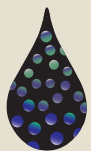


# RECOMMENDED MODIFICATIONS TO THE 45Q TAX CREDIT FOR CARBON DIOXIDE SEQUESTRATION



**National Enhanced  
Oil Recovery Initiative**



**C2ES** CENTER FOR CLIMATE  
AND ENERGY SOLUTIONS



**Great Plains Institute**

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## ■ ABOUT THE NATIONAL ENHANCED OIL RECOVERY INITIATIVE

The National Enhanced Oil Recovery Initiative (NEORI) was formed to help realize CO<sub>2</sub>-EOR's full potential as a national energy security, economic, and environmental strategy. Organized and staffed by the Center for Climate and Energy Solutions (C2ES) and the Great Plains Institute (GPI), the Initiative brought together a broad and unusual coalition of executives from the electric power, coal, ethanol, chemical, and oil and gas industries; state officials, legislators, and regulators; and environmental and labor representatives. (See Project Participant List on the [NEORI website](#).)

NEORI was launched on July 17, 2011 in Washington, D.C., with bipartisan support from four U.S. Senators and a member of Congress. Project participants met on three occasions to define the scope and expectations of the project, provide feedback on technical matters, and provide policy guidance. They gathered in Washington, DC with the launch of the project on July 17, 2011; in Traverse City, MI, on September 21-22; and in Houston, TX, on November 1-2. The latter two meetings included field visits to commercial EOR operations and to a CO<sub>2</sub> capture facility.

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## INTRODUCTION

The National Enhanced Oil Recovery Initiative (NEORI) recommends that Congress consider implementing a revenue-positive federal production tax credit to support deployment of commercial carbon dioxide (CO<sub>2</sub>) capture and pipeline projects. A new, more robust federal incentive is needed to increase the supply of man-made or anthropogenic CO<sub>2</sub> that the oil industry can purchase for use in enhanced oil recovery (EOR) to increase domestic production from existing oil fields.

NEORI also recommends that Congress undertake immediate modification of the existing Section 45Q Tax Credit for Carbon Dioxide Sequestration,<sup>1</sup> through legislative action and/or working with the Department of the Treasury to revise Internal Revenue Service program guidance.

To avoid stalling important commercial CO<sub>2</sub> capture projects under development, there is an urgent need to improve the functionality and financial certainty of this federal incentive to enable its effective commercial use. To make 45Q immediately accessible to US companies, Congress should pursue the following changes to the program:

- Designate the owner of the CO<sub>2</sub> capture facility as the primary taxpayer;
- Establish a registration, credit allocation, and certification process;
- Change the recapture provision to ensure that any regulations issued after the disposal or use of CO<sub>2</sub> shall not enable the federal government to recapture credits that were awarded according to regulations that existed at that time; and
- Authorize limited transferability of the credit within the CO<sub>2</sub> chain of custody, from the primary taxpayer to the entity responsible for disposing of the CO<sub>2</sub>

The consensus recommendations below detail the specific 45Q program modifications requested, and the section-by-section summary provides further explanation and context.

## BACKGROUND AND RATIONALE

Section 45Q makes available a per-ton credit for CO<sub>2</sub> disposed of in secure geologic storage. The program provides \$10 per metric ton for CO<sub>2</sub> stored through EOR operations and \$20 per metric ton for CO<sub>2</sub> stored in deep saline formations. However, due to unforeseen issues in the original statute (§ 115 of the Energy Improvement and Extension Act of 2008), the 45Q program lacks sufficient transparency and certainty for companies to be able to use the credit to secure private financing for projects.

Large-scale expansion of commercial EOR using industrially-sourced CO<sub>2</sub> later in this decade requires that critical industrial capture projects begin construction now and enter commercial operation within the next few years. If Congress makes modest, functional improvements this year to 45Q that result in little or no additional fiscal cost, the program currently authorized at 75 million metric tons of CO<sub>2</sub> stored can help several significant EOR projects nationwide secure private sector financing and move forward to commercial operation.

The following recommendations elaborate on these key design changes in detail.

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<sup>1</sup> 26 USC §45Q provides a tax credit for carbon dioxide sequestration. Section 45Q was enacted by § 115 of the Energy Improvement and Extension Act of 2008.

## AMENDMENTS TO §45Q CREDIT FOR CARBON DIOXIDE SEQUESTRATION: SECTION BY SECTION ANALYSIS

Below is a narrative description of purposed amendments from NEORI. Legislative text follows later in this document.

### (A) DEFINE THE PRIMARY TAXPAYER.

This provision amends 45Q(d)(5) so that the primary taxpayer that can claim the credit is the owner of the carbon capture equipment at a qualified industrial facility. Carbon capture equipment is the equipment used to capture, separate, and pressurize carbon dioxide. This amendment would remove the current requirement in 45Q(c)(1) that the taxpayer owns both the carbon capture equipment and the industrial facility that is the source of the qualified carbon dioxide.

### (B) ESTABLISH A REGISTRATION, ALLOCATION AND CERTIFICATION PROCESS.

This provision directs the Secretary of the Treasury (Secretary) to establish a registration, allocation, and certification process that determines eligibility for taxpayers to claim the tax credit.

**Registration.** Requires taxpayers to register with the Internal Revenue Service (Service) after fulfilling certain requirements. New requirements for registration eligibility, beyond those currently required under 45Q, include:

- Taxpayers must have appropriate preconstruction air permits for the qualified facility (e.g., New Source Review permits); and
- Taxpayers must have a contractual agreement for the disposal of the CO<sub>2</sub> in secure geological storage.

In order to register, the taxpayer must provide:

- The name, address, and taxpayer identification number of the expected reporting taxpayer;
- The name and location of the qualified facility that will capture the CO<sub>2</sub>;
- The amount of CO<sub>2</sub>, in metric tons, for which the taxpayer is seeking an allocation; and
- A designation of whether the qualified facility is a new build or a retrofit.

The taxpayer must specify the amount of CO<sub>2</sub> for each year, starting with year 1 and up to year 10, for each year in which the taxpayer seeks an allocation. This amount shall be determined based on the design of the facility and the metric tons of CO<sub>2</sub> that will be disposed of each year in secure geological storage.

**Certification.** Establishes requirements for the certification of taxpayers, which is a prerequisite for claiming credits. For a registered taxpayer to become certified, the proposed qualifying facility must be under construction, constructed or commercially operating. Registered taxpayers must request certification once construction has begun, and demonstrate that construction has begun and include the construction start date. Certified taxpayers that are not commercially operating at the time of certification must also notify the Service when commercial operation has begun. For new builds, registered taxpayers are required to begin commercial operation within 5 years of registration. For retrofits, registered taxpayers are required to begin commercial operation within 3 years of registration. Taxpayers with qualified facilities that have completed construction and are commercially operating must submit proof of the construction start date. Taxpayers also must submit annual reports

for each taxable year of commercial operation in which they claim credits. Annual reports include information such as the amount of credits claimed for a taxable year and any adjustments to information included in a prior annual report.

***Concurrent registration and certification.*** Enables taxpayers that meet certification requirements at the time of registration to become certified. Taxpayers that are concurrently registered and certified have priority in the queue on a first-come, first-serve basis. Concurrently registered and certified taxpayers whose registration and certification submissions are received on the same date will be prioritized within the queue according to start date of construction. Available credits shall be reserved for concurrently registered and certified taxpayers, according to expected allocation, while submissions are under review by the Service.

***Allocation of credit pool.*** Directs the Service to place each registered taxpayer in a queue to receive an allocation of credits from the credits available at the time of registration. Registered taxpayers shall be placed in the queue on a first-come, first-serve basis. The Service shall allocate available credits to each registered taxpayer, for up to 10 years, based on position in the queue and based on the amount of qualified metric tons of CO<sub>2</sub> for each taxable year that the taxpayer expects to dispose of in secure geological storage (as designated by the taxpayer during registration). The Service shall not allocate more credits than the facility design and its CO<sub>2</sub> capture capacity will allow.

***Penalties.*** Establishes penalties for failure to meet program requirements or, in general, for making statements that are materially inaccurate. Taxpayers that do not request certification within 6 months of registration are removed from the queue. Taxpayers that have been removed from the queue may register again but will not be placed in the queue in their original position. Taxpayers are de-certified if the taxpayer does not meet time requirements of certification. Taxpayers are automatically de-certified for any amount of allocated credits that are not claimed in each taxable year. Any credits that are available as a result of de-certification shall go back into the available credit pool.

***Public notification.*** Establishes requirements for the IRS to provide public notification and disclosure for the tax credit. The Service shall provide public notification and disclosure including: a description of the qualified facility, the location of the relevant qualified facility, and the amount of the credit for each taxpayer. Any changes in the tax credit queue or availability shall be reported on a continuous basis through public notification on the IRS website, and the IRS will also issue an annual report summarizing the amount of allocated credits, claimed credits, and credits available for allocation.

***Definitions.***

- ***Registration.*** Registration is the process by which a taxpayer meeting requirements is placed in the tax credit queue and is allocated credits for up to 10 years of commercial operation, based on the availability of tax credits at the time of registration.
- ***Allocation.*** Allocation is the amount of tax credits that the IRS determines, during registration, the taxpayer may claim after meeting all requirements, including becoming certified. Credits may be allocated for up to 10 years of commercial operation.
- ***Certification.*** Certification is the process by which a taxpayer becomes eligible to claim up to the amount of credits allocated, per year, at the time of registration
- ***Concurrent registration and allocation.*** Taxpayers who meet the requirements to become certified may request certification at the time of registration.
- ***Beginning of construction.*** Beginning of construction is when significant physical work has begun and includes work performed by the taxpayer and by other persons under a written, binding contract. Significant physical work includes on-site and off-site work but does not include preliminary activities such as

planning or designing, securing financing, exploring, researching, clearing a site, test drilling to determine soil condition, or excavation to change the contour of the land (as distinguished from excavation for footings or foundations).

**Effective Date.** The amendments made by this section shall apply to taxable years beginning after December 31, 2012. The Secretary will establish the registration, allocation, and certification process as soon as practicable, but not later than 90 days after the date of enactment.

**(C) CHANGE TO RECAPTURE PROVISION.**

This provision amends the 45Q(d) recapture provision to ensure that any regulations issued after the disposal or use of CO<sub>2</sub> at a qualified facility shall not enable the government to recapture credits that were awarded according to regulations that existed at the time. This would clarify the current language that requires the Secretary, by regulations, to recapture the credit allowable for CO<sub>2</sub> that is no longer captured, disposed of, or used as a tertiary injectant according to the 45Q requirements.

**(D) TRANSFERABILITY.**

This section allows the primary taxpayer to transfer the credit solely to the person responsible for disposing the CO<sub>2</sub> if the primary taxpayer is not claiming the credit. The primary taxpayer must submit a statement to the Secretary that he or she is transferring the credit, according to the specifications of the Secretary. The statement must include the name, address and taxpayer identification number of the taxpayer transferring the credit; the name, address and the taxpayer identification number of the taxpayer receiving the transfer; and other information that the Secretary may require.

## AMENDMENTS TO §45Q CREDIT FOR CARBON DIOXIDE SEQUESTRATION: POLICY RECOMMENDATIONS

### (a) DEFINE THE PRIMARY TAXPAYER.

(1) The primary taxpayer is the owner of the carbon capture equipment placed in service at a qualified industrial facility.

(A) Carbon capture equipment includes equipment used to capture, separate, and pressurize carbon dioxide (CO<sub>2</sub>).

### (b) ESTABLISH A REGISTRATION, ALLOCATION, AND CERTIFICATION PROCESS.

The Secretary of the Treasury (Secretary) shall establish a registration, allocation, and certification process.

(1) Registration. The taxpayer must register with the Internal Revenue Service (Service). Only applicants that meet the requirements for registration will qualify. The taxpayer shall execute a signed representation, subject to verification by the Service, that the qualified facility meets registration requirements.

(A) Registration requirements (beyond those already described in 45Q) –

(i) The taxpayer, or owner of the qualified facility (if different), must have obtained appropriate preconstruction air permits (e.g., New Source Review Permits) for the facility.

(ii) The taxpayer, or owner of the qualified facility (if different), must have entered into a contractual arrangement for the disposal of the qualified CO<sub>2</sub> in a secure geologic formation.

(iii) The taxpayer must provide –

(I) The name, address, and taxpayer identification number of the expected reporting taxpayer;

(II) The name and location of the qualified facility that will capture the CO<sub>2</sub>;

(III) The amount in metric tons of qualified CO<sub>2</sub> for each taxable year, starting with year 1 and up to year 10, for which the taxpayer is seeking an allocation, based on design of the qualified facility and metric tons of CO<sub>2</sub> that will be disposed of in secure geological storage for each year in which the taxpayer seeks an allocation of credits; and

(iv) The taxpayer must indicate if the qualified facility is a new build or a retrofit.

(2) Certification.

(A) Certification eligibility. Taxpayers are eligible for certification if the qualified facility is–

(i) Under construction; or

(ii) Constructed; or



(iii) Commercially operating.

(B) Certification submission.

(i) Registered taxpayers. Registered taxpayers must request certification from the Service once facility construction has begun. Submissions shall include demonstration that construction has begun and identify the date when construction began.

(ii) If the qualified facility is under construction, constructed, and/or is commercially operating, taxpayer submissions shall identify the date when construction began and include a demonstration that the construction began on such date.

(iii) The Service will issue a certification letter to qualified taxpayers within 30 days of request.

(C) Requirements for certified taxpayers when the qualified facility is not commercially operating at the time of certification.

(i) Certified taxpayers must notify the Service once commercial operation has begun.

(ii) Time requirements for beginning commercial operation –

(I) New builds – Commercial operation must begin within five years of registration. Certified taxpayers must notify the Service within five years of registration that commercial operation has begun.

(II) Retrofits – Commercial operation must begin within three years of registration. Certified taxpayers must notify the Service within three years of registration that commercial operation has begun.

(iii) Annual reporting requirements for certified taxpayers.

(I) Taxpayers must submit annual reports, starting with the first taxable year in which commercial operation has begun and in which the taxpayer claims credits. Each annual report shall include –

(a) The name, address, and taxpayer identification number of the reporting taxpayer, and all parties with which the taxpayer contractually ensures the secure geological storage of CO<sub>2</sub> (if a different person than the taxpayer);

(b) The name and location of the qualified facility at which the CO<sub>2</sub> was captured;

(c) The amounts (in metric tons) of qualified CO<sub>2</sub> for the taxable year that has been taken into account for purposes of claiming the 45Q credit; and

(d) Any changes to information included in prior submitted annual reports, including adjustments to the amount (in metric tons) of qualified CO<sub>2</sub> taken into account for purposes of the 45Q tax credit in prior taxable years.

(3) Concurrent registration and certification. Taxpayers may apply for concurrent registration and certification if construction has begun, is complete, or if the qualified facility is commercially operating at the time of registration. Taxpayers must complete all requirements of registration and certification to apply concurrently.

(4) Allocation of credit pool.

(A) The Service shall assign each registered taxpayer a number that places taxpayers in a tax credit queue. Taxpayers that are concurrently registered and certified have priority in the queue on a first-

come, first-serve basis. However, those who are concurrently registered and are certified and whose registration and certification submissions are received on the same date shall be prioritized in the queue according to start date of construction. The Service shall reserve available credits while evaluating certification submissions, according to expected allocation, for taxpayers that have requested certification at the time of registration. Registrants who are not certified are placed in the queue after certified registrants on a first-come, first-serve basis. The Service will allocate credits to each registered taxpayer for up to 10 years of commercial operation based on –

- (i) Credits available at the time of registration and on a first-come, first-serve basis;
- (ii) The amount of qualified metric tons of CO<sub>2</sub> for each taxable year, up to 10 years, that the taxpayer expects to dispose of in secure geological storage, as designated by the taxpayer during registration; and
- (iii) No more than the facility design and its CO<sub>2</sub> capture capacity will allow.

(5) Penalties.

(A) Automatic removal from queue. Taxpayers that do not request certification within six months of registration or make materially inaccurate representations are removed automatically from the registration queue. Taxpayers so removed from the queue may re-register, but do not retain their original queue position.

(B) De-certification. Tax credit certification is automatically void for a taxpayer that does not notify the Service that commercial operation has begun, according to 2(B) requirements or for a taxpayer that makes materially inaccurate representations.

(C) De-certification for allocated credits. Taxpayers are decertified automatically for the amount of allocated credits that are not claimed in each taxable year, starting with Year 1 and up to Year 10. Those unclaimed tax credits shall be placed back in the available pool of tax credits.

(6) Public notification. Upon registration and allocation, the Service will publicly disclose a description of the qualified facility, the location of the qualified facility, and the amount of the credit with respect to each registered taxpayer. The Service shall provide real-time public notification of any changes in the tax credit queue and availability of tax credit pool due to registration, certification, and removal from registration queue, de-certification, and credits claimed through annual taxpayer reporting. The Service will continuously update this information on the Service's website and issue an annual report summarizing credits allocated, credits claimed, and credits available for allocation.

(7) Definitions.

(A) Registration. Registration means that a taxpayer is placed in a registration queue and is allocated credits for up to 10 years of commercial operation, based on availability of tax credits at the time of registration.

(B) Allocation. Allocation means the amount of tax credits, determined by the Service, which a taxpayer may request for certification. Tax credits may be allocated to taxpayers for up to 10 years of commercial operation. Credit availability for allocation is based on the amount of credits in the credit pool at the time of registration.

(C) Certification. Certification means that the taxpayer is eligible to claim up to the amount of credit allocated to the taxpayer at the time of registration.

(D) Concurrent registration and certification. Taxpayers who meet certification eligibility requirements at the time of registration may request certification at the time of registration.

(E) Beginning of Construction. Construction begins when physical work of a significant nature begins. Work performed by the taxpayer and by other persons under a written binding contract is taken into account in determining whether construction has begun. Both on-site and off-site work may be taken into account for purposes of demonstrating that physical work of a significant nature has begun. Physical work of a significant nature does not include preliminary activities such as planning or designing, securing financing, exploring, researching, clearing a site, test drilling to determine soil condition, or excavation to change the contour of the land (as distinguished from excavation for footings and foundations).

(F) Determination of taxable year 1. The taxpayer shall define the first taxable year as either—

(i) The first taxable year during which the taxpayer is certified; or

(ii) The first taxable year when the taxpayer is in commercial operation for an entire taxable year.

(8) Effective Date – The amendments made by this section shall apply to taxable years beginning after December 31, 2012. As soon as practicable, but not later than 90 days after the date of enactment of this [Act], the Secretary shall establish the registration, allocation, and certification process.

**(c) CHANGE TO RECAPTURE PROVISION.**

Such regulations shall in no way provide for recapturing the benefit of any credit allowable due to a change in any regulations, issued after the disposal or use of such qualified CO<sub>2</sub> conducted in accordance with regulations that existed at the time of such disposal or use.

**(d) TRANSFERABILITY.**

Provides for limited transferability within the CO<sub>2</sub> chain of custody.

(1) Transfer of Credit. If the primary taxpayer has certified that it is not claiming the credit, the credit may be claimed by the person responsible for disposing of the qualified CO<sub>2</sub>. Such transfer shall only be effective if the taxpayer submits to the Secretary, at such time and in such manner as the Secretary prescribes, a statement concerning the transfer which contains –

(A) The name, address, and the taxpayer identification number of the taxpayer transferring the credit;

(B) The name, address, and taxpayer identification number of the taxpayer receiving the transfer; and

(C) Such other information as the Secretary may require relating to such transfer.

The National Enhanced Oil Recovery Initiative recommends that Congress undertake immediate modification of the existing Section 45Q Tax Credit for Carbon Dioxide Sequestration, through legislative action and/or working with the Department of the Treasury to revise Internal Revenue Service program guidance. There is an urgent need to improve the functionality and financial certainty of this federal incentive to enable its effective commercial use and avoid stalling important commercial CO<sub>2</sub> capture projects under development.



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