an affidavit under penalties of perjury from the third party stating that it is independent.
- Prior to claiming the 45Q Credit, the taxpayer must submit the written LCA report to the IRS and the DOE and obtain pre-approval. The taxpayer must also submit the model if the LCA is not verified by an independent third-party review. The LCA will be subject to a technical review by the DOE, and the IRS, in consultation with the DOE and the EPA, will determine whether to approve the LCA.
- The Final Regulations retain the requirement that the LCA must conform with ISO 14044:2006, "Environmental management — Life cycle assessment — Requirements and Guidelines," and add a reference to ISO 14040:2006, "Environmental management – Life cycle assessment – Principles and framework," as that standard discusses the overall framework for LCAs. The ISO standards provide guidelines and a framework for the LCA, and permit the use of both direct and indirect data.
- Although the 45Q Credit is only available with respect to qualified carbon oxides, all greenhouse gas emissions are taken into account under this analysis (based on CO2-e). An LCA measures CO2-e and verifies that qualified carbon oxide is utilized by demonstrating that the proposed

process results in a net reduction of CO2-e when compared to a comparison system. The LCA must be prepared in conformity with ISO 14040:2006 and ISO 14044:2006 and taxpayers must use the NETL's CO2 Utilization Guidance Toolkit (which is consistent with ISO standards), including the guidance and data available on DOE's website at www.netl.doe.gov/LCA/CO2U.

- Generally, an LCA must take into account emissions from cradle-to-grave (which considers the entire product life cycle, including all the phases from raw material extraction until end-of-life), unless the deletion of lifecycle stages is permitted by ISO 14040:2006 and ISO 14044:2006. Any decisions to omit lifecycle stages must be clearly stated in the LCA report, and the reasons and implications for the omission must be explained in the LCA report.

***Observation:*** The LCA is central to claiming the 45Q Credit where the taxpayer is utilizing the qualified CO/CO2. It is not required to be performed under a disposal or injection fact pattern. The LCA determines the amount of the 45Q Credit and must be approved by the IRS before claiming the 45Q Credit.

The LCA is a tool and methodology used to evaluate the environmental impact of a process, product, or service over the course of its entire life based on inputs (resources and energy consumed) and outputs (resulting pollutants/waste) within a boundary. Conformity with the ISO 14040 and 14044 standards will help streamline the LCA reports. The technical DOE review will focus on if the utilization process results in a reduction in CO2-e compared to a comparison system. The LCA report may result in a lower amount of qualified CO/CO2 compared to the direct measurement.

The 2020 Form 8933 instructions provide insight into the approval process of the LCA. Taxpayers must submit the LCA report and a cover letter with specific identifying information to the IRS via fax and physical mail. A separate submission must be made to the DOE and the instructions note: "Taxpayers should also send the DOE an email at LCA45Q@hq.doe.gov, and the DOE will respond with instructions for submission of the LCA application." Subsequent to sending the email, the taxpayer will receive an automated email within approximately a week with a link to upload the LCA report with a cover letter to the DOE with the name of the utilization facility (excluding any taxpayer identification information such as TIN/EINs). The DOE will then conduct a technical review of the LCA for the IRS and will provide the results of the review directly to the IRS.

In addition to the Form 8933 instructions, it is expected that the IRS will publish separate procedural guidance that provides further detail on the processes of preparation, submission and approval of the LCA report. Taxpayers intending to amend prior year tax returns must consider the statute of limitation. Although the Final Regulations note that priority will be given to LCA reviews related to prior years, taxpayers should clearly state this as part of the submission to the IRS and DOE.

As previously noted, an "approved" LCA study does not provide a determination on overall 45Q Credit eligibility and the IRS may still examine other aspects of the credit claim.

**Multiple parties involved in ownership, purchase of carbon oxides, and contracting arrangements**

*Contracting to ensure disposal, injection or utilization* – The 45Q Credit is available to a taxpayer that captures and ensures disposal, injection or utilization of qualified CO/$CO_2$. There are instances where multiple taxpayers are involved in 45Q Credit activities, where one taxpayer own the carbon

capture equipment or components of such equipment, and another taxpayer ensures the disposal, injection or utilization of the qualified $CO/CO_2$. The Final Regulations address various aspects of multiple taxpayers participating in the carbon capture process.

- The Final Regulations provide that a taxpayer may enter into a binding written contract with a general contractor that hires subcontractors to physically carry out the capture, disposal, injection, or utilization of the qualified carbon oxide, but the contract must bind the subcontractors to the requirements of Treas. Reg. § 1.45Q-1(h)(2). The Final Regulations also permit multiple binding written contracts. Further, as long as all the requirements of Treas. Reg. § 1.45Q-1(h)(2) are met, parties to these contracts may be related.
- The Final Regulations provide a framework for the types of contracts, terms, and reporting requirements that will demonstrate a valid, binding contract to ensure the disposal, injection, or utilization of qualified carbon oxide.
- A taxpayer may enter into multiple contracts with multiple parties for the disposal, injection, or utilization of qualified carbon oxide. Furthermore, a party that physically carries out the disposal, injection, or utilization of qualified carbon oxide may enter into multiple binding written contracts with multiple parties that own carbon capture equipment to capture or contractually ensure the capture of qualified carbon oxide.
- For example, a taxpayer that captures qualified carbon oxide may contract with one party to dispose of a portion of its captured qualified carbon oxide in a deep saline formation, with another party to use another portion of its captured qualified carbon oxide as a tertiary injectant in multiple EOR sites, and with several parties to utilize the remaining portion of its captured qualified carbon oxide. Furthermore, the contracting parties that dispose of, inject, or utilize the captured carbon oxide may contract with multiple parties that capture the qualified carbon oxide.
- A taxpayer must have a binding written contract that includes commercially reasonable terms that provides for enforcement. Taxpayers may include information regarding how much carbon oxide the parties agree to dispose of, inject, or utilize in their contracts. Contracts may also include various other specific provisions relating to enforcement, such as long-term liability provisions, indemnity provisions, or penalties for breach of contract or liquidated damages.
- Direct privity of contract is not required between the taxpayer to which the credit is attributable (the carbon capture equipment owner) and the party that performs the disposal, injection, or utilization of qualified carbon oxide, as long as there is a chain of contractual privity ultimately connecting those parties and satisfying the requirements of the regulation.
- Parties to a contract that contractually assures the disposal, injection, or utilization of qualified carbon oxide for the taxpayer may be commonly owned, controlled or otherwise have some overlapping ownership relationship. Neither the statute, the Proposed Regulations, nor the Final Regulations prohibit such relationships. The contracts simply must conform to all of the requirements of these Final Regulations.
- Taxpayers who have existing contracts that were signed before the date the Final Regulations were published in the Federal Register will have 180 days from the effective date (*i.e.*, January 13, 2021) to conform their contracts to the requirements of Treas. Reg. § 1.45Q-1(h)(2) by executing new contracts or amending existing contracts.

***Observation:*** The modifications in provisions related to contracting with multiple parties were expected, and the Final Regulations clarify the applicability to both the capturing party and contracting party. The existence of each contract and the parties involved must be reported to the IRS on an annual basis on Form 8933.

The Proposed Regulations required that a binding written contract include a mechanism for enforcement of liquidated damages without any specific enforcement related provision or mandate for such a provision. The Final Regulations harmonize the conflicting provisions regarding liquidated damages by replacing the definition of binding written contract with the definition in section 8.02(1) of Notice 2020-12 and Treas. Reg. § 1.168(k)-1(b)(4)(ii)(A)-(D).

These provisions regarding a chain of contractual privity are favorable for taxpayers that have multiple legal entities providing for flexibility if certain equipment/processes (and contracts with their parties) are within different legal entities.

Taxpayers that have existing agreements in place should take actions to ensure that any such contractual relationship be modified to have a binding written contract by July 12, 2021.

*Election to allow a different credit claimant* – An election can be made under section 45Q(f)(3)(B) to allow the first taxpayer that: disposes of the qualified carbon oxide, uses the qualified carbon oxide as a tertiary injectant, or utilizes the qualified carbon oxide to claim the credit. However, if such disposer, injector, or utilizer enters into a subcontract with a third-party to carry out the disposal, injection, or utilization, then the subcontractor may not be a credit claimant. Section 45Q(f)(3)(B) elections may be made for all or a portion of the available section 45Q credit and may be made for a single or multiple credit claimants.

- Taxpayers can satisfy the "contractual assurance" requirement through a single offtake contract with a counterparty who contractually assures the disposal, injection, or utilization of qualified carbon oxide through one or more levels of subcontractors.
- If an electing taxpayer elects to allow multiple credit claimants to claim section 45Q credits, the maximum amount of section 45Q credits allowable to each credit claimant is proportional to the amount of qualified carbon oxide disposed of, used as a tertiary injectant, or utilized by the respective credit claimant.
- Section 45Q(f)(3)(B) elections must be made on an annual basis no later than the time prescribed by law (including extensions) for filing the Federal income tax return or *Form 1065, U.S. Return of Partnership Income*, and generally may not be made on an amended Federal income tax return.
- The Final Regulations require both an electing taxpayer and a credit claimant to include a Form 8933 with its timely filed Federal income tax return or Form 1065 (including extensions) as applicable. An electing taxpayer must provide each credit claimant with a copy of the electing taxpayer's Form 8933, and each credit claimant must attach that copy of the electing taxpayer's Form 8933 to its own Form 8933.

***Observation:*** The election to transfer must be made on a timely filed tax return. Therefore, taxpayers must make sure any applicable contracts related to the qualified carbon oxides are in place in order to make the election on time. Note there is an exception that allows the filing of amended returns, amended Forms 1065, or Administrative Adjustment Requests (AARs), as applicable, for tax years beginning on or after January 1, 2018 and before January 13, 2021.

**Recapture Considerations**

*Credit recapture* – The Final Regulations shorten the recapture period from five years to three years. Recapture rules apply to disposal and injection projects but not to utilization projects because the LCA accounts for all emissions of greenhouse gases throughout the life cycle of the utilized product.

- The recapture period begins on the date of the first injection of qualified carbon oxide for disposal in secure geological storage or use as a tertiary injectant, and ends the earlier of (i) three years after the last taxable year in which the taxpayer claimed a section 45Q Credit or was eligible to claim a credit that it elected to carry forward; or (ii) the date monitoring ends under subpart RR requirements or the CSA/ANSI ISO 27916:2019 standard.
- The "post-credit-claiming period" is the period after the end of the twelve-year credit period during which a leak can result in recapture, whereas the "lookback period" is the portion of the recapture period during which the IRS can look back to recapture credits after a leakage event.
- Any recapture amount will be accounted for in the taxable year that it is identified and reported. The credit carryforwards should not be affected. The taxpayer must add the amount of the recaptured section 45Q tax credit to the amount of tax due in the taxable year in which the recapture event occurs.
- If, during the recapture period, a taxpayer, operator, or regulatory agency determines that qualified carbon oxide has leaked to the atmosphere, the taxpayer will have a recapture amount if the leaked amount of qualified carbon oxide exceeds the amount of qualified carbon dioxide disposed of in secure geological storage or used as a tertiary injectant in that taxable year. That excess amount of leaked qualified carbon oxide will be recaptured at a credit rate calculated on a LIFO basis (that is, the excess leaked qualified carbon oxide will be deemed attributable first to the first preceding year, then to second preceding year, and then up to the fifth preceding year) to simplify the calculation of the recapture amount. Consistent with this updated three-year lookback period, the Final Regulations provide that the post-credit-claiming period ends the earlier of (i) three years after the last taxable year in which the taxpayer claimed a section 45Q credit or (ii) the date monitoring ends under the requirements of the subpart RR standard or the CSA/ANSI ISO 27916:2019 standard.
- In the event of a recapture event with respect to a secure geological storage location in which the stored qualified carbon oxide had been captured from more than one unit of carbon capture equipment that was not under common ownership, the recapture amount must be allocated among the taxpayers that own the multiple units of carbon capture equipment pro rata on the basis of the amount of qualified carbon oxide captured from each of the multiple units of carbon capture equipment.
- If there is a recapture event where the leaked amount of qualified carbon oxide is deemed attributable to qualified carbon oxide with respect to which multiple taxpayers claimed section 45Q credit amounts, the recapture amount is allocated on a pro rata basis among the taxpayers that claimed the section 45Q credits.
- The Final Regulations provide a limited exception to recapture in the event of a leakage of qualified carbon oxide resulting from actions not related to the selection, operation, or maintenance of the storage facility, such as volcanic activity or a terrorist attack.
- The Final Regulations also provide that if qualified carbon oxide is deliberately removed from a secure storage site, a recapture event occurs in the year in which the qualified carbon oxide is removed from its original storage.
- If a taxpayer intentionally removes qualified carbon oxide from a qualified enhanced oil or natural gas recovery project and reinjects it into the same qualified enhanced oil or natural gas recovery project, that intentional removal will not trigger a recapture event. However, if the qualified carbon oxide is instead injected into a different qualified enhanced oil or natural gas recovery project, such intentional removal would trigger a recapture event.
- The Final Regulations allow a taxpayer to obtain third-party recapture insurance to protect against recapture.
- The Final Regulations do not allow for taxpayers to perform remedial actions or otherwise cure a leak to avoid credit recapture because such a

provision would significantly lessen the consequences faced by taxpayers that allow qualified carbon oxide to leak to the atmosphere.

***Observation:*** The change from a 5-year recapture period to a 3-year recapture period provides for additional flexibility for taxpayers and specifically for tax equity partnerships as the shortened period reduces recapture risk to 15 years (12-year credit period plus 3-year recapture). Utilization projects do not have recapture as the LCA study inherently accounts for the potential loss of qualified carbon oxides.

**Effective date**

The effective date is for taxable years beginning on or after January 13, 2021, the date that the Final Regulations were effective in the Federal Register. However, taxpayers may choose to apply the Final Regulations for taxable years beginning on or after January 1, 2018, and before January 13, 2021.

*Amended returns* – Under the Final Regulations taxpayers may claim the 45Q Credit on an amended Federal income tax return, an amended Form 1065, or an Administrative Adjustment Request (AAR), as applicable, for taxable years ending after December 31, 2017, and before taxable years beginning after January 13, 2021, provided that the requirements described in the Final Regulations are satisfied. The amended Federal income tax return or the amended Form 1065 must be filed, in no event, later than the applicable period of limitations on assessment for the taxable year for which the amended Federal income tax return or Form 1065 is being filed.

- Partnerships that are subject to the centralized audit procedures contained in the Bipartisan Budget Act of 2015 ("BBA partnerships") generally must file AARs to make elections in years for which returns already have been filed.
- The BBA partnership may make a late election by filing an AAR on or before October 15, 2021, but in no event, later than the applicable period of limitations on filing an AAR under section 6227(c).

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