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IRS and Treasury Issue Proposed Regulations on Tech-Neutral Tax Credits for Clean Energy Projects

The Proposed Regulations generally would apply to projects placed in service after December 31, 2024, once final regulations are published in the Federal Register.

On June 3, 2024, the IRS and Treasury issued proposed regulations (the "Proposed Regulations") under sections 45Y and 48E.[1] These sections, which were enacted as part of the Inflation Reduction Act of 2022, allow tax credits for certain clean energy projects beginning in 2025 in lieu of credits under sections 45 (the production tax credit) and 48 (the investment tax credit). Because the section 45Y and 48E credits are expected by some measures to be the single largest driver[2] of the reduction in greenhouse gas ("GHG") emissions under the Inflation Reduction Act, taxpayers, policymakers, and market participants will have a keen interest in the Proposed Regulations and the subsequent finalization of this guidance.

The cornerstone of sections 45Y and 48E is a pivot from a prescribed list of credit-eligible technologies to a "technology neutral" system under which any qualifying energy generation or storage technology is credit eligible if it satisfies a "zero or negative" GHG emissions standard.[3]

Under the Proposed Regulations, certain technologies—wind, solar, geothermal, marine and hydrokinetic, and nuclear energy (both fission and fusion)—would be deemed to have *per se* zero or negative GHG emissions. Other potentially eligible technologies—such as renewable natural

gas, biogas, and hydrogen fuel cells—would be subject to more stringent rules for determining their GHG emissions.

The Proposed Regulations generally would apply to projects placed in service after December 31, 2024 once final regulations are published in the Federal Register.

Calculation of the Tech-Neutral PTC and Tech-Neutral ITC

Tech-Neutral PTC

Section 45Y (the "Tech-Neutral PTC") will provide taxpayers with a 10-year pre-inflation adjustment base credit of $15 per MWh of electricity produced and either sold to an unrelated person or, in the case of a facility equipped with a metering device that is owned and operated by an unrelated person, sold, consumed, or stored.[4][5] Using 2023 as an example, the inflation-adjusted rate would be $28 per MWh. The Tech-Neutral PTC also includes bonus amounts for projects located in energy communities and for projects that meet the domestic content bonus requirements, each of which would be a separate 10 percent increase in the base amount of the Tech-Neutral PTC.[6]

Tech-Neutral ITC

Section 48E (the "Tech-Neutral ITC") provides a 30 percent base credit for a "qualified investment" with respect to a "qualified facility" or energy storage technology ("EST"), provided that prevailing wage and apprenticeship requirements are satisfied. Like the Tech-Neutral PTC, the Tech-Neutral ITC also includes bonus amounts for facilities located in energy communities or facilities that meet the domestic content bonus requirements (each a separate incremental 10 percentage point increase to the base credit) and for facilities that are allocated a low-income community bonus amount by the IRS (up to additional 20 percentage point increase, depending on the type of project).

Under the Proposed Regulations, the Tech-Neutral ITC would be subject to recapture if the qualified facility has a GHG emissions rate (discussed below) that exceeds 10 grams of CO_2e per kWh,[7] averaged over the taxable year, for any taxable year during the five-year period beginning on the date the qualified facility is originally placed in service. The new emissions-based recapture rule would vest 20 percent of the Tech-Neutral ITC each year in a manner similar to the existing ITC recapture rules under section 50(a). The Proposed Regulations would provide that a taxpayer must report the GHG emissions rate to the IRS during the recapture period of the qualified facility.[8]

Credit Stacking and Phase Out

Neither the Tech-Neutral PTC nor the Tech-Neutral ITC can be claimed for a facility for which a credit was determined under section 48E or 45Y, respectively, or section 45, 45J, 45Q, 45U, 48, or 48A for the taxable year or any prior taxable year.

The Proposed Regulations would provide that a taxpayer that claims a Tech-Neutral PTC or Tech-Neutral ITC with respect to one qualified facility may still be eligible for the Tech-Neutral ITC

or Tech-Neutral PTC, respectively, with respect to a different qualified facility that is co-located with the first facility.

Both the Tech-Neutral ITC and Tech-Neutral PTC phase out for projects that begin construction after the later of 2032 and the year in which the IRS determines that the annual GHG emissions from the production of electricity in the United States are equal to or less than 25 percent of what they were in 2022.

Determining GHG Emissions Rates

The Inflation Reduction Act requires that the IRS publish annually a table setting forth the GHG emissions rate for types of facilities for purposes of the Tech-Neutral PTC and Tech-Neutral ITC, along with an expert analysis of any categories added or removed (consistent with the methodologies described below). Taxpayers must use and may rely on the table as of the date construction begins.

For the process of establishing GHG emissions rates, the Proposed Regulations would categorize facilities as either combustion and gasification facilities ("C&G Facilities") or not ("Non-C&G Facilities"). The Proposed Regulations would provide that GHG emissions rates would exclude any qualified carbon dioxide generated in the facility's production of electricity that is captured by the taxpayer and disposed of in secure geological storage or utilized in certain commercial processes described in section 45Q(f).

If a taxpayer's facility type is not included in the IRS's annual table, the Proposed Regulations would provide a process for taxpayers to receive a provisional emissions rate ("PER") from the IRS similar to the process under section 45V. To receive a PER, a taxpayer first would need to seek an emissions value for its facility from the Department of Energy (which requires a formal study) or (in the case of C&G Facilities) determine an emissions value based on an IRS-designated lifecycle analysis model ("LCA," discussed below); the taxpayer then would receive a PER by filing a petition that includes the emissions value for the applicable facility with its tax return for the first taxable year in which it claims the applicable credit.

Non-C&G Facilities

For Non-C&G Facilities other than wind, solar, hydropower, marine and hydrokinetic, nuclear fission and fusion, and certain types of waste energy recovery facilities (which, as noted above, are deemed to have zero or negative GHG emissions), the Proposed Regulations would provide that the GHG emissions rate must be determined through a technical and engineering assessment of the fundamental energy transformation into electricity (but not necessarily an LCA), considering all input and output energy carriers and chemical reactions or mechanical processes taking place at the facility in the production of electricity. Under a principles-based approach, emissions that may relate to the facility but do not occur "in the production of electricity" are excluded, such as off-site emissions related to land use changes or the production and transportation of fuels.

C&G Facilities

The Proposed Regulations would confirm that the GHG emissions rate for C&G Facilities must be determined, in part, pursuant to a qualifying LCA. The starting point for this LCA would be feedstock generation or extraction and the ending boundary would be the meter at the point of electricity production (*i.e.*, excluding distribution, transmission, and use of electricity).

The qualifying LCA must be based on an anticipated baseline and take into account enumerated direct and indirect emissions. In contrast to the rule for Non-C&G Facilities, the Proposed Regulations would eschew a principles-based approach for excluded emissions for C&G Facilities and instead would list four categories of specifically excluded emissions (generally, construction-, maintenance-, infrastructure-, and distribution-related emissions). Nevertheless, an LCA may consider "alternative fates" (*e.g.*, of biomass feedstocks) and may account for "avoided emissions."[9]

In the preamble to the Proposed Regulations, the IRS and Treasury noted numerous issues that they are continuing to consider in modeling GHG emissions for C&G Facilities, including spatial and temporal LCA parameters, principles informing the LCA baselines, allocation of emissions to co-products and byproducts, use of book-and-claim accounting systems for tracking the emissions associated with fuel and feedstock sources, and special rules for facilities producing electricity from biogas, renewable natural gas, and fugitive methane (including a requirement that any such feedstock originate from its "first productive use").

Other Rules

For facilities placed in service before 2025, the addition of a new unit or an addition of capacity after 2024 may be eligible for the Tech-Neutral PTC or Tech-Neutral ITC. For purposes of this rule, the Proposed Regulations would provide that a new unit or addition of capacity would be treated as a separate qualified facility and that a facility that is decommissioned or is in the process of decommissioning and restarts can be considered to have increased capacity if certain conditions are met.

Pursuant to the Inflation Reduction Act, the Tech-Neutral ITC generally will be unavailable if the property constitutes a "building or its structural components." No such prohibition applied to most energy property (including solar energy property) under the section 48 legacy ITC. The Proposed Regulations generally would adopt pre-1986 guidance defining a "building" but do not provide any definition of "structural components."[10]

The Proposed Regulations for the Tech-Neutral ITC would adopt some (but not all) of the approaches in the proposed regulations under section 48 published in November 2023, including that (i) a qualified facility includes "all functionally interdependent components," (ii) a taxpayer must own at least a fractional interest in an entire "unit of qualified facility" to claim the Tech-Neutral ITC in respect of any component of that qualified facility, and (iii) retrofit costs must satisfy the "80/20" rule to be credit-eligible.[11]

Substantiation

The Proposed Regulations also would provide guidance on specific records required to be kept to substantiate eligibility for a Tech-Neutral PTC or Tech-Neutral ITC, including that a taxpayer must

maintain documentation regarding the design, operation, and if applicable, feedstock or fuel source used by the facility that establishes that such facility had a negative or zero GHG emissions rate for the taxable year.

Observations

- As with the section 48 proposed regulations, the fractional interest / multiple owners rule creates a cliff-effect trap that would require taxpayers to be certain they own at least a fractional interest in the entire "unit of energy property" or otherwise risk total credit disallowance. As discussed in our prior alert (found here), the rule directly conflicts with the Tax Court's decision in *Cooper v. Commissioner*, 88 T.C. 84 (1987).

- In contrast to the section 48 proposed regulations, the Proposed Regulations do not provide guidance on whether "second life" batteries would be counted for purposes of determining the Tech-Neutral ITC in respect of modifications to ESTs.

- The statutory rule allowing taxpayers to qualify for the Tech-Neutral PTC without selling the underlying power to an unrelated third party differs from the existing PTC, which requires a sale, but this rule is only available in circumstances in which the production is measured using a meter that is owned and operated by an unrelated third party. The details in the Proposed Regulations regarding the metering requirement will be very important for taxpayers who wish to consume the power they produce, rather than selling it to a third party, and may result in the creation of a cottage industry focused on providing metering solutions.

- The designation of certain technologies that are *per se* eligible for the Tech-Neutral PTC and Tech-Neutral ITC will be welcome news to many industries. Given the significant, potential burden to establish that other technologies are credit eligible (*e.g.*, full LCA in some instances), we would anticipate that there may be a significant push by other industries for inclusion on this *per se* list in the final regulations.

- Taxpayers constructing projects involving technologies that are not on the *per se* eligibility list may wish to consider taking steps to start construction before the end of 2024 to be eligible to claim the section 45 PTC or section 48 ITC, which have less stringent requirements and remain available for projects on which construction begins before 2025.

- The new GHG emissions rate recapture rules will present new financing challenges for technologies that are not *per se* eligible, requiring tax equity and tax credit investors to craft legal protections against the risk that operational property is less efficient than expected. The insurance markets are likely to be an important tool in managing this risk.

- The "building or its structural components" prohibition was an unfortunate development in the Inflation Reduction Act and may cause issues for dedicated energy projects that power buildings (*e.g.*, solar or potentially small nuclear projects), which seems inconsistent with the intent of the law. The Proposed Regulations do not address these issues. It would be helpful for Treasury and the IRS to provide a definition of "structural components" and examples in the final guidance indicating that the "building or its structural components" prohibition would not preclude taxpayers from claiming the Tech-Neutral ITC in situations where it was routinely claimed for property dedicated to powering buildings before the Inflation Reduction Act.

- Taxpayers looking to claim the Tech-Neutral PTC or Tech-Neutral ITC for a C&G Facility would be well-advised to review the questions asked by the IRS and Treasury regarding the guidance for modeling GHG emissions rates and to consider providing input in

advance of the publication of the final regulations. Many of the LCA modeling issues and issues regarding use of biogas, renewable natural gas, and fugitive methane also were raised in the proposed regulations under section 45V published in December 2023, which received nearly 30,000 comments.

[1] Unless indicated otherwise, all section references are references to the Internal Revenue Code of 1986, as amended (the “Code”), and references to “regulations” are references to the Treasury regulations promulgated under the Code. In certain cases, if a taxpayer begins construction on a qualified facility before 2025, but places the facility in service after 2024, the taxpayer is apparently able to choose application of section 45, 45Y, 48, or 48E.

[2] King, Ben, et al., Tech-Neutral Tax Credits: The Foundation of US Electric Power Decarbonization, Rhodium Group, May 23, 2024, https://rhg.com/research/tech-neutral-tax-credits-electric-power/. The Rhodium Group study was cited by Treasury in its press release here. As was the case with the so-called Tax Cuts and Jobs Act, the Senate’s reconciliation rules prevented Senators from changing the Act’s name, and the formal name of the so-called Inflation Reduction Act is actually “An Act to provide for reconciliation pursuant to title II of S. Con. Res. 14.”

[3] Storage technology is not subject to the “zero or negative” GHG emissions standard.

[4] The Proposed Regulations also would provide requirements for combined heat and power system (“CHP”) property to be eligible for the Tech-Neutral PTC. Under the Proposed Regulations, CHP property must produce at least 20 percent of its useful energy in the form of thermal energy that is not used to produce electrical or mechanical power (or a combination thereof) and at least 20 percent of its total useful energy in the form of electrical or mechanical power (or a combination thereof). Additionally, the energy efficiency percentage of CHP property must be greater than 60 percent.

[5] The pre-adjustment base rates under sections 45Y and 48E assume the facility meets prevailing wage and apprenticeship requirements; our previous client alert on these requirements can be found here. Section 45Y(g)(4) provides that persons will be treated as related to each other if such persons would be treated as a single employer under the regulations prescribed under section 52(b). The Proposed Regulations would provide that a corporation that is a member of an affiliated group of corporations filing a consolidated return will be treated as selling electricity to an unrelated person even if the electricity is first sold to another member of the group before being sold to an unrelated person outside the group.

[6] Please see our previous client alerts on these adders, which can be found here (energy community bonus), here (initial domestic content bonus guidance), and here (further domestic content bonus guidance).

[7] CO2e stands for carbon dioxide equivalent. The Proposed Regulations assign global warming potential (“GWP-100”) values for purposes of determining “CO2e per kWh” in a manner similar to the GREET models for sections 45V and 45Z. For example, methane is assigned a GWP-100 that is 28 times greater than carbon dioxide.

[8] This reporting would be at the time and in the form and manner prescribed by the IRS, and also would apply if the taxpayer transferred a credit under section 6418. Please see our prior alert on the proposed regulations on credit transferability here.

[9] Offsets and offsetting activities unrelated to the production of electricity by a C&G Facility may not be taken into account in a qualifying LCA.

[10] Borrowing from Treas. Reg. § 1.48-1(e)(1), the Proposed Regulations would not treat either of the following as a "building": (i) a structure that is essentially an item of machinery or equipment or (ii) a structure that is so closely related to the components of credit-qualifying property housed by the structure that both the components and the structure would be expected to be replaced if the components were replaced. Accordingly, both of those types of structures would be eligible to be treated as integral parts of a qualified facility in respect of which the Tech-Neutral ITC can be claimed.

[11] Please see our discussion of those proposed regulations here.

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