

August 3, 2020

**Submitted Electronically**

Ms. Maggie Stehn  
Office of Associate Chief Counsel (Passthroughs & Special Industries)  
Internal Revenue Service  
CC: PA:LPD:PR (REG-112339-19), Room 5203  
PO Box 7604 Ben Franklin Station  
Washington, D.C. 20044

**Re: Comments in Response to Notice of Proposed Rulemaking  
under Section 45Q (REG-112339-19)**

Dear Ms. Stehn:

On behalf of Minnkota Power Cooperative (“Minnkota”) we appreciate the opportunity to comment in response to the notice of proposed rulemaking that provided proposed regulations (“Proposed Regulations”) regarding the tax credit for carbon oxide sequestration under section 45Q of the Internal Revenue Code of 1986, as amended (“Code”).<sup>1</sup> We appreciate the work of the IRS, Treasury, Department of Energy, EPA and other departments and agencies in developing the section 45Q guidance issued to date.

Congress originally enacted section 45Q in 2008 to provide a tax credit to taxpayers that capture and sequester carbon dioxide. Due to shortcomings in the statute, as originally enacted, section 45Q did not have the anticipated effect of spurring substantial investment in carbon capture and sequestration (“CCS”) projects. Congress sought to address these shortcomings by amending section 45Q in the Bipartisan Budget Act of 2018 (“BBA”). In the BBA, Congress expanded the availability of tax credits to spur the financing and development of CCS projects. Congress delegated broad authority to Treasury and the IRS to implement this intent through guidance.

As we have previously noted, absent the issuance of section 45Q guidance that would allow the industry to effectively utilize the post-BBA section 45Q credit as intended by Congress, we are concerned that the post-BBA section 45Q credit will, like the pre-BBA section 45Q, not have the effect of spurring substantial investment in CCS projects. We believe that the guidance issued to date properly addresses a number of issues in a manner that will help serve the purposes of amending section 45Q as part of the BBA. The comments offered below address certain remaining areas requiring clarification and guidance necessary to achieve Congress’ goal of spurring substantial investment in CCS projects. We offer these comments based on the experiences of Minnkota in developing Project Tundra, a CCS project that would be the world’s largest

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<sup>1</sup> Unless otherwise indicated, all section references herein are to the Code or to the Treasury Regulations promulgated thereunder.

CCS project when completed and would serve the equivalent of permanently taking over 600,000 gasoline-fueled vehicles off the road.

Moreover, we urge Treasury and the IRS to issue final regulations reflecting the comments below as promptly as possible, and in all events before the end of 2020, to support continued work on CCS projects that are in the development process, such as Project Tundra, and to enable taxpayers to satisfy the December 31, 2023, statutory deadline for beginning construction of CCS projects.

## **I. Background**

### **A. Minnkota**

Minnkota is a not-for-profit electric generation and transmission cooperative headquartered in Grand Forks, North Dakota. Minnkota provides wholesale electric energy to 11 member-owner distribution cooperatives in eastern North Dakota and northwestern Minnesota that provide service to customers in an approximately 34,500 square-mile area.

Milton R. Young Station ("Young Station"), located near Center, North Dakota, is a lignite-fired power plant that uses coal mined from property contiguous with the Young Station. It serves as the largest source of electric generation for Minnkota. Young Station is comprised of two units -- Minnkota owns Young Station "Unit 1" and Square Butte Electric Cooperative ("Square Butte") owns "Unit 2." Minnkota and Square Butte are owned by the same 11 member-owner distribution cooperatives. Minnkota operates and maintains Young Station for itself and for Square Butte.

The two units that comprise Young Station began producing electricity in 1970 and 1977 and together have a generating capacity of over 700,000 kilowatts. Both units at Young Station are equipped with emission control technologies that meet or exceed all current state and federal air quality standards. In that regard, between 2006 and 2011, about \$425 million was invested into Young Station to significantly reduce emissions of sulfur dioxide, nitrogen oxides, mercury, and other emissions. Minnkota is in the early development phase for Project Tundra, including characterization and modeling of the subsurface, and engineering and design of additional infrastructure to capture and sequester carbon dioxide generated by Young Station Units 1 and 2.

### **B. Project Tundra**

Project Tundra involves the development of a CCS project that is expected to reduce up to 90 percent of the carbon dioxide emissions from Young Station Unit 2, with an additional reduction of carbon dioxide emissions from Young Station Unit 1. Carbon dioxide emissions from Young Station Units 1 and 2 would be captured and sequestered in deep saline formations. If Project Tundra is completed as originally planned, it would be the largest carbon capture facility in the world.<sup>2</sup> Minnkota recently made changes to expand the projected capture of carbon dioxide in Project Tundra, as originally planned, by approximately 25% to a total of about 4 million metric tons/year.

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<sup>2</sup> More information on Project Tundra is available at [www.ProjectTundraND.com](http://www.ProjectTundraND.com)

The demonstration and commercialization of CCS technology for coal is important to not only the economy of North Dakota, but also to the region and the world. It will protect jobs and ensure the continued supply of low cost, reliable electricity to consumers in the upper Midwest, a part of the nation that must be prepared to deliver energy in extreme weather conditions. Notably, Minnesota's resource profile positions it to meet energy needs whether it is 30 degrees below zero or 100 degrees.

Certainly, fossil fuel energy will remain a critical element of the energy mix of the upper Midwest and the nation for the foreseeable future. The CCS technology developed at Project Tundra would help ensure the availability of affordable, reliable, and clean energy as the United States (and the world) seeks to reduce its carbon footprint. By using CCS technology to reduce emissions of carbon dioxide and comply with federal or other regulations, coal-fired power plants, such as the Young Station, can remain an option for generating electricity in a low-carbon economy.

More broadly, the benefits of Project Tundra, driven by ingenuity and innovation, can help transform the way the world uses fossil fuels. The United States can successfully lead the global effort to reduce carbon emissions, but will require a robust and sustained set of policies necessary to achieve these outcomes, for which section 45Q will be central. Minnesota has undertaken substantial efforts related to the development of Project Tundra. Critical to the continued development, and ultimate construction, of Project Tundra are final regulations that are consistent with Congress' intent to spur the financing and development of CCS projects.

## **II. Areas of Comment**

### **COMMENT 1: RECAPTURE**

In section 45Q(f)(4), Congress delegated authority to the Secretary of the Treasury, by regulations, to address the recapture of tax credits with respect to any qualified carbon oxide which ceases to be captured, disposed of, or used as a tertiary injectant in a manner consistent with the requirements of section 45Q. In section 45Q(f)(2), Congress delegated authority to the Treasury Secretary, in consultation with the Administrator of the EPA, the Energy Secretary, and the Interior Secretary, to establish regulations for determining adequate security measures for the geological storage of qualified carbon oxide under section 45Q(a) such that the qualified carbon oxide does not escape into the atmosphere. Congress delegated broad authority to Treasury and the IRS on how to define the standards for triggering and measuring the recapture of tax credits upon the occurrence of a leak of qualified carbon oxide.

The recapture rules are among the most significant for the final regulations because of their potential impact on the willingness of developers to develop CCS projects and of investors to finance CCS projects. Unless revised, we anticipate that the recapture rules as set forth in the Proposed Regulations will deter the financing and development of many CCS projects.

We recognize the statement in the preamble to the Proposed Regulations that a taxpayer may obtain third-party insurance to protect against recapture. However, it is highly uncertain whether, and to what extent, insurance ultimately will be generally available in the market or available with respect to a particular CCS project. Moreover, to the extent available, given anticipated project economics for certain CCS projects,

the premiums for such an insurance product and the term for which such insurance would be required may make the project economically unviable (particularly if the recapture rules are retained and the risk for any insurer therefore is too great). This would frustrate the intent of Congress of expanding the availability of tax credits in the BBA in order to spur the financing and development of CCS projects.

**A. Exceptions to recapture**

***We request that the final regulations confirm that where a Class VI permit holder has complied with all requirements for obtaining a Class VI permit and has complied with all requirements with respect to holding such permit, any loss of containment of qualified carbon oxide is treated as resulting from an action not related to the selection, operation or maintenance of the storage facility.***

**1. Class VI permit requirements**

The existing Class VI permit requirements for selecting, operating, and maintaining secure geological storage developed by the EPA are stringent. Class VI permit requirements address siting, construction, operation, testing, monitoring and closure – *i.e.*, the full lifecycle of a Class VI well. The EPA regulations governing Class VI wells state:<sup>3</sup>

Today's rule defines a new class of injection well (Class VI), along with technical criteria that tailor the existing UIC regulatory framework to address the unique nature of CO<sub>2</sub> injection for [geological sequestration]. It sets minimum technical criteria for Class VI wells to protect [underground sources of drinking water] from endangerment, including:

- Site characterization that includes an assessment of the geologic, hydrogeologic, geochemical, and geomechanical properties of the proposed [geological sequestration] site to ensure that Class VI wells are located in suitable formations.
- Computational modeling of the [area of review] for [geological sequestration] projects that accounts for the physical and chemical properties of the injected CO<sub>2</sub> and is based on available site characterization, monitoring, and operational data.
- Periodic reevaluation of the [area of review] to incorporate monitoring and operational data and verify that the CO<sub>2</sub> plume and the associated area of elevated pressure are moving as predicted within the subsurface.
- Well construction using materials that can withstand contact with CO<sub>2</sub> over the life of the [geological sequestration] project.

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<sup>3</sup> The Class VI permit requirements are available at [https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-co2#well\\_reqs](https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-co2#well_reqs).

- Robust monitoring of the CO<sub>2</sub> stream, injection pressures, integrity of the injection well, ground water quality and geochemistry, and monitoring of the CO<sub>2</sub> plume and position of the pressure front throughout injection.
- Comprehensive post-injection monitoring and site care following cessation of injection to show the position of the CO<sub>2</sub> plume and the associated area of elevated pressure to demonstrate that neither pose an endangerment to [underground sources of drinking water].
- Financial responsibility requirements to ensure that funds will be available for all corrective action, injection well plugging, post-injection site care (PISC), site closure, and emergency and remedial response.

In short, the EPA (or a state pursuant to authorization by the EPA) is charged with ensuring, and has the technical capabilities to ensure, that a proposed Class VI sequestration site will permanently sequester qualified carbon oxide. In light of these comprehensive processes and requirements, the EPA already ensures that all appropriate care will be undertaken with respect to the selection, operation, or maintenance of a Class VI permitted storage facility. There is no more that a taxpayer claiming section 45Q credits or the entity with which the taxpayer has contracted for disposal, reasonably can be expected to do to ensure permanent sequestration.

Moreover under existing EPA rules, Class VI permit holders are fully incentivized to avoid a release of sequestered qualified carbon oxide -- the consequences of non-compliance are severe. In the event of an inadvertent emission of carbon dioxide, a Class VI permit holder would be subject to EPA remediation requirements. An inadvertent emission of captured carbon oxide due to a weakness in the structural integrity of the sequestration site would result in the loss, or suspension, of the holder's Class VI permit if remediation requirements were not satisfied. The Safe Drinking Water Act also imposes administrative, civil and criminal penalties for violations of program requirements.

## **2. Requested inclusion in final regulations**

We request that the final regulations confirm that where a taxpayer is sequestering qualified carbon oxide pursuant to a Class VI permit, any release is treated as resulting from actions not related to the selection, operation or maintenance of the storage facility unless there is, and to the extent related to, non-compliance with the requirements of the Class VI permit requirements. Treasury and the IRS should implement this provision through a clarification of the current recapture exception provisions in Prop. Reg. § 1.45Q-5(i) by the addition to the list of examples (which currently include volcanic activity and terrorist acts) release from a UIC Class VI permitted storage site (except to the extent resulting from non-compliance with a Class VI permit).<sup>4</sup>

Incorporating requirements for Class VI permits into the proposed provisions on recapture is consistent with the statutory requirement in section 45Q(f)(2) that the

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<sup>4</sup> We also recommend that such list be expanded to include other examples such as tectonic shifts.

Treasury Secretary, in consultation with the Administrator of the EPA, the Energy Secretary, and the Interior Secretary, establish regulations for determining adequate security measures for the geological storage of qualified carbon oxide under section 45Q(a) such that the qualified carbon oxide does not escape into the atmosphere.

**B. Determination of amount of recapture**

***We request that for the purposes of determining the amount of a recapture payment that must be made by a taxpayer with respect to a leakage of qualified carbon oxide, the final regulations adopt our recommended methodology that addresses the challenges associated with determining the taxpayer responsible for a recapture payment with respect to a leakage and the amount of such recapture payment.***

In prior guidance, Treasury and the IRS have recognized the complexity of developing standards for measuring the recapture of section 45Q credits and specifically requested comments on these issues. This complexity results, in part, from the different recapture considerations that apply depending on whether a project involves the disposal, use, or utilization of qualified carbon oxide. It also arises due to the fact that qualified carbon oxide from different carbon capture facilities may be injected into a single site (and the amount injected from each carbon capture facility may vary each year) and that carbon capture facilities may be owned by more than one taxpayer (and the ownership of the carbon capture facility may vary each year).

Under the Proposed Regulations, the amount of leakage is first applied and offset against the amount of qualified carbon oxide captured and sequestered in the current year, then applied and offset against the amount of qualified carbon oxide captured in the prior five years under a last-in, first-out (“LIFO”) methodology, to the extent of such captured amounts.<sup>5</sup> The Proposed Regulations are even more complicated if a recapture event occurs with respect to a secure geological storage location in which the stored qualified carbon oxide had been captured from more than one carbon capture equipment unit and was not under common ownership.<sup>6</sup> The notice of proposed rulemaking acknowledges the complexity of the proposed approach and specifically requests comments on how to apply the recapture provisions with respect to tax credits that are carried forward to future taxable years due to insufficient income tax liability in the current taxable year.

In the interest of administrability, and consistent with both (i) the general approach in the Proposed Regulations of attributing section 45Q credits proportionately among applicable taxpayers for recapture purposes and (ii) the indication in the preamble to the Proposed Regulations that the section 50(a)(1) was used as an analog for purposes of the section 45Q recapture rules,<sup>7</sup> we propose the following

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<sup>5</sup> Prop. Reg. § 1.45Q-5(d), (g). Although the Proposed Regulations provide for a 5-year lookback period during which the IRS may recapture tax credits after a leakage event, we note that the actual lookback period actually may extend up to 17 years under the Proposed Regulations. This may be explained most easily with an example, which we provide in Attachment A. It is unclear whether this result was intended, but it is inconsistent with spurring substantial development of CCS projects.

<sup>6</sup> Prop. Reg. § 1.45Q-5(g)(3), (4).

<sup>7</sup> Reference is made to section 50(a)(1) in our comments as we understand from the preamble to the Proposed Regulations that such section was the basis for providing a 5-year recapture

methodology to determine the amount of recapture payments due by a taxpayer. This proposed approach is intended to address the variety of circumstances relevant to determining the appropriate person that should be liable for any required tax credit recapture associated with a leakage of qualified carbon oxide. The proposed approach is outlined below.

- Step 1: The amount of any leakage at a sequestration site during the taxable year should be calculated using any reasonable method (the “Leakage Amount”).
- Step 2: The Leakage Amount should be proportionately attributed (a) first, to each year of injection at the site from which the leakage occurred, (b) second, to each carbon capture facility from which qualified carbon oxide was injected during such year, and (c) third, to each owner of each such carbon capture facility during such year.
  - Step 2a: Attribution of Leakage Amount to each year of injection. The Leakage Amount should be attributed to the appropriate year of injection. Generally, the year in which any leaked qualified carbon oxide was injected at a sequestration site is not readily determinable. Therefore, the Leakage Amount should be attributed to each year of injection (each a “Leakage Injection Year”) based on the proportionate amount of injection to the site in such year as compared to the total amount of injection to the sequestration site.
    - We note that under the Proposed Regulations, any leaked qualified carbon oxide is treated first as attributable to qualified carbon oxide injected in the current year, then as attributable to qualified carbon oxide injected in the prior five years. There is no rational basis for attributing the amount of leakage to the amounts injected in the leakage year and 5 prior years using a LIFO approach, as opposed attributing such leakage to the first years of injection using a first-in, first-out (“FIFO”) approach. Our proposed methodology provides an approach that more properly treats the molecules of qualified carbon oxide injected each year as fungible and, correspondingly, treats the amount of leaked qualified carbon oxide as proportionately attributable to each year of injection.
  - Step 2b: Attribution of Leakage Amount to each carbon capture facility. The Leakage Amount attributed to each Leakage Injection Year (under step 2a) must be attributed to each separate carbon capture facility from which qualified carbon oxide was captured and sequestered at the sequestration site experiencing the leakage event. Such attribution should be based on the proportionate amount of qualified carbon oxide from such carbon capture facility injected at the sequestration site during the applicable Leakage Injection Year.

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period (which period is in excess of what was requested by most commentators and in excess of the 3-year period that we understand was in a draft of the Proposed Regulations received by OIRA).

- We note that this step is generally consistent with the methodology provided in Prop. Reg. § 1.45Q-5(g)(3).
- Step 2c: Attribution of Leakage Amount to each owner of a carbon capture facility. The Leakage Amount attributed to each carbon capture facility (under step 2b) for each Leakage Injection Year must be attributed to each owner of that carbon capture facility in proportion to such owner's proportionate interest in the carbon capture facility during the applicable Leakage Injection Year.
  - We note that this step is generally consistent with the methodology provided in Prop. Reg. § 1.45Q-5(g)(4).
- Step 3: Recapture Percentage. Each taxpayer to whom a Leakage Amount is attributed under Step 2 may be subject to recapture in the year of leakage. Following on the principles of section 50(a)(1), for each Leakage Injection Year, the amount of recapture of the Leakage Amount attributable to such year is 100% of such leakage if the leakage occurs in Leakage Injection Year or in the first year after the end of the Leakage Injection Year, 80% if in the second year after, 60% if in the third year after, 40% if in the fourth year after, 20% if in the fifth year after and 0% if six or more full years after.
  - We note that the preamble to the Proposed Regulations explains that the lengthy 5-year recapture period is based on the "recapture provisions for investment credit property under section 50(a)(1)." In section 50(a)(1), that 5-year period is coupled with a 20% per year reduction in potential recapture. This step is consistent with the 20% per year reduction in section 50(a)(1).
- Step 4: Recapture Amount. The recapture amount to be paid in the current year is calculated based on the tax credit rate for the applicable Leakage Injection Year. Any amount of section 45Q credit carryforward should be available to offset such recapture payment.
  - We note that section 45Q(b)(1)(A) provides for an annual increase in the amount of the section 45Q credit. . The tax benefit for an amount of leakage in the Leakage Year is based on the tax credit amount for that year. Accordingly, any recapture of tax credits attributable to such year should use the same tax credit amount (otherwise there would be more than a "recapture" of the tax credit attributable to the leaked qualified carbon oxide).

An example applying this methodology is provided as Attachment B.<sup>8</sup>

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<sup>8</sup> As noted above, it is imperative that the final regulations include recapture rules that are consistent with what is needed by the industry to develop and finance CCS projects; the Proposed Regulations unfortunately are not. In that regard, we urge Treasury and the IRS to adopt the methodology provided above in full (*i.e.*, adopting only parts of the proposal likely would not be workable for the development and financing of CCS projects). Alternatively, the final regulations could either (i) use the LIFO method provided in the Proposed Regulations by replacing the 5-year lookback period with a 1-year lookback period or (ii) permit use of a FIFO

## **COMMENT 2: SECURE GEOLOGICAL STORAGE**

Section 45Q(a)(3)(B) provides a tax credit based on the amount of qualified carbon oxide disposed of by the taxpayer in secure geological storage and not otherwise used by the taxpayer. In section 45Q(f)(2), Congress delegated authority to the Treasury Secretary, in consultation with the EPA Administrator, the Energy Secretary, and the Interior Secretary, to establish regulations for determining adequate security measures for the geological storage of qualified carbon oxide under section 45Q(a) such that the qualified carbon oxide does not escape into the atmosphere. Section 45Q confirms, however, that secure geological storage includes storage at deep saline formations, oil and gas reservoirs, and unminable coal seams under such conditions as the Treasury Secretary may determine under regulations.

In Notice 2009-83, Treasury and the IRS provided procedures for a taxpayer to determine adequate security measures for secure geological storage until regulations were promulgated. Notice 2009-83 anticipated the issuance of Subpart RR.

### **A. MRV plan requirement**

***With respect to the disposal of qualified carbon oxide in secure geological storage, we request that during the interim period beginning when operations of a CCS project commence and ending when an MRV Plan is finalized, the final regulations include a process to allow taxpayers to claim tax credits to which they are entitled under section 45Q.***

For qualified carbon oxide disposed of in secure geological storage in a Class VI well, the Proposed Regulations appear to require an EPA-approved site-specific Monitoring, Reporting, and Verification (“MRV”) Plan to be developed and implemented before qualifying tax credits can be claimed.<sup>9</sup> While all holders of a Class VI permit must implement an MRV Plan under existing law, in the normal course, as a practical matter, an MRV Plan may not have been implemented at the time that the taxpayer files a tax return on which it would be entitled to claim tax credits. Accordingly, the uncertainty and delays associated with developing and implementing an MRV Plan, which can take 12 to 18 months (if not longer) to develop and implement after a Class VI well is already operational, may inhibit the ability of developers of, and investors in, CCS projects to timely obtain the benefit of the tax credits.

Therefore, we request that the final regulations include procedures to allow tax credits to be claimed after a Class VI permit has been obtained, but before an MRV Plan has been formally approved by the EPA and fully implemented. In lieu of requiring an MRV Plan in order to claim tax credits during such period, we request that the final regulations allow an engineer or geologist certification that the amounts of sequestered carbon oxides are correctly determined and documented by the taxpayer under CSA/ANSI ISO standard 27914:2017 (applicable to geological storage). This proposed process is similar to the requirements for enhanced oil recovery projects that are permitted to rely on certification under CSA/ANSI ISO standard 27916:19, and would permit the timely claiming of tax credits.

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method coupled with the recapture percentage reductions provided in section 50(a)(1) and Step 3 of our proposed methodology.

<sup>9</sup> See Prop. Reg. § 1.45Q-3(e).

In considering whether an MRV Plan should be required before tax credits can be claimed, it is important to note that an MRV Plan does not impose any safeguards in addition to those to which a Class VI permit holder is subject. Under EPA regulations, an MRV Plan is not required before Class VI injection operations begin. An MRV Plan is not a permitting process. Rather, the MRV Plan is simply a summary of how data is to be tracked, collected, and reported by the Class VI permit holder; it is an accounting methodology. Operators of Class VI wells are subject to extensive technical and operational standards and government oversight. This includes not only comprehensive modeling, monitoring, and well construction requirements, but also detailed site characterization, mechanical integrity testing, site care, and financial security obligations, as detailed above. Operators of Class VI wells also are required to use a mass balance methodology for calculating injection amounts, which is the same accounting protocol that an approved MRV plan would require.

Consistent with EPA regulations for the operation of a Class VI well, the final regulations should not require MRV Plan to be developed and implemented before tax credits can be claimed. This approach is consistent with the guidance under Notice 2009-83. Congress' direction in section 45Q(f)(2) for consultation between the Treasury Secretary and the EPA Administrator specifically with respect to "security measures" for storage (as opposed to accounting methodologies) further supports taking an approach in the final regulations that is consistent with EPA regulations under Subpart RR, which do not require an MRV Plan to be developed and implemented before injection operations begin.

#### **B. Sequestration site management**

***We request the final regulations provide that secure geological storage is considered to remain continuous for volumes of qualified carbon oxide that are intentionally withdrawn but that can be demonstrated to have been reinjected in an alternative formation or otherwise in a manner meeting the requirements for secure geological storage.***

With respect to injection of qualified carbon oxide as a tertiary injectant in a qualified enhanced oil or natural gas recovery project, it is understood that some amount of the injected qualified carbon oxide will be released with recovered oil or natural gas, and recaptured and reinjected as part of that process. The Proposed Regulations allow the credit for the injected qualified carbon oxide, but not the reinjected qualified carbon oxide.<sup>10</sup>

Similarly, with qualified carbon oxide that is disposed of in secure geological storage, as part of the flow management of a sequestration site, the site operator may intentionally withdraw qualified carbon oxide from a site and reinject such qualified carbon oxide in an alternative formation that meets the requirements for secure geological storage in order to maintain the integrity of the site as a whole. Such process necessarily must be in compliance with the underlying Class VI permit. Similar to the treatment in the Proposed Regulations for enhanced oil and natural gas recovery, where qualified carbon oxide is withdrawn and reinjected as part of the flow management of a sequestration site in compliance with a Class VI permit, there is no

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<sup>10</sup> See Prop. Reg. § 1.45Q-2(b).

policy reason not to treat the qualified carbon oxide as continuously sequestered (unless and to the extent that the amount withdrawn exceeds the amount reinjected).

We request that the final regulations provide that secure geological storage is considered to remain continuous with respect to volumes of qualified carbon oxide that are intentionally withdrawn but that can be demonstrated to have been promptly reinjected in an alternative formation or otherwise in a manner meeting the requirements for secure geological storage.

### **COMMENT 3: DEFINITION OF CARBON CAPTURE EQUIPMENT**

*We request that the final regulations include confirmation (through a safe harbor or example) that a person that owns both the absorber unit and the regeneration unit (or their functional equivalents) is treated as the sole "person that owns the carbon capture equipment" for purposes of section 45Q(f)(3)(A)(ii).*

#### **A. Credit generally attributable to the owner of carbon capture equipment**

Section 45Q(f)(3)(A)(ii) addresses the person to whom the section 45Q credit is generally attributable. That section states that the tax credit is generally attributable to "the person that owns the carbon capture equipment and physically or contractually ensures the capture and disposal, utilization, or use as a tertiary injectant of such qualified carbon oxide."

The question of who is entitled to any available section 45Q credits is critically important for the development of CCS projects. Treasury and the IRS have addressed this concern with regard to tax equity investors in Revenue Procedure 2020-12 by providing a safe harbor under which an investor will be respected as a partner/owner in (rather than a lender to) a partnership that owns carbon capture equipment and thus will be entitled to an allocation of available tax credits.

However, as a threshold matter, in many circumstances it may not be clear whether, and to what extent, section 45Q credits are attributable to that partnership, or any other entity. We therefore urge Treasury and the IRS to provide greater clarity on this issue, as discussed below.

#### **B. Definition of "carbon capture equipment"**

As noted above, the section 45Q credit is generally attributable to "the person that owns the carbon capture equipment." Section 45Q does not define the term "carbon capture equipment." Rather, such term is defined in Notice 2020-12 and in the Proposed Regulations. Notice 2020-12, at section 3.05, provides the following definition of carbon capture equipment:

all components of property that are used to capture or process (for example, separation, purification, drying, and/or compression) carbon oxide until it is transported away from the qualified facility for disposal, utilization, or use as a tertiary injectant. For these purposes, carbon capture equipment includes a system of gathering 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 this notice) for the purpose of transporting that carbon oxide away from the qualified facility or single project to a pipeline used to transport carbon oxide from multiple taxpayers and projects.

The Proposed Regulations define carbon capture equipment to include “all components of property used to capture or process carbon oxide until the carbon oxide is transported for disposal, injection, or utilization.”<sup>11</sup> The Proposed Regulations further provide that carbon capture equipment is equipment used for the purpose of:

- Separating, purifying, drying, and/or capturing carbon oxide that would otherwise be released into the atmosphere from an industrial facility;
- Removing carbon oxide from the atmosphere via direct air capture; or
- Compressing or otherwise increasing the pressure of carbon oxide.<sup>12</sup>

The Proposed Regulations further state that carbon capture equipment generally includes components of property necessary to compress, treat, process, liquefy, pump, or perform some other physical action to capture carbon oxide,<sup>13</sup> and provides the following lengthy, but non-exhaustive list of examples:

absorbers, compressors, conditioners, cooling towers, dehydration equipment, dehydration systems, electrostatic filtration, engines, filters, fixtures, glycol contractors, heat exchangers, liquefaction equipment, lube oil systems, machinery, materials, membranes, meters, monitoring equipment, motors, mounting equipment, pipes, power generators and regenerators, pressure vessels and other vessels, processing equipment, processing plants, processing units, pumps, reboilers, recycling units, scrubbers, separation vessels, solvent pumps, sorbent vessels, specially designed flue gas ducts, support structures, tracking equipment, treating equipment, turbines, water wash equipment, and other carbon oxide related equipment.<sup>14</sup>

The Proposed Regulations also provide a short list of excluded components that are related to transporting carbon oxide: pipelines, branch lines, or land and marine transport vessels used for transporting captured qualified carbon oxide for disposal, injection, or utilization.<sup>15</sup> Included in the definition of carbon capture equipment, however, is a gathering and distribution system that collects qualified carbon oxide from one or more qualified facilities that constitute a single project to transport the qualified carbon oxide away from the qualified facility or project to a pipeline used by multiple taxpayers or projects.<sup>16</sup>

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<sup>11</sup> Prop. Reg. § 1.45Q-2(c).

<sup>12</sup> Prop. Reg. § 1.45Q-2(c)(1).

<sup>13</sup> Prop. Reg. § 1.45Q-2(c)(2).

<sup>14</sup> Prop. Reg. § 1.45Q-2(c)(2).

<sup>15</sup> Prop. Reg. § 1.45Q-2(c)(3).

<sup>16</sup> Prop. Reg. § 1.45Q-2(c)(3).

**C. Potential impact of this broad definition on the determination of the taxpayer to which the credit is attributable**

For certain purposes of section 45Q, a broad definition of “carbon capture equipment” is helpful. However, in the context of determining the person to whom the section 45Q credit is attributable under section 45Q(f)(3)(A)(ii), the broad definitions of carbon capture equipment in Revenue Procedure 2020-12 and the Proposed Regulations, together with an extensive but non-exclusive list of carbon capture equipment therein, will in certain situations create a material risk. The risk is of multiple taxpayers unintentionally being treated as owning various items falling within that broad definition of “carbon capture equipment” and, accordingly, each unintentionally being treated as entitled to a portion of available tax credits. We do not believe that Congress, Treasury or the IRS sought to create such a foot fault situation in section 45Q that could result in an inability of taxpayers to obtain the intended benefits of the credit.

**D. Requested inclusion in final regulations**

To minimize this risk, we request that the final regulations include confirmation (through a safe harbor or example) that the IRS respects the owner of both the absorber unit and the regeneration unit (or their functional equivalents) as the sole “person that owns the carbon capture equipment” for purposes of section 45Q(f)(3)(A)(ii). Treating as the sole owner of the carbon capture equipment for this purpose the person that owns the absorber unit and regeneration unit would eliminate this uncertainty and a potential foot fault. Moreover, the absorber unit and regeneration unit are appropriate component choices for a safe harbor or example because they are the very pieces of equipment in which qualified carbon oxide is separated from flue gas – *i.e.*, for an applicable facility, this is the equipment that captures the qualified carbon oxide. For example, in the technology that would be used in Project Tundra (which also is used in other carbon capture facilities), (i) in the absorber unit, an amine-based liquid solvent separates carbon dioxide from flue gas and (ii) in the regeneration unit, heat separates the amine-based liquid solvent from carbon dioxide. Further, carbon capture through an absorber unit and regeneration unit is a well-known technology and we anticipate that such equipment (or their functional equivalents) will continue to be widely used in carbon capture facilities and as CCS technology develops further. The requested confirmation would preserve the benefits of a broad, functional definition of carbon capture equipment while providing certainty for owners of the equipment as to the party to whom the credit will be attributable.

**COMMENT 4: BEGINNING OF CONSTRUCTION**

**A. Beginning of construction requirement, generally**

Section 45Q(d)(1) includes a December 31, 2023, deadline for beginning construction for entitlement to the section 45Q credit, but does not define when construction will be treated as having begun. Notice 2020-12 provides guidance on what it means to begin construction on a CCS project using an approach that is generally consistent with prior guidance on the beginning of construction requirement for solar, wind and other renewable energy projects (“Prior Beginning of Construction

Guidance”).<sup>17</sup> We commend Treasury and the IRS for providing beginning of construction guidance for section 45Q that is similar in many respects to the Prior Beginning of Construction Guidance, which is already well-understood among industry participants.

**B. Potential impact of rules on the ability to effectively use the full 6-year period provided for the Continuity Safe Harbor**

***We request that Treasury and IRS issue guidance that provides that the work described in Notice 2020-12 in section 5.02(2)(d) is treated as on-site physical work of a significant nature only at the election of a taxpayer.***

Notice 2020-12, at section 4.01, provides that a taxpayer may establish the beginning of construction by, *inter alia*, starting physical work of a significant nature (the “Physical Work Test”). That Notice, at section 7.01, also provides that a continuity requirement must be satisfied. The continuity requirement is deemed satisfied if the project is placed in service by the end of a calendar year that is no more than six years after the calendar year during which construction of the carbon capture equipment begins (the “Continuity Safe Harbor”). Based on experience in the renewables industry with the Prior Beginning of Construction Guidance, although the continuity requirement can be satisfied through a “facts and circumstances” analysis, for practical purposes an inability to satisfy the Continuity Safe Harbor will significantly hamper the ability to develop and finance a CCS project. Therefore, it is not only imperative that construction begin before the statutory December 31, 2023, deadline, but also that the Continuity Safe Harbor is satisfied.

Notice 2020-12, as currently drafted, potentially may cause the Continuity Safe Harbor to effectively be less than that 6-year period provided in the Notice, which we believe is unintentional and would put in jeopardy the ability to use the Continuity Safe Harbor. In that regard, section 5.02(2)(d) states that on-site physical work of a significant nature includes “the installation of equipment and other work necessary for the disposal of qualified carbon oxide in secure geological storage.” Although section 5.02(2)(d) may be helpful to taxpayers that require the inclusion of such activities to meet the December 31, 2023, statutory deadline, it may be detrimental for other facilities.

That is the case because, generally, work of that nature may begin well before other work, thereby starting the 6-year period prematurely. For example, for a Class VI geological storage site, the drilling of exploratory wells needed to gather data to satisfy permits and licenses requirements is preliminary work and therefore is not treated as on-site physical work of a significant nature under section 5.03. However, after using those exploratory wells, taxpayers may be in a position where they can either (i) incur costs to plug, cap, and abandon the exploratory wells and later incur additional costs to drill monitoring wells for the sequestration activities or (ii) line the well with casing and cement to preserve the option of converting the exploratory wells in the future, for example as a carbon dioxide monitoring well. The latter option is prudent to reduce project costs, but may, under section 5.02(2)(d) as currently drafted, be treated as the beginning of construction. Accordingly, construction of the

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<sup>17</sup> Notices 2020-41, 2019-43, 2018-59, 2017-4, 2016-31, 2015-25, 2014-46, 2013-60, and 2013-29.

project may be treated as beginning in a year well before construction would otherwise be treated as beginning. As a result, the 6-year Continuity Safe Harbor period would be treated as beginning in that earlier year, thereby effectively reducing that 6-year period. Making section 5.02(2)(d) elective would avoid that result.

**C. Clarification of “other work necessary” for Physical Work Test**

***We request that Treasury and the IRS provide additional guidance on the meaning of “other work necessary” that satisfies the Physical Work Test.***

Section 5 of Notice 2020-12 describes how a taxpayer can meet the Physical Work Test to be deemed to have begun construction on a CCS project. Section 5.02(2) provides examples of on-site physical work of a significant nature that satisfy the Physical Work Test. We appreciate the examples provided in sections 5.02(2)(a)-(c), which provide certainty for taxpayers.

Section 5.02(2)(d), however, states that physical work of a significant nature includes:

the installation of equipment and other work necessary for the disposal of qualified carbon oxide in secure geological storage (as described in § 45Q(a)(1)(B) and (a)(3)(B)) at the geological storage site, which may be at a different location than the qualified facility or carbon capture equipment.

We understand that different secure geological storage sites will require unique physical work to be performed, and that the examples in section 5.02(2) are not intended to be an exhaustive list. However, the reference to “other work necessary” is unclear and such uncertainty may lead taxpayers to avoid relying on that provision notwithstanding that Treasury and the IRS clearly intended to allow certain work not fully described in the Notice to be treated as on-site physical work of a significant nature. We request that Treasury and the IRS provide additional guidance regarding the scope of the term “other work necessary” including, perhaps, in the form of specific examples of what “other work necessary” would qualify as meeting the Physical Work Test.

**D. Clarify significance of preliminary activity examples**

***We request that Treasury and the IRS clarify the significance of why certain preliminary activity examples listed in prior guidance are not listed as preliminary activities in Notice 2020-12.***

Notice 2020-12 and the Prior Beginning of Construction Guidance state that preliminary activities do not qualify as physical work of a significant nature and provide lists of preliminary activities. However, the list of preliminary activities in section 5.03 of Notice 2020-12 does not match the list in the Prior Beginning of Construction Guidance. The Prior Beginning of Construction Guidance includes as preliminary activities: planning or designing, conducting mapping or modeling to assess a resource, conducting geophysical, gravity, magnetic, seismic and resistivity surveys, and conducting environmental and engineering studies as preliminary activities. These activities are not listed as preliminary activities in Notice 2020-12. These are types of

activities that are generally more significant for CCS projects than for many renewable energy projects.

Although Notice 2020-12 and the Prior Beginning of Construction Guidance state that their respective lists of preliminary activities are not exhaustive, and we understand that both lists are not necessarily intended to be identical, we request that Treasury and the IRS clarify whether these differences are intended to signal that the items not included in the list of preliminary activities in section 5.03 of Notice 2020-12 would not be treated as preliminary activities for purposes of the Physical Work Test and the Continuity Safe Harbor for CCS projects.

**COMMENT 5: TREATMENT OF CCS PROJECTS WITH NO NON-TAX REVENUE**

***We request that the final regulations confirm that the section 45Q credit is available for CCS projects with no non-tax revenue.***

Section 45Q(f)(3)(A)(ii) generally provides that the tax credit is attributable to the person that owns the carbon capture equipment and physically or contractually ensures the capture and disposal, utilization, or use as a tertiary injectant of such qualified carbon oxide. Revenue Procedure 2020-12 provides a safe harbor under which an investor will be respected as a partner/owner in (rather than a lender to) a partnership that owns carbon capture equipment and thus will be entitled to an allocation of tax credits attributable to the partnership. We commend Treasury and the IRS for taking an approach in Revenue Procedure 2020-12 that is generally consistent with the safe harbor for investments in renewable energy projects provided in Revenue Procedure 2007-65.

In one significant respect, however, Revenue Procedure 2020-12 differs from the well-understood guidance of Revenue Procedure 2007-65. Section 4.02(2)(b) of Revenue Procedure 2020-12 provides, in relevant part:

The Investor's Partnership Interest must constitute a bona fide equity investment with a reasonably anticipated value commensurate with the Investor's overall percentage interest in the Project Company, separate from any federal, state, and local tax deductions, allowances, credits, and other tax attributes to be allocated by the Project Company to the Investor. An Investor's Partnership Interest is a bona fide equity investment only if that reasonably anticipated value is contingent upon the Project Company's net income, gain, and loss, and is not substantially fixed in amount.

The approach taken in section 4.02(2)(b) is contrary to Congressional intent in allowing section 45Q credits. Notably, section 45Q permits a tax credit in situations in which qualified carbon oxide is disposed of in secure geological storage and there would be no anticipated non-tax revenue stream. Section 4.02(2)(b) also conflicts with section 4.09 of Revenue Procedure 2020-12, which recognizes that CCS projects may "not receive payments for its activities relating to carbon oxide sequestration." The continued inclusion of section 4.02(2)(b) would result in Revenue Procedure 2020-12 effectively becoming inapplicable to such projects, and limited only to projects that generate revenue by virtue of the qualified carbon oxide being used as a tertiary injectant or being utilized in a manner described in section 45Q(f)(5). There is no

rational policy reason for such a distinction between these methods of sequestering qualified carbon oxide.

We request that subsequent guidance strike section 4.02(2)(b) of Revenue Procedure 2020-12. In the alternative, we request that subsequent guidance expand the definition of “bona fide equity investment” to include investors reasonably anticipating a return derived from both tax credits and cash flow, if any.

More generally, the final regulations should confirm that the section 45Q credit is available for projects for which there is no anticipated value other than (or the anticipated value is well below the value of) any federal, state, and local tax deductions, allowances, credits, and other tax attributes with respect to the project. Presumably, Congress provided for the higher credit amount for disposal of qualified carbon oxide in secure geological storage in recognition of the fact that such projects lack a non-tax revenue stream when disposing of qualified carbon oxide. Section 4.02(2)(b) of Revenue Procedure 2020-12, as currently stated, conflicts with that intent and creates significant uncertainty as to the availability of the section 45Q credit for projects in which there are no or relatively little non-tax revenue. The final regulations should make clear that the section 45Q credit is available in such circumstances.

#### **COMMENT 6: CLARIFICATION OF “BINDING WRITTEN CONTRACT” REQUIREMENTS**

***We request that Treasury and the IRS resolve the seeming inconsistency in the requirements for a “binding written contract” in the Proposed Regulations by adopting the definition of a binding written contract in section 8.02 of Notice 2020-12.***

Section 45Q(f)(3)(A)(ii) generally provides that the tax credit is attributable to the person that owns the carbon capture equipment and physically or contractually ensures the capture and disposal, utilization, or use as a tertiary injectant of such qualified carbon oxide. Prop. Reg. § 1.45Q-1(h)(2) further provides that a taxpayer is not required to physically carry out the disposal, injection, or utilization of qualified carbon oxide to claim tax credits if the taxpayer contractually ensures, in a binding written contract, that the party that does so abides by the requirements of the section 45Q regulations.

The descriptions of contracts ensuring the disposal, injection, or utilization of qualified carbon oxide in two provisions of Prop. Reg. § 1.45Q-1(h)(2) appear to conflict. Prop. Reg. § 1.45Q-1(h)(2)(i) provides that a binding written contract to carry out the disposal, injection, or utilization of qualified carbon oxide cannot limit damages to a specified amount. Prop. Reg. § 1.45Q-1(h)(2)(iii)(B) seems to contradict the prohibition in Prop. Reg. § 1.45Q-1(h)(2)(i) and states that such a contract may include liquidated damages provisions, but are not required to do so. We request that Treasury and the IRS resolve the seeming inconsistency between Prop. Reg. § 1.45Q-1(h)(2)(i) and Prop. Reg. § 1.45Q-1(h)(2)(iii)(B).

Correction of the inconsistency can be accomplished through consistent adoption of the definition of binding written contract in section 8.02 of Notice 2020-12. Section 8.02 of Notice 2020-12 permits work performed, or amounts paid or incurred under a binding written contract, as further defined in Treas. Reg. § 1.168(k)-

1(b)(4)(ii)(A)-(D), to be taken into account in determining whether construction has begun under the Physical Work Test or Five Percent Safe Harbor. Section 8.02(1) provides that, to be binding, a written contract must not limit damages to a specified amount, for example, by use of a liquidated damages provision. Section 8.02(1) further provides that a contractual provision that limits damages to at least five percent of the total contract price will not be treated as limiting damages to a specified amount. This definition is consistent with the treatment of binding written contracts in the Prior Beginning of Construction Guidance that is well-understood in the renewables industry. It also is consistent with section 168 depreciation rules regarding binding written contracts.

To resolve the apparent inconsistency in the Proposed Regulations, and to conform with the guidance in Notice 2020-12 and other binding written contract guidance, we request that Treasury and the IRS clarify that the term “binding written contract” as used in Prop. Reg. § 1.45Q-1(h)(2)(i) has the same meaning as provided in section 8.02 of Notice 2020-12.

#### **COMMENT 7: UTILIZATION OF QUALIFIED CARBON OXIDE**

***We urge Treasury and the IRS to provide expansive rules regarding the availability of the credit “for any other purpose for which a commercial market exists.”***

Section 45Q generally allows the credit for qualified carbon oxide that is utilized by a taxpayer in a manner described in section 45(Q)(f)(5). Section 45Q(f)(5) provides that “utilization of qualified carbon oxide” means (i) the fixation of such qualified carbon oxide through photosynthesis or chemosynthesis, such as through the growing of algae or bacteria; (ii) the chemical conversion of such qualified carbon oxide to a material or chemical compound in which such qualified carbon oxide is securely stored, or (iii) the use of such qualified carbon oxide for any other purpose for which a commercial market exists (with the exception of use as a tertiary injectant in a qualified enhanced oil or natural gas recovery project), as determined by the Secretary.

The Proposed Regulations do not alter this definition. Rather, the Proposed Regulations reserve on defining commercial markets. Although Project Tundra currently anticipates disposing of qualified carbon oxide in secure geological storage, we urge Treasury and the IRS to provide expansive rules regarding the availability of the credit “for any other purpose for which a commercial market exists” that would provide practical alternative storage options for taxpayers and incentivize greater capture and sequestration of qualified carbon oxide that would otherwise be released into the atmosphere.

\* \* \*

On our behalf and on behalf of Minnkota, thank you for your attention to these issues. We appreciate the efforts of Treasury, the IRS and the other involved departments and agencies in issuing guidance under section 45Q. If you have any questions with respect to this comment letter, I can be reached at (202) 383-0456 or [amishshah@eversheds-sutherland.com](mailto:amishshah@eversheds-sutherland.com).

Best regards,

A handwritten signature in blue ink, appearing to read "Amish M. Shah". The signature is fluid and cursive, with the first name "Amish" being the most prominent.

**Amish M. Shah**  
Eversheds Sutherland (US) LLP

# Attachment A

Assume the following:

- A CCS facility is placed in service on July 1, 2022 and sequesters CO<sub>2</sub> in a Class VI permitted well.
- The owner of the carbon capture facility claims a section 45Q credit based on the following amounts of CO<sub>2</sub> captured and sequestered: 250,000 metric tons (MT) in 2022, 500,000 MT in 2023-2033 and 250,000 MT in 2034 and no amount thereafter.
- In 2039, there is an identified and reported release of the 50,000 MT of the CO<sub>2</sub> captured and sequestered in a sequestration site that has been used since 2022.

The recapture rules as currently proposed could be interpreted as follows:

- Under Prop. Reg. § 1.45Q-5(a), the release of the 50,000 MT would be a recapture event with respect to the project.
- Under Prop. Reg. § 1.45Q-5(b)-(d), the amount leaked 50,000 MT exceeds the amount disposed in 2039 (zero) and therefore the quantity of recaptured qualified carbon oxide is 50,000 MT.
- Under Prop. Reg. § 1.45Q-5(f) the recapture period is generally July 1, 2022 to December 31, 2039.
- Under Prop. Reg. § 1.45Q-5(g)(1) the recapture for the 50,000 MT must be taken into account in 2039.
- Under Prop. Reg. § 1.45Q-5(e) and (g)(2), the recapture amount to be added to the tax due in 2039 is calculated as follows:
  - Disposal in 2039 is zero, so no amount attributable to 2039
  - First preceding year: Disposal in 2038 is zero, so no amount attributable to 2038
  - Second preceding year: Disposal in 2037 is zero, so no amount attributable to 2037
  - Third preceding year: Disposal in 2036 is zero, so no amount attributable to 2036
  - Fourth preceding year: Disposal in 2035 is zero, so no amount attributable to 2036
  - Fifth preceding year: Disposal in 2034 is 250,000 MT, so an additional tax is calculated for 2039 at the 2034 credit rate multiplied by 50,000 MT. Therefore in 2039, an additional tax would be assessed due to a 2039 release of CO<sub>2</sub> injected as early as 2022 – i.e., 17 years earlier.

# Attachment B

Assume the following:

- There is a leakage of 1,000,000 MT of qualified carbon oxide from sequestration site A in 2029.
- The amount of injections to Site A have been, since inception, from the following carbon capture facilities in the following amounts:

	2026	2027	2028	2029	Total
Carbon Capture Facility X	500,000 MT	450,000 MT	550,000 MT	500,000 MT	2,000,000 MT
Carbon Capture Facility Y	800,000 MT	825,000 MT	775,000 MT	850,000 MT	3,250,000 MT
Total amount injected at Site A	1,300,000 MT	1,275,000 MT	1,325,000 MT	1,350,000 MT	5,250,000 MT

- Carbon Capture Facility Y is owned 80% by Taxpayer T during the period 2026-2029.

Based on the above assumptions, the recapture amount for Taxpayer T for Carbon Capture Facility Y would be \$23,245,000, calculated as follows. Other taxpayers owning interests in Carbon Capture Facility X and Y also similarly would be subject to a recapture payment.

	Calculation	2026	2027	2028	2029	Total
<b>Step 2a</b> Attribution to each Leakage Injection Year	First, divide total amount injected at Site A for the year by total amount injected in all years at Site A (5,250,000); Second, multiply quotient by Leakage Amount (1,000,000 MT)	247,500 MT	242,900 MT	252,500 MT	257,100 MT	1,000,000 MT
<b>Step 2b</b> Attribution to Carbon Capture Facility Y	First, divide amount of injected qualified carbon oxide from Carbon Capture Facility Y for year by total amount injected at Site A for year; Second, multiply quotient by amount determined in Step 2a	152,300 MT	157,200 MT	147,700 MT	161,900	619,000 MT
<b>Step 2c</b> Attribution to Taxpayer T	Multiply amount determined in Step 2b by applicable percentage of ownership of facility by the owner (80% for Taxpayer T for Carbon Capture Facility Y)	121,800 MT	125,700 MT	118,200 MT	129,500 MT	495,200 MT
<b>Step 3</b> Application of credit recapture percentage	Applicable percentage for year of amount determined in Step 2c	60%: 73,100 MT	80%: 100,600 MT	100%: 118,200 MT	100%: 129,500 MT	421,400 MT
<b>Step 4</b> Recapture Amount for Taxpayer T	Product of amount determined in Step 3 and applicable credit rate for year	Credit rate of \$50/MT: \$3,655,000	Assumed credit rate of \$53/MT: \$5,331,000	Assumed credit rate of \$56/MT: \$6,619,000	Assumed credit rate of \$59/MT: \$7,640,000	<b>Total recapture amount: \$23,245,000</b>