

June 6, 2024

MEMORANDUM

TO: Carbon Capture Coalition

FROM: Hunter Johnston
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RE: Technology-Neutral Investment and Production Tax Credit Proposed Regulations

On May 29, 2024, the Department of Treasury and Internal Revenue Service (collectively “Treasury”) issued proposed regulations to implement the technology-neutral clean energy production tax credit (“PTC”) and investment tax credit (“ITC”) that take effect in 2025 (the “Proposed Regulations”).¹ This memorandum provides a summary of the technology-neutral ITC and PTC’s statutory provisions, Proposed Regulations, and treatment of carbon capture technology.

The Inflation Reduction Act (“IRA”) transitions the PTC and ITC to be determined on a technology-neutral basis under section² 45Y for the PTC and section 48E for the ITC, each of which will become available for projects placed in service after December 31, 2024, when the current section 45 PTC and section 48 ITC expire.³

Under the current section 45 PTC and section 48 ITC, a technology must be specifically and expressly listed in the statute to qualify for the credit. Whenever a new technology is developed, Congress must amend the statute for the technology to be eligible for the PTCs or ITCs. Under the technology-neutral scheme, any technology that generates electricity for which the greenhouse gas (“GHG”) emissions rate is not greater than zero qualifies for the credit.

¹ See 89 Fed. Reg. 47,792 (Jun. 3, 2024) (Notice of Proposed Rulemaking: Section 45Y Clean Electricity Production Credit and Section 48E Clean Electricity Investment Credit) (the “Proposed Regulations”), <https://www.govinfo.gov/content/pkg/FR-2024-06-03/pdf/2024-11719.pdf>

² Unless otherwise indicated, all “section” references are to sections of the Internal Revenue Code of 1986, as amended (the “Code”) and all “Prop. Treas. Reg. §” references are to sections of proposed regulations promulgated thereunder.

³ As discussed below, there will be an interim period where taxpayers may choose between the current section 45 and section 48 credits and the new technology-neutral section 45Y and section 48E credits if they begin construction before, but have not already placed facilities or energy property in service by, January 1, 2025.

The Proposed Regulations require a lifecycle greenhouse gas emissions analysis (“LCA”) to determine the GHG emissions rate for certain combustion and gasification facilities. The guidance related to LCAs in the Proposed Regulations goes significantly beyond the guidance that has been issued in the context of section 45Q utilization projects. Although not directly applicable to section 45Q utilization projects, these rules might provide some insight into the government’s current thinking about LCAs and so may be of particular interest to coalition members pursuing utilization projects. These rules are described in II.C.2, below. The Proposed Rules also provide a provisional emissions rate determination process that differs substantially from the LCA process used for section 45Q utilization projects, but might provide a useful analogy for reforming that process. These rules are described in II.D, below.

Under the current section 45 PTC and section 48 ITC, the use of carbon capture, utilization and storage (“CCUS”) is irrelevant to a taxpayer’s qualification for the credits. This is no longer the case for the new technology-neutral PTC and ITC. Because qualification for the technology-neutral credits depends on the GHG emissions rate of the underlying qualified facility or energy property, which may be reduced through CCUS, the use of CCUS potentially can allow some taxpayers to qualify for these credits when they otherwise would not qualify in the absence of CCUS. This feature of the Proposed Regulations is discussed in II.C.3, below.

Because of this key difference between the technology-neutral credits and the legacy credits, the statute includes anti-duplication rules (discussed below) that prevents a taxpayer from claiming both section 45Q credits along with a section 45Y PTC or section 48E ITC. There is no anti-duplication rule between section 45Q credits and the current section 45 PTC or section 48 ITC. Accordingly, after the transition, taxpayers that wish to use CCUS for projects that generate electricity will need to choose between claiming the new technology-neutral credits or section 45Q credits.

In light of the role that CCUS technologies play in the new technology-neutral credits, Treasury has requested comments on several issues related to CCUS for determining the GHG emissions rate and the interaction between section 45Q, on the one hand, and sections 45Y and 48E, on the other. These issues are described in II.C.4, below.

Comments on the Proposed Regulations are due by August 2, 2024, and there will be a public hearing on the Proposed Regulations on August 12 and 13, 2024. The Carbon Capture Coalition did not file comments to Notice 2022-49 that was issued in October 2022 regarding Treasury’s request for comments on the technology-neutral credits.

I. Statutory Provisions

A. Current Law

Section 45 provides a PTC for electricity produced using qualifying renewable energy resources.⁴ For facilities placed in service after December 31, 2021, and the construction of which begins before January 1, 2025, the 2023 base credit (adjusted for inflation) is \$0.55 per kWh for wind, closed-loop biomass, geothermal energy, and solar energy and \$0.3 per kWh on the sale of electricity produced from the qualified energy resources of open-loop biomass, landfill gas, trash, qualified hydropower, and marine and hydrokinetic renewable energy.⁵

Section 48 provides an ITC for investments in qualifying energy property the construction of which begins before January 1, 2025.⁶ The base credit rate is 6% for investment in qualifying solar, geothermal, microturbine, energy storage technology, qualified biogas property, and microgrid controller property, or combined heat and power (“CHP”) property and 2% in the case of microturbine property.⁷

The PTC base credit increases five times and the ITC base credit increases to 30% (10% for microturbine property) for facilities that meet prevailing wage and apprenticeship requirements.⁸ PTC facilities can increase the credit by an additional 10% and ITC facilities can increase the credit by an additional 10 percentage points for meeting certain domestic content standards.⁹ Facilities located in energy communities can be eligible for a 10% increase for the PTC or 10 percentage point increase for the ITC.¹⁰

B. Technology-Neutral Investment and Production Tax Credits

Section 45Y provides a PTC for 10-years for any facility placed in service after December 31, 2024, that is used for the generation of electricity for which the GHG emissions is not greater than zero.¹¹

Section 48E provides an ITC for qualified investment in any facility placed in service after December 31, 2024, that is used for the generation of electricity for which the GHG emissions is not greater than zero.¹²

⁴ Section 45(a).

⁵ Section 45(c)(1)(A)-(I), (a)(1), (b)(2). *See also* IRS Notice 2023-51, <https://www.irs.gov/pub/irs-irbs/irb23-30.pdf>.

⁶ Section 48(a).

⁷ Section 48(a)(2)(A)(i)-(ii), (a)(3)(A)(i)-(xi).

⁸ Sections 45(b)(6)(B)(iii), (b)(7), (b)(8); 48(a)(9)(B)(iii), (a)(10), (a)(11).

⁹ Sections 45(b)(9); 48(a)(12).

¹⁰ Sections 45(b)(11); 48(a)(14).

¹¹ Section 45Y(b)(1)(A)-(B).

¹² Section 48E(a)(1)(A), (b)(3)(A)(i)-(iii).

Similar to the current PTC and ITC schemes, the technology-neutral PTC increases five times and the technology-neutral ITC increases to 30% for facilities meeting the prevailing wage and apprenticeship requirements.¹³ The energy domestic content and energy community bonuses also apply to both the technology-neutral PTC and ITC.¹⁴

Captured carbon emissions are not included for purposes of computing the GHG emissions rate that determines eligibility for the technology-neutral ITC and PTC, which means that CCUS can help projects achieve the zero GHG emissions rate to qualify for the technology-neutral ITC and PTC. As described further below in Section II, the amount of greenhouse gases emitted into the atmosphere by a facility in the production of electricity that is used to determine eligibility for the section 45Y PTC and section 48E ITC credits cannot include any qualified carbon dioxide captured by the taxpayer and either (1) disposed of by the taxpayer in secure geological storage pursuant to any regulations established under section 45Q(f)(2), or (2) utilized by the taxpayer in a manner described in section 45Q(f)(5).¹⁵

However, a facility that claims section 45Q credits is ineligible to also claim the section 45Y or section 48E credits.¹⁶

Unlike the past short-term extensions and starts and stops over the last decade, the IRA provided the technology-neutral ITC and PTC with long-term extensions. Sections 48E and 45Y are available to any eligible project that commences construction before 2033 or the year that the Secretary determines that annual GHG emissions from the production of electricity falls below 25% of 2022 levels, whichever is later.¹⁷ After such year, the credit phases out over three years.¹⁸

II. Proposed Regulations

Under the Proposed Regulations, the technology-neutral PTC will have a base value of 3 cents per kilowatt hour, while the ITC will be worth up to 30% of facility construction costs. The Proposed Regulations also describe how GHG emissions rates for determining eligibility for the credit will be established and discuss the requirements for combustion and gasification facilities (“C&G Facilities”) and non-combustion and gasification facilities (“Non-C&G Facilities”).

Prop. Treas. Reg. § 1.45Y–5(b)(4) defines a C&G Facility as a “facility that produces electricity through combustion or uses an input energy source to produce electricity, if the input energy source was produced through a fundamental transformation, or multiple transformations, of one energy source into another using combustion or gasification.”¹⁹ A facility that produces

¹³ Sections 45Y(a)(2)(B)(iii), (g)(9), (g)(10); 48E(a)(2)(A)(iii), (d)(3), (d)(4).

¹⁴ Sections 45Y(g)(7), (g)(11); 48E(a)(3)(A)-(B).

¹⁵ Sections 45Y(b)(2)(D); 48E(b)(3)(B)(ii).

¹⁶ Sections 45Y(b)(1)(D); 48E(b)(3)(C)(iii).

¹⁷ Sections 45Y(d)(3); 48E(e)(3).

¹⁸ Sections 45Y(d)(2)(A)-(D); 48E(d)(2)(A)-(D).

¹⁹ Prop. Treas. Reg. § 1.45Y–5(b)(4).

electricity using any fuel that was produced using electricity that had been produced, in whole or in part, from the combustion of fossil fuels would be considered a C&G Facility.²⁰

The Proposed Regulations define a Non-C&G Facility as a “facility that produces electricity and is not described in Prop. Treas. Reg. § 1.45Y–5(b)(4).”²¹

A. Qualified Facility

The Proposed Regulations define a facility to include property that is an “integral part” of a qualified facility and incorporate the “functionally interdependent” test so that the qualified facility includes all functionally interdependent components of property owned by the taxpayer that are operated together and that can operate apart from other property to produce electricity.²²

The Proposed Regulations also clarify that any property that meets the requirements of a qualified facility is part of a qualified facility regardless of where such property is physically located.²³ A qualified facility generally does not include equipment that is a modification or addition to an existing facility but the Proposed Regulations include rules regarding the expansion of a facility and incorporate the existing 80/20 rule for a retrofitted qualified facility.²⁴

The current section 45 PTC and section 48 ITC for some technologies apply to projects that commence construction before January 1, 2025, while the technology-neutral section 45Y PTC and section 48E ITC apply to projects that are placed in service after December 31, 2024.²⁵ In some cases, if a taxpayer places in service a qualified facility after 2024, the construction of which begins before 2025, the qualified facility may be eligible for more than one of the credits, but the preamble to the Proposed Regulations states taxpayers can only claim one of the credits.²⁶

B. Recapture Rules

The Proposed Regulations provide the technology-neutral ITC is subject to recapture if, during a five-year period beginning on the date the qualified facility is placed in service, the Secretary determines the qualified facility’s GHG emissions rate exceeds 10 grams of CO₂e per kWh averaged over the taxable year.²⁷

²⁰ See 89 Fed. Reg. at 47,801.

²¹ Prop. Treas. Reg. § 1.45Y-5(b)(7).

²² Prop. Treas. Reg. § 1.45Y-2(b)(2), (b)(3).

²³ Prop. Treas. Reg. § 1.45Y-2(b)(1).

²⁴ Prop. Treas. Reg. § 1.45Y-4(c), (d).

²⁵ Sections 45(d); 45Y(b)(1)(A)(ii); 48(a)(2)(A)(i)(II); 48E(b)(3)(A)(ii).

²⁶ See 89 Fed. Reg. at 47,792.

²⁷ Prop. Treas. Reg. § 1.48E-4(f)(1), (2).

C. Determining GHG Emissions Rates

For purposes of determining GHG emissions rates to qualify for the credits, the Proposed Regulations apply the same requirements for the technology-neutral PTC and ITC but require different approaches for determining emissions rates for Non-C&G Facilities and C&G Facilities.²⁸ C&G Facilities must consider the net rate of GHG emissions by taking into account a lifecycle greenhouse gas emissions analysis that is not required for Non-C&G Facilities.²⁹

For both Non-C&G Facilities and C&G Facilities, GHG emissions do not include: emissions from back-up generators; emissions from routine operational and maintenance activities integral to the production of electricity; emissions from a step-up transformer; emissions that occur before commercial operations including manufacturing of components or the facility itself; emissions from the infrastructure associated with the facility; and emissions from the distribution of electricity to consumers.³⁰

As described below, emissions rates are also reduced for carbon dioxide that is captured from an industrial source and sequestered or utilized.³¹

1. Non-Combustion & Gasification Facility

For Non-C&G Facilities, emissions rates are based on the GHG emissions generated directly in the production of electricity.³² The Proposed Regulations exclude emissions not directly produced “by the fundamental transformation of the input energy source into electricity,” including:

- emissions from hydropower reservoirs due to anoxic conditions;
- ebullitive, diffuse, and degassing emissions from hydropower operations;
- emissions of non-condensable gases from underground reservoirs during geothermal operations; and
- emissions occurring due to activities and operations occurring off-site, including but not limited to, the production and transportation of fuels used by the facility, or land use change from siting or changes in demand.³³

The Proposed Regulations require the GHG emissions rate to be determined through a technical and engineering assessment.³⁴

²⁸ See Prop. Treas. Reg. § 1.48E-5(b)-(f).

²⁹ See sections 45Y(b)(2); 48E(b)(3)(B)(ii); Prop. Treas. Reg. §§ 1.45Y-5(d), 1.48E-5(d).

³⁰ Prop. Treas. Reg. § 1.45Y-5(b)(6)(i)-(vi), (d)(2)(vi)(A)-(D).

³¹ Prop. Treas. Reg. § 1.45Y-5(e).

³² Prop. Treas. Reg. § 1.45Y-5(c)(1)(i).

³³ Prop. Treas. Reg. § 1.45Y-5(c)(1)(i)(A)-(D).

³⁴ Prop. Treas. Reg. § 1.45Y-5(c)(1)(ii).

The Proposed Regulations intend to provide certainty for credit eligibility by identifying certain types of facilities that are categorically Non-C&G Facilities with a GHG emissions rate that is not greater than zero: wind, hydropower, marine and hydrokinetic, solar, geothermal, nuclear, and certain waste energy recovery property.³⁵

2. Combustion & Gasification Facility

The Proposed Regulations require an LCA to determine the GHG emissions for C&G facilities and provide requirements for the LCA.³⁶ The starting boundary for the LCA is feedstock generation or extraction and includes the processes necessary to produce or collect the raw materials needed to produce electricity.³⁷ The ending boundary is the meter at the point of production of the C&G Facility.³⁸ The LCA must be based on a future anticipated baseline.³⁹ Offsets and offsetting activities unrelated to the production of electricity are not taken into account.⁴⁰

The Proposed Regulations also include principles for included emissions and excluded emissions within the LCA.⁴¹ Direct emissions included in the LCA include emissions from feedstock generation, production, and extraction; emissions from feedstock and fuel transport; emissions from transporting and distributing fuels to the electricity production facility; emissions from handling and processing feedstock and intermediate products; emissions from combustion and gasification.⁴² Indirect emissions include emissions from land use changes or increased use of the feedstock.⁴³ The excluded emissions are described above in Section II.C. Last, the LCA can also consider alternative fates or account for avoided emissions.⁴⁴

The preamble to the Proposed Regulations requests comment on several key issues related to the LCA:

- Treatment of biogas, renewable natural gas, and fugitive sources of methane;
- Analytical LCA parameters, including spatial scales and time horizons;
- Whether and how to distinguish between co-products, byproducts, and waste products and how emissions should be allocated to each LCA;
- How to attribute emissions to the heat produced by facilities using combined heat and power systems;

³⁵ Prop. Treas. Reg. § 1.45Y-5(c)(2)(i)-(viii).

³⁶ Prop. Treas. Reg. § 1.45Y-5(d)(1)-(2).

³⁷ Prop. Treas. Reg. § 1.45Y-5(d)(2)(i).

³⁸ Prop. Treas. Reg. § 1.45Y-5(d)(2)(ii).

³⁹ Prop. Treas. Reg. § 1.45Y-5(d)(2)(iii).

⁴⁰ Prop. Treas. Reg. § 1.45Y-5(d)(2)(iv).

⁴¹ Prop. Treas. Reg. § 1.45Y-5(d)(2)(v)-(vi).

⁴² Prop. Treas. Reg. § 1.45Y-5(d)(2)(v)(A).

⁴³ Prop. Treas. Reg. § 1.45Y-5(d)(2)(v)(B).

⁴⁴ Prop. Treas. Reg. § 1.45Y-5(d)(2)(vii).

- How to create and maintain LCA baselines; and
- Additional issues related to LCA modeling.⁴⁵

3. Treatment of Captured Carbon Emissions for Determining GHG Emissions Rates

The Proposed Regulations provide that the GHG emissions rate for a Non-C&G Facility or C&G Facility under both section 45Y and section 48E “must exclude any qualified carbon dioxide” captured by the taxpayer and either disposed of by the taxpayer in secure geological storage pursuant to the regulations under section 45Q(f)(2) or utilized by the taxpayer in secure geological storage in a manner described in section 45Q(f)(5).⁴⁶ By excluding qualified carbon dioxide in this manner, the Proposed Regulations appear to reduce the GHG emissions rate for facilities that employ qualifying CCUS technologies, thus making it easier for such facilities to qualify for the technology-neutral credits.

For example, suppose a C&G Facility without CCUS produces 600g of direct carbon dioxide emissions from combustion per kWh of electricity generated. Suppose further that, because of reductions in indirect or upstream emissions compared to the relevant baseline, the LCA for such facility demonstrates a GHG emissions rate of 500 g CO₂e per kWh. Without CCUS, this facility would not qualify for the tech-neutral credit because its GHG emissions rate is more than zero. However, if carbon capture equipment is added and the taxpayer captures and sequesters 600 grams of CO₂ per kWh, it appears that, under the Proposed Regulations, the GHG emissions rate would become negative 100 g CO₂e per kWh, and the facility potentially qualify for the tech-neutral credit because it has a GHG emissions rate less than zero.

Although this appears to be the intent of both the statutory provisions and the Proposed Regulations as drafted, the Proposed Regulations could state this more clearly. Furthermore, an example added to the final regulations could help eliminate any uncertainty about the operation of this proposed rule.

Qualified carbon dioxide means carbon dioxide captured from an industrial source that would otherwise be released into the atmosphere as industrial emission of greenhouse gas, is measured at the source of capture and verified at the point of disposal or utilization, and is captured and disposed or utilized within the United States.⁴⁷

4. Comments Requested Regarding CCUS

Because the Proposed Regulations exclude qualified carbon dioxide from the GHG emissions rate, Treasury requests comments on several issues related to CCUS for determining the GHG emissions rate.

⁴⁵ See 89 Fed. Reg. at 47,804.

⁴⁶ Prop. Treas. Reg. §§ 1.45Y-5(e); 1.48E-5(e).

⁴⁷ Prop. Treas. Reg. § 1.45Y-5(e) (referencing the statutory definition under section 45Y(e)(3)).

- What requirements should apply to substantiate and verify that carbon dioxide that is captured by the taxpayer is (1) disposed of by the taxpayer in secure geological storage pursuant to any regulations established under section 45Q(f)(2), disposed of by the taxpayer in secure geological storage, or (2) utilized by the taxpayer in a manner described in section 45Q(f)(5)? For example, would it be appropriate to limit the carbon dioxide that may be considered to be qualified carbon dioxide under section 45Y(e)(3), and thus excluded under section 45Y(b)(2)(D), to carbon dioxide that has been reported to the U.S. Greenhouse Gas Reporting Program (“GHGRP”)? If so, which GHGRP subpart or subparts should be used?⁴⁸
- In the event that carbon dioxide that was captured and sequestered as required by section 45Y(e)(3) subsequently escapes into the atmosphere after such carbon dioxide was taken into account by a taxpayer that claimed a Clean Electricity Tax Credit under Section 48E or Section 45Y, what enforcement mechanisms or regulatory regimes should be used to identify when such emissions leakages have occurred? How should such emissions leakages be taken into account in determining compliance with the GHG emissions rate requirements under sections 45Y and 48E? Are the existing recapture provisions under section 45Q sufficient for this purpose?⁴⁹
- Should carbon capture and sequestration that occurs in the production of fuel that is used by a facility to produce electricity be taken into account under Prop. Treas. Reg. § 1.45Y-5(e) and section 45Y(e)(3)? If so, how should such use of carbon capture and sequestration (for example, emissions from CO₂ capture, purification and compression, transportation, and CO₂ site injection) be assessed in an LCA? Should emissions that occur from carbon capture and sequestration be taken into account in determining the net rate of greenhouse gases emitted into the atmosphere by a C&G Facility in the production of electricity? What verification and substantiation requirements would be appropriate to establish that carbon capture and sequestration that met the requirements of section 45Y(e)(3) and Prop. Treas. Reg. § 1.45Y-5(e) were met in the production of a fuel or feedstock? Are the existing recapture provisions under section 45Q sufficient for this purpose?⁵⁰

D. Obtaining a GHG Emissions Rate

For purposes of obtaining a GHG emissions rate, the Proposed Regulations apply the same requirements for the technology-neutral PTC and ITC.⁵¹ Under Proposed Regulations, Treasury must annually publish a table that sets forth the GHG emissions rates for types and

⁴⁸ See 89 Fed. Reg. at 47,810.

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ See Prop. Treas. Reg. §§ 1.45Y-5(f), (g); 1.48E-5(f), (g).

categories of facilities that the Taxpayer must use to establish emissions rates.⁵² The annual table is intended to cover as many technologies as possible so the provisional emissions rate (“PER”) process, as described below, is intended to be available only if the technology is not covered in the annual table.

A PER process is available for facilities not captured in the annual table.⁵³ To obtain a PER, the taxpayer must file a PER petition with their tax return for the first taxable year claiming the credit.⁵⁴ The PER must contain an emissions value and, if applicable, a letter from the Department of Energy (“DOE”). The Proposed Regulations provide that the taxpayer can obtain an emission value using two methods: (1) obtain an analysis from the DOE, or (2) by the using an approved LCA model.⁵⁵

An emissions value obtained from DOE is based on an analytical assessment of the emissions rate associated with the facility, performed by the National Laboratories in consultation with other experts.⁵⁶ The taxpayer must request an emissions value consistent with DOE’s rules and procedures, which the Proposed Regulations note the DOE intends to publish.⁵⁷ A taxpayer may request an emissions value from DOE only after a front-end engineering and design (“FEED”) study or similar indication of project maturity, as determined by DOE, such as the completion of a project specification and cost estimation sufficient to inform a final investment decision for the facility and may reject non-responsive applications.⁵⁸ DOE’s guidance will, in limited circumstances, allow a taxpayer to request a revision to an initial assessment of an emissions value on the basis of revised technical information or facility design and operation.⁵⁹ The Proposed Regulations require the taxpayer to retain in its books and records the request to DOE for an emissions value, including any information provided by the taxpayer to DOE pursuant to the emissions value request process.⁶⁰

Alternatively, an emissions value can be determined by the taxpayer for a facility using the most recent version of an LCA model or models, as of the time the taxpayer files the PER petition.⁶¹ If an emissions value is determined using the LCA model, the taxpayer is required to provide to the IRS information to support its determination of the emissions value.⁶² A taxpayer

⁵² Prop. Treas. Reg. § 1.45Y-5(f)(1)-(2).

⁵³ Prop. Treas. Reg. § 1.45Y-5(g)(1)-(2).

⁵⁴ Prop. Treas. Reg. § 1.45Y-5(g)(3).

⁵⁵ Prop. Treas. Reg. § 1.45Y-5(g)(3), (6).

⁵⁶ Prop. Treas. Reg. § 1.45Y-5(g)(3).

⁵⁷ Prop. Treas. Reg. § 1.45Y-5(g)(5).

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

may not request an emissions value from DOE for a facility for which an emissions value can be determined by using the most recent version of an LCA model.⁶³

The Proposed Regulations do not require DOE to approve the PER before the taxpayer file a return but state that, upon the IRS's acceptance of the taxpayer's return containing a PER, the emissions value of the facility specified will be deemed accepted.⁶⁴ However, even if the IRS accepts the PER, the taxpayer must still comply with all applicable requirements to claim the section 48E or section 45Y credit.⁶⁵

The preamble to the Proposed Regulations states Treasury anticipates that the emissions value request process will open after the publication of the final regulations.⁶⁶

Although the LCA process for section 45Q differs from the LCA process under the Proposed Regulations for sections 48E and 45Y, the DOE's National Energy Technology Lab states it is anticipating revisions to the 45Q LCA Toolkit soon which could signal that DOE may be considering significant changes to conform the section 45Q LCA process with the sections 48E and 45Y LCA process included in the Proposed Regulations.⁶⁷

E. Coordination with Section 45Q Credits

The Proposed Regulations provide that the term "qualified facility" under section 45Y and section 48E does not include any facility for which a credit is determined under section 45Q.⁶⁸ The Proposed Regulations also clarify that a taxpayer that directly owns a qualified facility that is eligible for both section 45Y or section 48E and another Federal income tax credit is eligible for the section 45Y or section 48E credit only if the other Federal income tax credit was not claimed with respect to the qualified facility.⁶⁹

The Proposed Regulations include an example of the interaction between the section 45Y PTC and section 45Q credits. The example confirms that a taxpayer who owns a qualified facility under section 45Y that includes carbon capture equipment that is functionally interdependent with the production of electricity by the section 45Y facility and claimed a

⁶³ *Id.*

⁶⁴ Prop. Treas. Reg. § 1.45Y-5(g)(4).

⁶⁵ *Id.*

⁶⁶ 89 Fed. Reg. at 47, 811.

⁶⁷ See National Energy Technology Laboratory, 45Q – Frequently Asked Questions, <https://www.netl.doe.gov/LCA/co2u/45Q/faq> (“NETL will be releasing additional resources that can be leveraged for completing the 45Q LCA requirement in the coming months. These resources include example LCAs, standardized comparison product system (CPS) life cycle inventory data for carbon oxide capture from ammonia and ethanol facilities, and an updated 45Q addendum to the NETL CO2U LCA Guidance document”).

⁶⁸ Prop. Treas. Reg. §§ 1.45Y-2(c)(1); 1.48E-2(c)(1).

⁶⁹ *Id.*

section 45Q credit in a prior taxable year on the carbon capture equipment cannot claim the section 45Y credit on the facility because the section 45Q credit was already claimed.⁷⁰

The Proposed Regulations also further clarify that nothing in Prop. Treas. Reg. § 1.45Y-2(c) or Prop. Treas. Reg. § 1.48E-2(c) precludes a taxpayer from claiming a section 45Y or section 48E credit with respect to a qualified facility that is co-located with another facility for which a credit is claimed under section 45Q by the taxpayer or another taxpayer for the taxable year or any prior taxable year.⁷¹

⁷⁰ Prop. Treas. Reg. § 1.45Y-2(c)(3)(iv) (Example 4).

⁷¹ Prop Treas. Reg. §§ 1.45Y-2(c)(1); 1.48E-2(c)(1).