

INTERNAL REVENUE BULLETIN



HIGHLIGHTS OF THIS ISSUE

Bulletin No. 2024-34
August 19, 2024

These synopses are intended only as aids to the reader in identifying the subject matter covered. They may not be relied upon as authoritative interpretations.

EMPLOYEE PLANS

[REDACTED]

[REDACTED]

[REDACTED]

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and provides the procedures a taxpayer must follow to submit the LCA Report and required supporting information to the IRS and the Department of Energy for review under § 1.45Q-4(c)(5) before any credit for carbon oxide sequestration allowed under § 45Q(a)(2)(B)(ii) or (a)(4)(B)(ii) is determined for qualified carbon oxide utilized by any taxpayer in the manner described in § 45Q(f)(5) as implemented by § 1.45Q-4 (§ 45Q utilization credit).

[REDACTED]

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INCOME TAX

Notice 2024-60, page 515.

This notice describes the information that must be included in a written report described in § 1.45Q-4(c)(2) (LCA Report)

Finding Lists begin on page ii.

Part III

Required Procedures to Claim a Section 45Q Credit for Utilization of Carbon Oxide

Notice 2024-60

SECTION 1. PURPOSE

This notice describes the information that must be included in a written report described in § 1.45Q-4(c)(2) of the Income Tax Regulations (LCA Report) and provides the procedures a taxpayer must follow to submit the LCA Report and required supporting information to the Internal Revenue Service (IRS) and the Department of Energy (DOE) for review under § 1.45Q-4(c)(5) before any credit for carbon oxide sequestration allowed under § 45Q(a)(2)(B)(ii) or (a)(4)(B)(ii) of the Internal Revenue Code (Code) is determined for qualified carbon oxide utilized by the taxpayer in the manner described in § 45Q(f)(5) (§ 45Q utilization credit).¹ As required by § 1.45Q-4(c)(6), the IRS must approve the lifecycle analysis (LCA) of greenhouse gas emissions (as defined in § 1.45Q-4(c)(1)) documented in the LCA Report with respect to carbon capture equipment placed in service on or after February 9, 2018, before any § 45Q utilization credit otherwise satisfying the applicable requirements of § 45Q and §§ 1.45Q-1, 1.45Q-2, and 1.45Q-4 is determined. Accordingly, the IRS must approve the taxpayer's LCA before the taxpayer may claim any § 45Q utilization credit determined with respect to a taxpayer on any federal income tax return for a taxable year beginning on or after January 13, 2021 (that is, the taxable years to which § 1.45Q-4 applies).²

The Department of the Treasury (Treasury Department) and the IRS anticipate

issuing proposed regulations to update §§ 1.45Q-1 through 1.45Q-4 for amendments made by § 13104 of Public Law 117-169, 136 Stat. 1818 (August 16, 2022), commonly known as the Inflation Reduction Act of 2022 (IRA), as well as to adopt certain aspects of the guidance provided by this notice. The Treasury Department and the IRS published final regulations (REG-101607-23) in the *Federal Register* (89 FR 17546) under §§ 1.6417-1 through 1.6417-6 with respect to any § 45Q utilization credit determined with respect to a taxable year beginning after December 31, 2022, as an applicable credit for purposes of making an elective payment election under § 6417. Additionally, on June 21, 2023, the Treasury Department and the IRS published a notice of proposed rulemaking (REG-101610-23) in the *Federal Register* (88 FR 40496), with respect to any § 45Q utilization credit determined with respect to a taxable year beginning after December 31, 2022, as an eligible credit for purposes of making an election under § 6418.³

SECTION 2. BACKGROUND

.01 Congress enacted the credit for the sequestration of carbon dioxide under § 45Q in § 115 of the Energy Improvement and Extension Act of 2008, Public Law 110-343, Div. B, Title I, 122 Stat. 3765, 3829 (October 3, 2008). Congress amended § 45Q several times thereafter, including significantly by § 41119 of the Bipartisan Budget Act of 2018, Public Law 115-123, Div. D, Title II, 132 Stat. 64, 162 (February 9, 2018), to apply to all carbon oxides, and most recently on August 16, 2022, by § 13104 of the IRA, 136 Stat. 1924.

.02 Section 45Q(a)(2)(B)(ii) allows a § 45Q utilization credit of \$10 per metric ton of qualified carbon oxide captured by

the taxpayer using carbon capture equipment that is originally placed in service at a qualified facility before February 9, 2018, and utilized by the taxpayer in a manner described in § 45Q(f)(5).

.03 Section 45Q(a)(4)(B)(ii) allows a § 45Q utilization credit of the applicable dollar amount (as determined under § 45Q(b)(1)) per metric ton of qualified carbon oxide captured by the taxpayer using carbon capture equipment that is originally placed in service at a qualified facility on or after February 9, 2018, during the 12-year period beginning on the date the equipment was originally placed in service, and utilized by the taxpayer in a manner described in § 45Q(f)(5).

.04 Section 45Q(f)(5)(A) 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 of the Treasury or her delegate (Secretary).

.05 Section 45Q(f)(5)(B)(i) provides a methodology to determine the amount of qualified carbon oxide utilized by the taxpayer. Such amount is equal to the metric tons of qualified carbon oxide that the taxpayer demonstrates, based upon an LCA of greenhouse gas emissions and subject to such requirements as the Secretary, in consultation with the Secretary of Energy and the Administrator of the Environmental Protection Agency (EPA), determines appropriate, were (i) captured and permanently isolated from the atmosphere,

¹ Unless otherwise specified, all “Section” or “§” references are to sections of the Code or the Income Tax Regulations (26 CFR part 1).

² Pursuant to § 1.45Q-4(e), taxpayers may choose to apply the rules in § 1.45Q-4 for taxable years beginning on or after January 1, 2018, provided the taxpayer applies §§ 1.45Q-1, 1.45Q-2, 1.45Q-3, 1.45Q-4, and 1.45Q-5 in their entirety and in a consistent manner. Alternatively, taxpayers may choose to rely on the rules in § 1.45Q-4 as contained in the notice of proposed rulemaking (REG-112339-19) published in the *Federal Register* (85 FR 34050) on June 20, 2020 (2020 proposed regulations), for taxable years beginning on or after February 9, 2018, and before January 15, 2021, provided the taxpayer follows proposed §§ 1.45Q-1, 1.45Q-2, 1.45Q-3, 1.45Q-4, and 1.45Q-5 of the 2020 proposed regulations in their entirety and in a consistent manner.

³ Pursuant to § 13801(g) of the IRA, §§ 6417 and 6418 apply to taxable years beginning after December 31, 2022. See 136 Stat. at 2013.

or (ii) displaced from being emitted into the atmosphere, through use of a process described in § 45Q(f)(5)(A).

.06 Section 45Q(f)(5)(B)(ii) provides that for purposes of determining the amount of qualified carbon oxide utilized by the taxpayer for purposes of § 45Q(a)(2)(B)(ii) or (a)(4)(B)(ii), the term “life-cycle greenhouse gas emissions” has the same meaning given such term under § 211(o)(1)(H) of the Clean Air Act (42 U.S.C. 7545(o)(1)(H)), as in effect on February 9, 2018, except that “product” is substituted for “fuel” each place it appears in 42 U.S.C. 7545(o)(1)(H).

.07 On June 2, 2020, the Treasury Department and the IRS published a notice of proposed rulemaking under § 45Q (REG-112339-19, 85 FR 34050) (proposed regulations). After consideration of all comments received in response to the proposed regulations, on January 15, 2021, the Treasury Department and the IRS published final regulations under § 45Q in the *Federal Register* (T.D. 9944; 86 FR 4728).

.08 For purposes of § 45Q(a)(2)(B)(ii) or (a)(4)(B)(ii) and § 1.45Q-1(b)(ii) and (c)(2)(ii), § 1.45Q-4(b)(2) provides that the amount of qualified carbon oxide determined to be utilized by the taxpayer for purposes of computing the § 45Q utilization credit cannot exceed the amount of qualified carbon oxide measured at the source of capture.

.09 Section 1.45Q-4(c)(1) provides that for purposes of determining the amount of qualified carbon oxide utilized by the taxpayer, the term “lifecycle greenhouse gas emissions” means the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes)⁴ related to the full product life cycle, including all stages of product and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished product to the ultimate consumer, with the mass values for all greenhouse gases adjusted to account for their relative global warming potential according to Table A-1 of 40 CFR Part 98 subpart A. Such emissions

are expressed in carbon dioxide equivalent (CO₂-e).

.10 Section 1.45Q-4(c)(2) provides that the taxpayer verifies the amount of qualified carbon oxide utilized through an LCA. An LCA must demonstrate that the proposed system, inclusive of the taxpayer’s process, results in a net reduction of CO₂-e compared to a comparison system.

SECTION 3. LCA REPORT STANDARDS AND REQUIREMENTS

.01 *LCA Report*. Section 1.45Q-4(c)(2) requires that the results of a taxpayer’s LCA be documented in a written LCA Report. In the case of a taxpayer that owns multiple qualified facilities for which it wishes to claim a § 45Q utilization credit, a separate LCA Report is required for each qualified facility.

.02 *LCA Report Standards*. Section 1.45Q-4(c)(3) requires that an LCA Report be prepared in conformity with and contain documentation that conforms with International Organization for Standardization (ISO) 14040:2006, *Environmental management – Life cycle assessment – Principles and framework* and ISO 14044:2006, *Environmental management – Life cycle assessment – Requirements and guidelines*. To ensure conformity with these ISO standards, the LCA Report must be completed in accordance with the most current revision, as of the beginning of the year in which the LCA is submitted, of the DOE’s National Energy Technology Laboratory’s (NETL) *Carbon Dioxide Utilization (CO₂U) Life Cycle Analysis Guidance for the U.S. DOE Office of Fossil Energy and Carbon Management and 45Q Addendum to the CO₂U LCA Guidance Document*: <https://www.netl.doe.gov/LCA/CO2U> (NETL CO₂U LCA Guidance Document) and <https://www.netl.doe.gov/LCA/CO2U/45Q> (NETL 45Q Addendum).⁵ Section 1.45Q-4(c)(3) further provides that an LCA may consist of direct and indirect data in conformity with ISO 14040:2006 and 14044:2006. Direct and indirect data are also generally known within ISO standards as primary and secondary data. For purposes of § 45Q, an LCA must rely upon direct, or primary,

data to address the actual operational performance of the taxpayer’s system for the taxable year for which the LCA Report is submitted.

.03 *Independent Third-Party Statement*. Section 1.45Q-4(c)(4) provides that an LCA Report must be performed or verified by an independent third party. If an independent third-party review is conducted, then it must include an assessment of an LCA model and supporting data and be performed in accordance with ISO 14071:2014, *Environmental management – Life cycle assessment – Critical review processes and reviewer competencies: Additional requirements and guidelines to ISO 14044:2006*. An LCA Report also must provide a statement documenting the qualifications of the independent third party, including proof of appropriate U.S. or foreign professional license, and an affidavit from the third party stating that it is independent from the taxpayer. If a § 45Q(f)(3)(B) election has been made, then the affidavit must state that the third party is independent from both the electing taxpayer and the credit claimant. In addition, the statement must be made under penalties of perjury.

.04 *LCA Report Cover Page Requirements*. The LCA Report must include a cover page that includes the following information:

- (1) Name and location of the facility where the qualified carbon oxide is utilized (utilization facility);
- (2) Name and Taxpayer Identification Number (TIN) (for example, Employer Identification Number (EIN)) of the taxpayer claiming the credit based on the LCA Report;
- (3) Name and TIN (for example, EIN) of the operator of the utilization facility (if other than the taxpayer);
- (4) Taxable year for which the LCA Report is being submitted;
- (5) Name, relationship to the taxpayer, mailing address, email address, and phone number of a person whom the IRS can contact regarding the LCA Report. If this person is not an employee of the taxpayer, an IRS Form 2848, *Power of Attorney and Declaration of Representative*, must accompany the LCA Report;

⁴ See 42 U.S.C. 7545(o)(1)(H) (Clean Air Act).

⁵ See the preamble to T.D. 9944, 89 FR 4728, 4745.

(6) An attestation that the applicable requirements of § 45Q and §§ 1.45Q-1, 1.45Q-2, and 1.45Q-4 are satisfied. Such attestation must include confirmation of the following:

(a) the carbon oxide for which the § 45Q utilization credit is being claimed is qualified carbon oxide within the meaning of § 45Q(c);

(b) the qualified carbon oxide for which the § 45Q utilization credit is being claimed is captured by a qualified facility within the meaning of § 45Q(d);

(c) the qualified carbon oxide for which the § 45Q utilization credit is being claimed was captured in the United States (within the meaning of § 638(1)), or a U.S. territory (within the meaning of the term “possession” set forth in § 638(2));

(d) in the case of a resubmission of an LCA Approval Request under section 6.02 of this notice, that there has been no Material Change (within the meaning of section 6.04 of this notice) since the prior LCA was approved; and

(7) A declaration, applicable to the LCA Approval Request (including the LCA and the cover page information required by section 3.04 of this notice) signed by a person currently authorized to bind the taxpayer in these matters, in the following form:

“Under penalties of perjury, I declare that I have examined the information contained in this affirmative statement and the documents that substantiate this affirmative statement, and to the best of my knowledge and belief, it is true, correct, and complete.”

SECTION 4. LCA APPROVAL REQUEST PROCEDURES

.01 *Overview.* A taxpayer satisfies the procedural requirements of § 1.45Q-4(c)(5) by submitting an LCA Approval Request to the IRS and a duplicate to the DOE for its technical review. An LCA Approval Request must include:

(1) An LCA Report meeting all applicable requirements of section 3 of this notice;

(2) Supplemental information that supports the LCA Report data (as described in section 4.02 of this notice);

(3) An Independent Third-Party Statement (as defined in section 3.03 of this notice); and

(4) If an independent third party has performed the LCA analysis and prepared the LCA Report, an LCA model.

.02 *Supplemental Information.* For purposes of section 4.01(2) of this notice, the supplemental information that supports the LCA Report data must contain all necessary details supporting the LCA Report data, calculations, and conclusions. For example, supplemental information may include (as applicable) the proposed system’s production and maintenance schedules, periods of other stoppages and interruptions, the actual throughput while in production, changes in the supplied input energy and materials and ingredients (such as chemical composition, concentration, and system-poisoning impurities), and deviations from the actual process technology from the description in the LCA Report. Additionally, a taxpayer must disclose (to the IRS only) whether any previously-filed claim for the § 45Q utilization credit was adjusted and why it was adjusted.

.03 *Submission of the LCA Approval Request.* The IRS and the DOE will accept LCA Approval Requests submitted by taxpayers on a rolling basis. A taxpayer must submit a LCA Approval Request to the IRS and a copy to the DOE using the procedures provided in this section 4.

(1) *Submissions to the IRS.* Taxpayers must mail the LCA Approval Request (including the model if the LCA Report was not verified by an independent third party) on a USB thumb drive, to:

Internal Revenue Service
Office of Associate Chief Counsel
(PSI)

1111 Constitution Ave, N.W.
Branch 6 (CC:PSI:6), Room 5114
Washington, DC 20224

Taxpayers also must fax or e-fax a complete LCA Approval Request to the IRS at (844) 255-4817.

(2) *Submissions to the DOE.* When a taxpayer submits an LCA Approval Request to the IRS, the taxpayer also must send an email to the DOE at LCA45Q@hq.doe.gov indicating the taxpayer’s intent to submit an LCA for DOE technical review. The DOE will respond with instructions for submitting a copy of the

LCA Approval Request and any subsequent information directly to the DOE.

SECTION 5. LCA APPROVAL REQUEST REVIEW

.01 *Overview of LCA Approval Request Review.* The IRS will first review the LCA Approval Request for completeness and adequacy of the materials provided. This review is based on (i) the material provided in the LCA Report and (ii) any other materials provided by the taxpayer as required under sections 3 and 4 of this notice. If the IRS finds that the LCA Approval Request is complete, then the IRS will request a technical review by DOE (DOE Technical Review). The LCA Approval Request Review generally will be completed within four (4) months of the date of receipt of a complete LCA Approval Request (Review Period). If the LCA Approval Request is incomplete, or either the DOE or the IRS need to request any additional or clarifying information from the taxpayer, then the LCA Approval Request Review may not be completed within the Review Period.

.02 *Incomplete LCA Approval Request.*

(1) If any required information is missing from an LCA Approval Request, then the IRS will contact the taxpayer directly by fax, e-fax, or phone. The taxpayer will have forty-five (45) calendar days from the date of this request by the IRS to provide the required information to both the IRS and DOE.

(2) Taxpayers should submit any supplemental information requested by the IRS by fax or e-fax at (844) 255-4817.

(3) If the taxpayer does not furnish the supplemental information to the IRS and DOE within forty-five (45) calendar days from the date of the IRS request, then the IRS generally will deny the taxpayer’s LCA Approval Request in writing. The IRS may grant an extension to the 45-day response period on a case-by-case basis if a taxpayer experienced a force majeure event. The taxpayer must request an extension in writing before the end of the 45-day period and provide an explanation of why an extension is necessary.

(4) Taxpayers should also submit any supplemental information requested by the IRS to the DOE at LCA45Q@hq.doe.gov.

.03 *DOE Technical Review Process.* Section 1.45Q-4(c)(6) provides that an LCA Report will be subject to a DOE Technical Review. The DOE Technical Review may be either a Conformance Review or a Critical Review.

(1) *Conformance Review.*

(a) *Defined.* A Conformance Review is a type of DOE Technical Review conducted to ensure that an LCA conforms to applicable ISO 14040:2006 and ISO 14044:2006 standards and the latest revision, as of the beginning of the year in which the LCA is submitted, of *NETL's Carbon Dioxide Utilization (CO2U) Life Cycle Analysis Guidance for the U.S. DOE Office of Fossil Energy and Carbon Management and 45Q Addendum to the CO2U LCA Guidance Document.*

(b) *Procedure.* The DOE will perform a Conformance Review if a taxpayer's LCA Approval Request includes an LCA Report that has been verified by an independent third party as adhering to applicable standards and best practices. Upon performing a Conformance Review, the DOE may determine that a Critical Review is warranted.

(2) *Critical Review.*

(a) *Defined.* A Critical Review is a type of DOE Technical Review conducted to ensure that an LCA Approval Request conforms to applicable ISO 14040:2006 and ISO 14044:2006 standards and the *NETL's Carbon Dioxide Utilization (CO2U) Life Cycle Analysis Guidance for the U.S. DOE Office of Fossil Energy and Carbon Management and 45Q Addendum to the CO2U LCA Guidance Document.* The scope of the Critical Review is expanded beyond the scope of the Conformance Review to include a detailed technical assessment of the LCA model and supporting data.

(b) *Procedure.* The DOE will perform a Critical Review if a taxpayer's LCA Approval Request includes an LCA Report that has not been verified by an independent third party. Additionally, the DOE may perform a Critical Review if the DOE determines that further review is warranted after performing a Conformance Review.

(3) *DOE Requests for Supplemental Information.* Upon receipt of an LCA Approval Request, the DOE will review the LCA Approval Request for complete-

ness and identify any questions for the taxpayer. The DOE will contact the taxpayer if additional or clarifying information is needed to complete the Technical Review and will send questions directly to the taxpayer by email to expedite the review process. In response to the DOE's request for additional information, taxpayers must provide all supplemental information to both the DOE and the IRS within forty-five (45) calendar days from the date of the DOE request (in the manner described in section 4 of this notice). If the taxpayer does not furnish the supplemental information to the DOE and to the IRS (in the manner described in section 4 of this notice) within forty-five (45) calendar days from the date of the DOE request, then the IRS generally will deny the taxpayer's LCA Approval Request in writing. The IRS may grant an extension to the 45-day response period on a case-by-case basis if a taxpayer experienced a force majeure event. The taxpayer must request an extension in writing before the end of the 45-day period and provide an explanation of why an extension is necessary. The DOE will not otherwise communicate with taxpayers about the status of a pending LCA Approval Request.

(4) Upon completion of its Technical Review, the DOE will notify the IRS whether it concurs with the results of the Taxpayer's LCA Report.

.04 *IRS Determination* – (1) In General. Section 1.45Q-4(c)(6) provides that the IRS will determine whether to approve the LCA and will notify the taxpayer. The taxpayer must receive approval of the taxpayer's LCA prior to claiming the § 45Q utilization credit on any federal income tax return. The IRS will determine whether to approve a complete LCA based on its review and the results of the DOE Technical Review.

(2) *Effect of LCA Review and Determination.* Review of the LCA is neither an examination nor an inspection of books for purposes of § 7605(b) and will not preclude or impede (under § 7605(b) or any administrative provisions adopted by the IRS) the IRS from later examining a return or inspecting books or records with respect to any taxable year for which the § 45Q utilization credit is claimed. Approval of the LCA does not mean that the IRS has

determined that all of the requirements of § 45Q have been satisfied.

.05 *Notification of Approval or Denial of LCA.* The IRS will notify the taxpayer of the approval or denial of the taxpayer's LCA in writing.

.06 *Resubmission after Denial of LCA.*

(1) *Allowance.* If an LCA is denied, and the deficiencies in the LCA can be cured, then the taxpayer may revise the taxpayer's LCA Approval Request and resubmit it to the IRS and DOE (in the manner described in section 4 of this notice).

(2) *Procedures for Resubmission After Denial.* A resubmission under this section 5.06 must state in the cover page of its LCA Report (described in section 3.04 of this notice) that the LCA Approval Request is being resubmitted after a denial by the IRS. The resubmitted LCA Approval Request should explain in detail the reasons why the original LCA Approval Request was denied and how the resubmitted LCA Approval Request differs from the original LCA Approval Request.

.07 *IRS Administrative Review.* If an LCA is denied solely on the basis of the IRS review in section 5.01 of this notice (excluding a denial on the basis of completeness), then the taxpayer will have an opportunity to request an IRS administrative review of that denial.

SECTION 6. REQUIREMENTS FOR REAPPROVAL OF AN APPROVED LCA

.01 *Overview.* Except as provided in sections 6.03 and 6.04 of this notice, a taxpayer may treat an approved LCA as approved for the taxable year for which the LCA Report was submitted and the following two taxable years (three-year approval period). Alternatively, a taxpayer may choose to submit a new LCA Approval Request to the IRS and the DOE (in the manner described in section 4 of this notice) for any taxable year.

.02 *Periodic Resubmissions.* A taxpayer wishing to claim the § 45Q utilization credit after the three-year approval period must submit a new LCA Approval Request to the IRS and the DOE (in the manner described in section 4 of this notice). If the IRS approves this LCA, then a new three-year approval period will

apply (unless the LCA analyzes a period of less than six months or there is a Material Change (as defined in section 6.04(1) of this notice)).

(1) *Example.* X, a calendar year taxpayer, utilizes qualified carbon oxides in 2022 in the manufacture of a product for which a commercial market exists. In 2023, X submits an LCA Approval Request to the IRS and the DOE analyzing X's utilization data for all twelve months of 2022. The IRS approves the LCA in 2023. X claims a § 45Q utilization credit on X's 2022 tax return. X may rely on the LCA to claim a § 45Q utilization credit for 2023 and 2024 provided that it follows the requirements in section 6.04(3) of this notice. If X wishes to claim a § 45Q utilization credit for 2025, it will need to submit a new LCA Approval Request to the IRS and the DOE for 2025.

(2) *Procedures for Periodic Resubmissions.* A resubmission under this section 6.02 must state in its cover report (described in section 3.04 of this notice) that the LCA Approval Request is being resubmitted under section 6.02 of this notice.

.03 Resubmission after Limited Initial Period. If a taxpayer submits the taxpayer's initial LCA Approval Request for an LCA that analyzes a period of less than six (6) months, then the taxpayer may treat the approved LCA as approved for the taxable year for which the LCA Report is submitted and the following taxable year (two-year approval period). A taxpayer wishing to claim the § 45Q utilization credit after the two-year approval period must submit a new LCA Approval Request to the IRS and the DOE (in the manner described in section 4 of this notice). If the IRS approves this new LCA, then a new three-year approval period will apply (unless the LCA analyzes a period of less than six months or there is a Material Change (as defined in section 6.04(1) of this notice)).

(1) *Example.* X, a calendar year taxpayer, begins utilizing qualified carbon oxides in August 2022 in the manufacture of a product for which a commercial market exists. In 2023, X submits an LCA Approval Request to the IRS and the DOE analyzing X's utilization data for five months of 2022. The IRS approves the LCA in 2023. X claims a § 45Q utilization credit on X's 2022 tax return. X may rely

on the LCA to claim a § 45Q utilization credit for 2023 provided that it follows the requirements in section 6.04(3) of this notice. If X wishes to claim a § 45Q utilization credit for 2024, then it will need to submit a new LCA Approval Request to the IRS and the DOE for 2024. Thereafter, X will be subject to the periodic resubmission requirements in section 6.02 of this notice.

(2) *Procedures for Resubmissions after Limited Initial Period.* A resubmission under this section 6.03 must state in the cover page of its LCA Report (described in section 3.04 of this notice) that the LCA Approval Request is being resubmitted under section 6.03 of this notice.

.04 Resubmission due to Material Change.

(1) *Material Change Defined.* A Material Change is any change to the taxpayer's process described in the LCA that reduces the "Life Cycle Displacement Factor" (DF) by an amount greater than 0.05 from the value of that metric from the taxable year in which the original LCA was approved by the IRS (Original DF).

(a) *Life Cycle Displacement Factor.* The value of the DF is a ratio that measures the amount of carbon dioxide equivalents displaced per unit of carbon oxide captured and utilized as defined in the *NETL's 45Q Addendum to the CO2U LCA Guidance Document*. The change in the DF is calculated separately for each of the two subsequent taxable years after the Original DF is determined. The change in the DF is calculated as the difference between the Original DF and the DF for the applicable subsequent taxable year (DF_n). A Material Change occurs if the Original DF exceeds the DF for the applicable subsequent taxable year by an amount greater than 0.05 of the Original DF as shown in the following formula:

$$\text{Original DF} - \text{DF}_{n \text{ (subsequent taxable year 1 or 2)}} > 0.05$$

(b) *Calculation of Displacement Factor in Taxable Years Subsequent to Approval of Original LCA for Determination of Material Change.* The taxpayer must calculate DFs for subsequent taxable years using only the changes that have affected the per unit carbon oxide utilization product direct inputs and outputs

(and the associated emissions) for the taxpayer's process described in the proposed system in the original LCA to determine whether there has been a Material Change. This Material Change determination will be subject to review by the IRS and the DOE.

(2) *Procedures for Resubmission due to Material Change.* If a Material Change (as defined in section 6.04(1) of this notice) occurs, then a taxpayer must resubmit the taxpayer's LCA to the IRS and the DOE (in the manner described in section 4 of this notice). The taxpayer must receive approval of the taxpayer's resubmitted LCA from the IRS and DOE before a § 45Q utilization credit may be determined for any additional taxable year on Form 8933, *Carbon Oxide Sequestration Credit*. A resubmission under this section 6.04 must state in the cover page of its LCA Report (described in section 3.04 of this notice) that the LCA is being resubmitted due to a Material Change and explain the Material Change.

(3) *Procedures if no Material Change Exists.* A taxpayer must calculate DFs as provided in section 6.04(1)(b) of this notice to determine whether a Material Change has occurred during each taxable year between required resubmissions to the IRS and the DOE. Based on this annual self-assessment, if the taxpayer finds that no Material Change has occurred, the taxpayer may treat the approved LCA as approved for the remainder of the three-year approval period in section 6.01 of this notice or the two-year approval period in section 6.03 of this notice as long as the taxpayer continues to use the Original DF in that approved LCA for calculating the taxpayer's § 45Q utilization credit. The taxpayer must make an affirmative statement that no Material Change has occurred within the taxable year and append the statement to the Form 8933 on which the § 45Q utilization credit is claimed. The taxpayer must satisfy the recordkeeping requirements of § 6001 and § 1.6001-1 to support the taxpayer's determination that no Material Change has occurred. After review of the affirmative statement, the IRS may contact the taxpayer stating that an updated LCA submission is necessary. The affirmative statement must provide the following information:

(a) The date on which the LCA was previously approved by the IRS;

(b) A statement that the taxpayer has determined that no Material Change (as defined in section 6.04(1) of this notice) has occurred;

(c) A penalty of perjury statement that provides the following:

“Under penalties of perjury, I declare that I have examined the information contained in this affirmative statement and the documents that substantiate this affirmative statement, and to the best of my knowledge and belief, it is true, correct, and complete.”

(d) The following additional statement:

“I further declare that I have authority to sign this document on behalf of the taxpayer.”

SECTION 7. APPLICABILITY DATE

This notice applies with respect to LCA Reports submitted on or after [the date that this notice is published in the Internal Revenue Bulletin]. Taxpayers that received an approval of an LCA Report submitted before [the date that this notice is published in the Internal Revenue Bulletin] may rely on the provisions of section 6 of this notice (including the three-year approval period in section 6.01 of this notice and the two-year approval period in section 6.03 of this notice) if they follow all of the provisions of that section.

SECTION 8. PAPERWORK REDUCTION ACT

The collection of information contained in this notice has been reviewed and approved by the Office of Management and Budget in accordance with the Paperwork Reduction Act (44 U.S.C. § 3507) under control numbers 1545-2132, 1545-0074, and 1545-0123.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number.

The collections of information in this notice are in sections 3, 4, 5, and 6 of this notice. This information is required to obtain an approval of an LCA, which is required before a § 45Q utilization credit may be determined for a taxpayer. This information will be used by the IRS and the DOE to verify that the taxpayer is eligible for the § 45Q utilization credit. The collection of information is required to obtain a benefit. The likely respondents are businesses or other for-profit institutions.

Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by § 6103.

SECTION 9. DRAFTING INFORMATION

The principal authors of this notice are David Selig and Maggie Stehn of the Office of Associate Chief Counsel (Passthroughs & Special Industries). For further information regarding this notice contact Mr. Selig or Ms. Stehn at (202) 317-6853 (not a toll-free number).