

Request for Comments on Credit for Carbon Oxide Sequestration

Notice 2019-32

SECTION 1. PURPOSE

The Department of the Treasury (Treasury Department) and the Internal Revenue Service (IRS) anticipate issuing regulations and other guidance to implement the provisions of § 45Q of the Internal Revenue Code, as amended by Section 41119 of the Bipartisan Budget Act of 2018 (BBA), Pub. L. No. 115-123 (February 9, 2018). This notice requests general comments on issues arising under § 45Q, as well as specific comments concerning the secure geological storage and measurement of qualified carbon oxide, the recapture of the benefit of the credit for carbon oxide sequestration, and other issues described in section 3 of this notice. Comments received in response to this notice will help to inform development of future regulations and other guidance implementing § 45Q.

SECTION 2. BACKGROUND

Section 45Q was enacted by § 115 of the Energy Improvement and Extension Act of 2008, Division B of Pub. L. No. 110-343, 122 Stat. 3765, 3829 (October 3, 2008), to provide a credit for the sequestration of carbon dioxide. Section 45Q was amended by § 1131 of the American Recovery and Reinvestment Tax Act of 2009, Division B of Pub. L. 111-5, 123 Stat 115 (February 17, 2009) and more recently by section 41119 of the Bipartisan Budget Act of 2018 (BBA), Pub. L. No. 115-123 (February 9, 2018). As a

result of the modifications made by the BBA amendment, the credit under § 45Q now applies to the sequestration of “qualified carbon oxide,” a broader term than qualified carbon dioxide. The amount of the credit is also increased for carbon oxide captured with equipment originally placed in service on or after the date of enactment of the BBA.

Section 45Q(a)(1) allows a credit of \$20 per metric ton of qualified carbon oxide (i) captured by the taxpayer using carbon capture equipment which is originally placed in service at a qualified facility before the date of the enactment of BBA, (ii) disposed of by the taxpayer in secure geological storage, and (iii) not used by the taxpayer as a tertiary injectant in a qualified enhanced oil or natural gas recovery project.

Section 45Q(a)(2) allows a credit of \$10 per metric ton of qualified carbon oxide (i) captured by the taxpayer using carbon capture equipment which is originally placed in service at a qualified facility before the date of the enactment of BBA and (ii) either (I) 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 or (II) utilized by the taxpayer in a manner described in § 45Q(f)(5).

Section 45Q(a)(3) allows a credit of the applicable dollar amount (as determined under § 45Q(b)(1)) per metric ton of qualified carbon oxide (i) captured by the taxpayer using carbon capture equipment which is originally placed in service at a qualified facility on or after the date of the enactment of BBA during the 12-year period beginning on the date the equipment was originally placed in service, (ii) disposed of by the taxpayer in secure geological storage, and (iii) neither used as a tertiary injectant in a qualified enhanced oil or natural gas recovery project nor utilized in a manner described in § 45Q(f)(5).

Section 45Q(a)(4) allows credit of the applicable dollar amount (as determined under § 45Q(b)(1)) per metric ton of qualified carbon oxide (i) captured by the taxpayer using carbon capture equipment which is originally placed in service at a qualified facility on or after the date of the enactment of BBA, during the 12-year period beginning on the date the equipment was originally placed in service, and (ii) either (I) 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 or (II) utilized by the taxpayer in a manner described in § 45Q(f)(5).

Section 45Q(b)(1)(A)(i)(1) provides that, for any taxable year beginning in a calendar year after 2016 and before 2027, the applicable dollar amount for purposes of § 45Q(a)(3) is an amount equal to the dollar amount established by linear interpolation between \$22.66 and \$50 for each calendar year during such period.

Section 45Q(b)(1)(A)(i)(II) provides that, for any taxable year beginning in a calendar year after 2016 and before 2027, the applicable dollar amount for purposes of § 45Q(a)(4) is an amount equal to the dollar amount established by linear interpolation between \$12.83 and \$35 for each calendar year during such period.

Section 45Q(b)(1)(A)(ii)(I) provides that, for any taxable year beginning in a calendar year after 2026, the applicable dollar amount for purposes of § 45Q(a)(3) shall be an amount equal to the product of \$50 and the inflation adjustment factor for such calendar year determined under § 43(b)(3)(B) for such calendar year, determined by substituting “2025” for “1990.” Section 45Q(b)(1)(A)(ii)(II) provides that, for any taxable year beginning in a calendar year after 2026, the applicable dollar amount for purposes of § 45Q(a)(4) shall be an amount equal to the product of \$35 and the inflation

adjustment factor for such calendar year determined under § 43(b)(3)(B) for such calendar year, determined by substituting “2025” for “1990.”

Pursuant to § 45Q(b)(1)(B), the applicable dollar amount determined under § 45Q(b)(1)(A) is rounded to the nearest cent.

Notice 2018-93, I.R.B. 2018-51 1041, 1042, sets forth the applicable dollar amounts under § 45Q(b)(1) of the Internal Revenue Code for purposes of determining the credit for carbon oxide sequestration under § 45Q(a)(3) and (a)(4).

Section 45Q(f)(1) provides that the credit under § 45Q shall apply only with respect to qualified carbon oxide the capture and disposal, use, or utilization of which is within (A) the United States (within the meaning of § 638(1)), or (B) a possession of the United States (within the meaning of § 638(2)).

Section 45Q(f)(2) provides that the Secretary, in consultation with the Administrator of the Environmental Protection Agency (EPA), the Secretary of Energy, and the Secretary of the Interior, shall establish regulations for determining adequate security measures for the geological storage of qualified carbon oxide under § 45Q(a) such that the qualified carbon oxide does not escape into the atmosphere. Such term shall include storage at deep saline formations, oil and gas reservoirs, and unminable coal seams under such conditions as the Secretary may determine under such regulations.

Under § 45Q(f)(3)(A), except as provided in § 45Q(f)(3)(B) or in any regulations prescribed by the Secretary, any credit under § 45Q shall be attributable to (i) in the case of qualified carbon oxide captured using carbon capture equipment which is originally placed in service at a qualified facility before the date of the enactment of

BBA, the person that captures and physically or contractually ensures the disposal, utilization, or use as a tertiary injectant of such qualified carbon oxide, and (ii) in the case of qualified carbon oxide captured using carbon capture equipment which is originally placed in service at a qualified facility on or after the date of the enactment of BBA, 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.

Under § 45Q(f)(3)(B), if the person described in § 45Q(f)(3)(A) makes an election in such time and manner as the Secretary may prescribe by regulations, the credit under § 45Q shall be allowable to the person that disposes of the qualified carbon oxide, utilizes the qualified carbon oxide, or uses the qualified carbon oxide as a tertiary injectant, and shall not be allowable to the person described in § 45Q(f)(3)(A).

Section 45Q(f)(4) provides that the Secretary shall, by regulations, provide for recapturing the benefit of any credit allowable under § 45Q(a) 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 § 45Q.

Section 45Q(f)(5)(A) provides that for purposes of § 45Q, 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.

Section 45Q(f)(5)(B)(i) provides that for purposes of determining the amount of qualified carbon oxide utilized by the taxpayer under § 45Q(a)(2)(B)(ii) or 45Q(a)(4)(B)(ii), such amount shall be equal to the metric tons of qualified carbon oxide which the taxpayer demonstrates, based upon an analysis of lifecycle greenhouse gas emissions and subject to such requirements as the Secretary, in consultation with the Secretary of Energy and the Administrator of the EPA, determines appropriate, were (I) captured and permanently isolated from the atmosphere, or (II) displaced from being emitted into the atmosphere, through use of a process described in § 45Q(f)(5)(A).

Under § 45Q(f)(5)(B)(ii), for purposes of § 45Q(f)(5)(B)(i), the term “lifecycle greenhouse gas emissions” has the same meaning given such term under subparagraph (H) of section 211(o)(1) of the Clean Air Act (42 U.S.C. 7545(o)(1)), as in effect on the date of the enactment of BBA, except that “product” shall be substituted for “fuel” each place it appears in such subparagraph.

Under § 45Q(f)(6)(A), for purposes of § 45Q, in the case of an applicable facility, for any taxable year in which such facility captures not less than 500,000 metric tons of qualified carbon oxide during the taxable year, the person described in § 45Q(f)(3)(A)(ii) may elect to have such facility, and any carbon capture equipment placed in service at such facility, deemed as having been placed in service on the date of the enactment of BBA. Section 45Q(f)(6)(B) defines the term “applicable facility” as a qualified facility (i) which was placed in service before the date of the enactment of BBA, and (ii) for which no taxpayer claimed a credit under § 45Q in regards to such facility for any taxable year ending before the date of the enactment of BBA.

Under § 45Q(f)(7), in the case of any taxable year beginning in a calendar year after 2009, there shall be substituted for each dollar amount contained in § 45Q(a)(1) and (2) an amount equal to the product of (A) such dollar amount, multiplied by (B) the inflation adjustment factor for such calendar year determined under § 43(b)(3)(B) for such calendar year, determined by substituting “2008” for “1990.”

Section 45Q(g) provides that in the case of any carbon capture equipment placed in service before the date of the enactment of BBA, the credit under § 45Q shall apply with respect to qualified carbon oxide captured using such equipment before the end of the calendar year in which the Secretary, in consultation with the Administrator of the Environmental Protection Agency, certifies that, during the period beginning after October 3, 2008, a total of 75,000,000 metric tons of qualified carbon oxide have been taken into account in accordance with (1) § 45Q(a), as in effect on the day before the date of the enactment of BBA, and (2) § 45Q(a)(1) and (2).

Pursuant to § 45Q(h) the Secretary may prescribe such regulations and other guidance as may be necessary or appropriate to carry out this section, including regulations or other guidance to (1) ensure proper allocation under § 45Q(a) for qualified carbon oxide captured by a taxpayer during the taxable year ending after the date of the enactment of BBA, and (2) determine whether a facility satisfies the requirements under § 45Q(d)(1) during such taxable year.

SECTION 3. REQUEST FOR COMMENTS

The Treasury Department and the IRS request comments on issues arising from the BBA amendments to § 45Q that should be addressed in regulations and other guidance. In addition to general comments, the Treasury Department and the IRS

request comments that address the following specific issues:

.01 [IRS Form 8933](#), Carbon Oxide Sequestration Credit, defines “Secure Geological Storage” as requiring approval by the EPA of a Monitoring, Reporting and Verification Plan (MRV Plan) submitted by the operator of the storage facility or tertiary injection project. Thus, meeting the Form 8933 conditions would be achieved by either receiving a Class II UIC permit plus an approved MRV Plan, or receiving a Class VI UIC permit plus an approved MRV Plan.

UIC permits are required for all injection well operators. Class VI UIC operators must also get an EPA-approved MRV plan as required under the Greenhouse Gas Reporting Program (GHGRP), set forth in 40 CFR Part 98. However, IRS Form 8933 adds regulatory requirements for Class II UIC permit holders (enhanced oil recovery operations) who are not currently required to get an EPA-approved MRV plan. As noted below, IRS is seeking comment on whether there are alternatives to this approach.

IRS Form 8933 also clarifies that the annual amount of carbon oxide claimed for the credit must be reconciled with amounts reported to the EPA under its GHGRP, subpart RR. See the EPA website at www.epa.gov and Notice 2009-83, 2009-44 I.R.B. 588, for more information on secure geological storage.

- Are there technical criteria different from or in addition to those provided in the EPA’s GHGRP that should be used to demonstrate secure geological storage? Are there existing guidelines, standards, or regulations that could be used to demonstrate secure geological storage such as those developed by the International Organization for Standardization (ISO)?

- Should EPA's GHGRP rules continue to be the reporting requirements for purposes of § 45Q, and should an approved MRV Plan from the EPA be received before any § 45Q credit can be claimed? Are there any viable alternatives to the subpart RR reporting requirements, such as third party, Department of Energy, or State certification?

.02 Pursuant to § 45Q(f)(4), taxpayers must recapture the benefit of any credit allowable under § 45Q(a) with respect to any qualified carbon oxide that ceases to be captured, disposed of, or used as a tertiary injectant in a manner consistent with the requirements of § 45Q. What should the standard be for triggering and measuring recapture? How should the recapture of the benefit of the credits relate to the requirements of § 45Q and the issues contemplated in this request for comments, in particular the rules for secure geological storage involving the disposal or use of carbon oxide as a tertiary injectant?

.03 Is guidance needed to further clarify terms and definitions appearing in § 45Q, such as carbon capture equipment, qualified carbon oxide, direct air capture facility, qualified facility, tertiary injectant utilization, or lifecycle greenhouse gas emissions?

.04 Is guidance required in defining what types of utilization qualify as "fixation of qualified carbon oxide through photosynthesis or chemosynthesis, such as through the growing of algae or bacteria" as described in § 45Q(f)(5)(A)?

.05 Is guidance required to establish the boundaries for lifecycle emissions for carbon oxide utilization to determine the amount of qualified carbon oxide that is "displaced from being emitted into the atmosphere" as described in in § 45Q(f)(5)(B)?

.06 Under § 45Q(f)(3)(A), the credit is attributable to the person that captures and physically or contractually ensures the disposal, utilization, or use of the qualified carbon oxide as a tertiary injectant. The Treasury Department and the IRS seek comments on the types of contractual arrangements that investors anticipate with parties who capture or dispose or utilize qualified CO. What are common terms of contracts ensuring the disposal, utilization, or use of qualified CO as a tertiary injectant? What should result if such terms are determined to be insufficient?

.07 What factors should be considered in determining the time and manner of the election under § 45Q(f)(3)(B) to transfer the § 45Q credit to a person that disposes of the qualified carbon oxide, utilizes the qualified carbon oxide, or uses the qualified carbon oxide as a tertiary injectant? If such an election is made, what issues should be considered regarding the transfer of the § 45Q credit?

.08 What constitutes the beginning of construction for purposes of § 45Q(d)?

.09 Is guidance needed concerning structures in which project developers and participating investors would be respected as partners in a partnership generating a § 45Q credit? Further, is guidance needed on allocating the credit and recapture of the credit among the partners in a partnership?

.10 What issues may arise when determining the amount of metric tons of qualified carbon oxide utilized by the taxpayer under § 45Q(a)(2)(B)(ii) or § 45Q(a)(4)(B)(ii), based upon an analysis of lifecycle greenhouse emissions and subject to such requirements as the Secretary, in consultation with the Secretary of Energy and Administrator of the EPA, determines appropriate, were (i) captured and permanently isolated from the atmosphere, or (ii) displaced from being emitted into the

atmosphere, through use of a process described in § 45Q(f)(5)(A)?

SECTION 4. ADDRESS TO SEND COMMENTS

.01 Comments may be submitted in writing on or before **[Insert date that is 45 days after the date this notice will be published in the Internal Revenue Bulletin]**.

Taxpayers may submit comments electronically via the Federal eRulemaking Portal at www.regulations.gov (indicate IRS and NOT-[XXXXX]). Alternatively, taxpayers may submit comments to:

CC:PA:LPD:PR (Notice XXXX-XX), Room 5203, Internal Revenue Service
P.O. Box 7604
Ben Franklin Station
Washington, D.C., 20044

.02 Submissions may be hand-delivered Monday through Friday between the hours of 8 a.m. and 4 p.m. to:

CC:PA:LPD:PR (Notice XXXX-XX), Courier's Desk, Internal Revenue Service
1111 Constitution Avenue, N.W.
Washington, D.C. 20224
Attn: CC:PA:LPD:PR

All comments received will be available for public inspection on www.regulations.gov.

SECTION 5. RELIANCE ON NOTICE 2009-83

Notice 2009-83, 2009-44 I.R.B. 588, which was modified by Notice 2011-25, I.R.B. 2011-14 604, by removing section 4.07 of Notice 2009-83, provides guidance on determining eligibility for the former credit for carbon dioxide sequestration, the amount of the credit, and rules regarding adequate security measures for secure geological storage of carbon dioxide. Taxpayers may rely on Notice 2009-83, as modified by Notice 2011-25, until additional guidance is issued.

SECTION 6. DRAFTING INFORMATION

The principal author of this notice is David Selig of the Office of Associate Chief Counsel (Passthroughs & Special Industries). For further information regarding this notice, contact Mr. Selig at (202) 317-6853 (not a toll-free call).